Front Cover: Collage of images provided by EFB faculty, staff, and students
Department of Environmental and Forest Biology

Annual Report

Summer 2012
Academic Year 2012 – 2013

Donald J. Leopold
Chair, Department of Environmental and Forest Biology
SUNY-ESF
1 Forestry Drive
Syracuse, NY 13210
Email: djleopold@esf.edu; ph: (315) 470-6760

July 15, 2013
# TABLE OF CONTENTS

**Introduction** ................................................................. 4

Overview to Annual Report .................................................. 4
New York Natural Heritage Program ........................................ 7
Building(s) ................................................................. 8

**Teaching** ................................................................. 10

Summary of main courses taught by faculty members ................. 10
Course teaching load summary by faculty members .................. 13
Undergraduate student advising loads .................................... 15
Curriculum changes ............................................................ 15
Undergraduate students enrolled in each EFB major .................. 15
Listing of awards and recognition ........................................ 16

**Research/Scholarship** .................................................. 16

Summary of publications/presentations .................................. 16
Science Citation Indices from the Web of Science and Scopus ...... 16
Summary of grant activity .................................................... 18
Patents and Patent Applications ........................................... 20
Listing of awards and recognition ........................................ 20

**Outreach and Service** ............................................... 21

Enumeration of outreach activities ....................................... 21
Summary of grant panel service ............................................ 21
Summary of journal editorial board service. ............................ 21
Number of journal manuscripts reviewed by faculty. .................. 22
Listing of awards and recognition ........................................ 22

**Service Learning** ..................................................... 22

**Graduate Students** ..................................................... 25

Number of students by degree objectives ................................ 25
Graduate student national fellowships/awards .......................... 25
Graduate recruitment efforts ............................................. 26
Graduate student advising ................................................ 27
Courses having TA support and enrollment in each .................... 28
Introduction – Overview to Annual Report

The topics and format of this annual report generally follow instructions from Provost Bongarten. Additional, brief material is included for readers external to ESF. Individual faculty annual reports, from which much of the information within the EFB Annual Report is directly taken, are available at: http://www.esf.edu/efb/annualreports.htm. Only a few of the many exciting activities and accomplishments within EFB the past academic year can be included in this brief summary.

Appendix A lists EFB faculty during the 2012-2013 Academic Year, including their rank, education, and scholarly interests. Numerous contributions by, and highlights of, the faculty follow throughout this report. Each faculty member’s summary (unedited) of their most significant accomplishments this past year is in Appendix B. Of the many faculty highlights this past year, only a few are included in this section.

The new ’12 –’13 academic year began on a very sad note with the passing of Distinguished Teaching Professor Dr. Guy Baldassarre on August 20 at the age of 59, from complications due to chronic lymphocytic leukemia. Many fine tributes followed, including the article in The Auk by Thomas Moorman (2013. The Auk 130:194–195). The College Foundation has established an account to endow a student scholarship in Guy’s name. One can contribute to this scholarship by contacting the Development Office or electronically at this link: https://wwwinfo.esf.edu/scripts/giving/givingDonation.asp.

Two Professor Emeriti passed during this last academic year. Dr. Maurice Alexander died on March 25 at the age of 95, a few weeks after the department had a special seminar and reception to thank him for his ongoing support and to dedicate Illick 5 in his name. Dr. Hugh Wilcox passed away on April 3 at the age of 96 at his home in Ashland, Oregon.

We had two successful faculty searches, hiring Dr. Shannon Farrell for the Wildlife Habitat Ecologist position and Dr. Gordon Paterson for the Toxicologist position. Dr. S. Farrell’s background is with songbirds (and sage grouse) and she has experience writing conservation plans and planning habitat management on private lands involving a variety of stakeholders; she is an ornithologist with skills in landscape modeling and conservation planning and strong interest in the behavioral mechanisms underlying species distributions. Dr. Paterson is leaving his current position as Research Associate at the Great Lakes Institute for Environmental Research where his research has focused on gradient analysis, pharmaceuticals and nanoparticles in the Great Lakes region. Both new EFB faculty begin August 19 of this year.

Since 2006, EFB has hired 12 new faculty (Drs. Frair, Fierke, Whipps, Dovciak, Folta, McGee, Cohen, Newman, Ryan, Rundell, S. Farrell, and G. Paterson), representing over one-third of the total number of EFB faculty and a very bright future for the department. Drs. Melissa Fierke and Chris Whipps were promoted to Associate Professor and awarded Continuing Appointment (i.e., tenure). Dr. Lee Newman, already promoted to Associate Professor, was also awarded Continuing Appointment.

After 44 years at ESF, Dr. Tsutomu Nakatsugawa retired at the beginning of last academic year. Since, he has been busy travelling and visiting with family and friends. Drs. Charlie Hall and Jim Nakas retired at the end of the spring semester after a combined 60 years of service. Charlie will remain very active in scholarship, but working from his new home base near Flathead Lake, Montana. Besides continuing his research, Jim plans to spend more time fly-fishing.
Dr. John Castello, as chair of the EBF Promotion and Tenure Committee, is leading an effort to develop metrics for faculty evaluation purposes. After many research projects on birds, Dr. Jonathan Cohen has received NYS-DEC funding for research on New England cottontails. Dr. Martin Dovciak continues his studies of climate-vegetation gradients and climate change effects on the coniferous-deciduous ecotone and on mountain spruce-fir forests in the Adirondacks and across northeastern US. Dr. John Farrell is guiding significant facility improvements at TIBS including the construction of the Frank Cean Researcher Building (student, faculty, and staff residence spaces, common areas, office and meeting spaces), renovation of the boathouse (including an advanced fish culture and holding capability and new laboratory and shop spaces) and new roofs on all buildings; a well and updated septic system are being installed this summer.

Dr. Danny Fernando finished writing eight chapters (out of 12) for his new book, Sexual Reproduction in Forest Trees (Cambridge University Press), that he is co-authoring with Dr. John Owens. In March, Dr. Melissa Fierke was the keynote speaker (“Aspiring to be an intentional model: mother, scientist, advisor, and teacher”) at Utica College’s Womyn’s Herstory Month luncheon and was recognized in April by the Undergraduate Student Association with their Best Teacher Award. Dr. Beth Folta implemented the greatly revised undergraduate curriculum for the Natural History and Interpretation major (to be renamed the Environmental Education and Interpretation major) and submitted over $4 million in grant proposals. Dr. Jacqui Frair has been quite busy developing her international program which included bringing a Fulbright student from Paraguay (studying the endemic Chacoan peccary), two different collaborations with partners in Mexico through INECOL, and serving as co-PI on a successful NSF proposal studying migration triggers in Galapagos tortoise (J. Gibbs, PI).

Taking advantage of a sabbatical leave during the spring semester, Dr. James Gibbs completed a year-long fellowship as “Viejo Sabio” within the Prometeo Program of the National Secretariat of Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT) building capacity for scientific investigation within the Galapagos National Park Service by collaborating with Park staff to complete high priority applied research projects; and, made good progress with collaborators in advancing a community-based endangered wildlife conservation program along the Altai Russia/western Mongolia border. In December Dr. Charlie Hall received the Association for the Study of Peak Oil and Gas “Matthew R. Simmons/M. King Hubbert Award for Excellence in Energy Education”, and this spring he received the SUNY Chancellor’s Award for Excellence in Scholarship and Creative Activities.

Dr. Tom Horton is making good progress on his book, Mycorrhizal Networks (Springer; Ecological Studies Series). Dr. Robin Kimmerer created two major educational programs that benefit ESF students, garnering $912,000 this year through the Center for Native Peoples and the Environment (which she directs). Dr. Don Leopold gave over two dozen invited presentations to over 1500 people, including 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). Dr. Karin Limburg continues her significant work on Atlantic Ocean and river fish declines and with others published “Fish and hydropower on the U.S. Atlantic coast: Failed fisheries policies from half-way technologies?” in Conservation Letters.

Dr. Mark Lomolino is developing his international network of colleagues and research programs in the areas of biogeography, ecology and macroecology. Dr. Greg McGee was given the Undergraduate Student Association’s Best Advisor Award in April. Dr. Myron Mitchell’s
research during this reporting period has resulted in 14 refereed papers published or in press and research grants totaling $1,507,937. Dr. Lee Newman has started work with a former ESF graduate, Dr. Stephen Lebduska, who currently serves as the head of the Spinal Cord Injury Unit at the Syracuse Veterans Hospital, to develop a Horticultural Therapy program for inpatients in the unit. Dr. Dylan Parry has begun two collaborations with researchers working on climate change, one on integrating insects into understanding the effects on forests and another with multiple investigators looking at the effects of climatic shifts on invasive insects.

The most significant accomplishment this year from Dr. William Powell’s lab, following 23 years of research by him, Dr. Chuck Maynard (FNRM) and their research team, came from their field trials of two-year-old transgenic American chestnut trees that for the first time indicate it is possible to enhance resistance to chestnut blight; their newer tree lines appear to be even more resistant to disease than are Chinese chestnut. Dr. Neil Ringler, while VP for Research at ESF, continues working with graduate students on projects that include restoration of Onondaga Lake, new studies of the fisheries and invertebrates of the Mohawk River, and perhaps a proposed Sea Grant study of Atlantic salmon. Dr. Rebecca Rundell taught Principles of Evolution (EFB 311) and Invertebrate Zoology (EFB 355) and for the first time for these courses, led very successful fossil-hunting field trips. Following significant efforts by Dr. Sadie Ryan, the new undergraduate Environmental Health major at ESF has been approved by SUNY and begins Fall 2014; Dr. Ryan will be the coordinator for this program, offered through Environmental Science. In January, in honor of her selection as ESF’s Exemplary Researcher, Dr. Kim Schulz gave a campus seminar “Understanding stressors in aquatic food webs: The importance of quality and quantity at multiple levels”.

Dr. Bill Shields, as Director of the Honors Program, has put two MOU’s in place with outside agencies for honors internships and regularly interacts with a significant donor to this Program. Dr. Don Stewart published a paper this spring indicating that a second species of Arapaima described in 1847 is valid after over a century of belief that only one species (gigas) of this genus existed; in a few months, Don has another paper coming out that describes a new species of this genus. Dr. Scott Turner negotiated a MOU between ESF, Ben Gurion University, the National Museum of Namibia and the Cheetah Conservation Fund in Namibia to begin development of joint educational/training/research projects. Dr. Alex Weir continues to serve as Director of the Cranberry Lake Biological Station and as coordinator of the department’s relatively new and required Diversity of Life courses which each had enrollments over 150 students. Dr. Chris Whipps continues as chair of ESF’s Institutional Animal Care and Use Committee and is now the Director of ESF’s Center for Applied Microbiology.

AnnMarie Clarke was hired in August 2012 in EFB’s Keyboard Specialist 2 position, joining Joanne Rappleyea (Keyboard Specialist 1) and Sandra Polimino (Office Manager/Secretary 1 – assistant to the Chair) in the administrative offices. Because the department is still down one full KB 2 position, the Provost authorized a temp replacement for EFB from mid January to mid April to assist with graduate application processing and other tasks.

Since last summer EFB began hosting the NY Natural Heritage Program (D.J. Evans, Director), one of only nine university-state heritage program partnerships in the U.S. Although the nearly 30 Heritage Program staff members are still based in Albany, the collaboration with this outstanding group of biologists, GIS specialists, and data managers has already greatly improved. We anticipate many unique opportunities for students and faculty to work on the state’s flora and fauna.
EFB, primarily due to efforts by Drs. James Gibbs and Jacqui Frair, is revitalizing the Roosevelt Wild Life Station, established at the College in 1919. Last August, Meredith Perreault was hired part-time as Executive Director of the Station and is working with the ESF Development Office to find external support for the Station’s ambitious goals (see http://www.esf.edu/rwls/).

The department very successfully launched the Dale L. Travis (’59) lecture series in March with the lecture by Dr. James Gibbs, “On the Brink: Saving Russia’s Last Snow Leopards” in the new Gateway Building. Over 400 people attended the talk and enjoyed a fine reception afterwards. Exciting talks are being scheduled for this new academic year, two on campus and two in New York City.

Construction activities in Illick have challenged teaching and research programs this past year, with new aquatic and fisheries research and teaching labs being built on the second floor and the replacement of the Illick roof and greenhouses affecting much of the building. Both projects are scheduled for completion during this new academic year. Construction on the new biology building (for EFB faculty and grads and their research labs) was supposed to begin this September but has been delayed. On a more positive note, some of the best specimens from the Roosevelt Wild Life Museum have been moved to the display cases in the Gateway Building thanks largely to Ron Giegerich and Dr. Jacqui Frair. These displays are now among the finest in upstate New York.

**New York Natural Heritage Program (submitted by D.J. Evans, Director)**

The New York Natural Heritage Program (NYNHP) joined ESF’s Department of Environmental and Forest Biology in July 2012 after nearly a year of planning and negotiations. Established in 1985, the Program has existed as a partnership between The Nature Conservancy (TNC) and New York State Department of Environmental Conservation (DEC) for the past 28 years, administered through a contract between DEC and TNC. We are excited about bringing the program to SUNY ESF and look forward to strengthening our connections to research and academia from our new home.

Similar to natural heritage programs and conservation data centers that exist across the United States, Canada and Latin America, NYNHP was originally set up to maintain a statewide database of rare species and high quality ecosystems for the DEC and its agency partners. The Program was formalized into Environmental Conservation Law in 1993 (ECL Section 11, Article 0539) and since that time has grown considerably in response to the needs of the conservation community. Our mission has expanded to include a national invasive species database partnership (iMapInvasives.org), ecological modeling, maintenance of a statewide geodatabase of conservation lands, and statewide wetland monitoring. We currently have 20 full time and 4 part time staff specializing in ecology, zoology, botany, geographic information systems, and database management. NYNHP data and products are used by federal, state, and local government agencies; the environmental conservation community; developers; and others to aid in land-use decisions.

The NYNHP is an active participant in NatureServe – an international network of biodiversity data centers overseen by a Washington D.C. based non-profit organization (NatureServe.org). Through membership in NatureServe, we work to develop biodiversity data, maintain compatible standards for data management, and provide information about rare species and natural communities that is consistent across many geographic scales – state, national and
global. The NYNHP Director is an elected member of the U.S Section Council of NatureServe, a nine member body of Natural Heritage Program directors who represent the U.S. network of programs, lead network initiatives to maintain communications and data consistency, and serve in an advisory capacity on NatureServe activities that directly impact the network. In 2013, the director of NYNHP was also elected by the U.S. Section to serve on the NatureServe Board of Directors.

Over the past year, our activity as part of EFB has included the re-establishment of three long-term agreements with DEC. Our primary agreement with DEC’s Division of Fish and Wildlife to manage and maintain data on rare species locations provide full or partial support for ten staff ($3,273,393.00, 5yr). Two additional long-term agreements with DEC that were renewed in 2013 are with the Division of Lands and Forests Invasive Species Unit and support five NYNHP staff: four who manage and maintain data on invasive species locations and control activities across the state ($2,311,657.00, 5yr) and one who coordinates the planning and activities of the Long Island Invasive Species Management Area ($535,406, 2yr). Our rare species database “Biotics” contains nearly 13,000 records of rare species locations and natural communities of statewide significance. We currently manage this database on-site, through software provided by NatureServe, and we exchange data with NatureServe for inclusion in a national dataset 1-2 times per year. Our invasive species database is a cloud service provided by the Florida Resource and Environmental Analysis Center at Florida State University and is a collaborative effort between NYNHP, the Florida Natural Heritage Program, NatureServe and The Nature Conservancy. This national database involves several other state Heritage Programs and is expanding in scope each year.

NYNHP also maintains a strong partnership with the Office of Parks, Recreation and Historic Preservation (OPRHP). In 2013, we renewed a five-year agreement to fund two full-time positions, an ecologist and a botanist, who conduct inventory in state parks and participate in the State Park Master Plan process ($1,200,204.00, 5yr). We conducted work in dozens of parks across the state in 2012-13, including organizing and conducting a Bioblitz at Taconic and Schodack Island State Parks which brought together experts in ecology, botany and zoology from across the state.

Our remaining positions are supported by outside grants and contracts from a variety other state and federal partners. For example, in 2012-13 our project list has included a statewide assessment for NYSERDA that will help in establishing biodiversity sensitive locations for wind energy projects; an EPA GLRI project designed to address a critical need in the implementation of a new regulation plan for Lake Ontario by looking in more detail at the relationships between elevation and plant composition in Lake Ontario coastal wetlands; and a large Wetland Program Development Grant from EPA to establish a consistent set of wetland assessment protocols and develop a field manual that will provide the framework for a statewide wetland monitoring program.

A list of publications, presentations and service by the New York Natural Heritage Program is in Appendix Q.

Building(s)

Following the $1.47 million award from the National Science Foundation to Drs. Ringler, Schulz, Farrell, Whipps, and Leopold, continued effort went into the planning for the new Center for Integrated Research and Teaching in Aquatic Sciences (CIRTAS, to be led by Dr. Kim
Schulz) on the second floor of Illick. Although construction was to be completed by the beginning of the ’12-’13 academic year, it is now supposed to be finished by end of September 2013, when the NSF funding terms. Funding is being used to construct and equip controlled environment rooms and other research spaces, once rooms 227, 228, 231 through 237 Illick.

As part of the CIRTAS construction, the ESF administration funded construction of a new lab and enhanced remote data access at the Thousand Islands Biological Station which has been completed. This construction will greatly enhance research space at TIBS and establish an electronic link between research activities there with the CIRTAS facility in Illick.

There has been no progress on construction of the new Academic Research Building into which the Department will move if/when it is ever constructed. Construction was to begin this September. Because funding is in hand for only half of the project (and one third of the faculty), the new ARB is planned to be built in phases. The most lab-intensive EFB faculty (approximately 11) and their graduate students will move into the Phase 1 building upon completion. Phase 1 was originally expected to be completed by 2015. Currently, there is no realistic time frame for the start and end of Phase 1, nor a schedule for Phase 2. Current architectural plans for both phases are at: [http://www.esf.edu/efb/newhome.asp](http://www.esf.edu/efb/newhome.asp)

After much planning for the new roof and roof top greenhouses on Illick, construction began during the summer 2012. Although most construction has happened when classes were not in session, there has been tremendous disruption to EFB faculty and graduate student research programs, especially those on the fourth and fifth floor of Illick, as well as very disruptive noise levels during key periods when classes were not in session. We continue to need to inform various parties that the faculty and graduate students are quite active when classes are not in session, and in fact, count on these key periods to meet non-teaching obligations. It is not known when this new roof and roof top greenhouses construction projects will be finished, nor would any stated deadlines likely be met within any reasonable period.

As part of the Illick exterior rehabilitation project (which includes the new roof and greenhouses), all windows were replaced at the west and east ends of the building. Additionally, new entrance doors were installed at the north, east, and south sides. After many years of temporarily fixing autoclaves in Illick, two new autoclaves were finally purchased (funded primarily by the administration) at the beginning of the fall ’12 semester; one still awaits installation.

We have recently learned that our distilled water system is not functioning properly so await those repairs. Cold rooms throughout Illick continue to break down and require ongoing, expensive repair. The most important walk-in cold room on the fourth floor of Illick, has been broken since June ’12 with no repair date known. Significant research samples that were in this cooler had to be discarded. There are no alternative cold storage spaces available and so we continue to wait for the repair or replacement of this outdated equipment that is essential to research and teaching in biology. Major asbestos mitigation projects have been ongoing throughout the building, wherever old tiles have had to be replaced because of construction. The building has never looked worse from top to bottom. The EFB faculty and graduate students should be commended for maintaining a strong doctoral-granting research program despite the chronic lack of adequate equipment and facilities in the building; and significant, ongoing disruptions from construction activities.
Teaching

An increasingly important aspect of EFB course offerings was the continuation of Maymester and Summer Session courses besides those already authorized for EFB’s summer field programs. Although many of the scheduled department courses for May to August were cancelled due to insufficient enrollment, EFB again had large enrollments for Flora of Central New York (16 students; taught by Visiting Instructor, Michael Hough) and Field Ornithology (20 students; taught by Visiting Instructor, Alan Bedford) during Maymester ’13. Additional courses taught during Maymester ’13 included Principles of Genetics (EFB 307, W. Helenbrook; 14 students) and Natural History Museums and Modern Science (EFB 404; E. Folta; 13 students).

Global Environment was taught on-line (by R. Beal) during last year’s summer session. Summer session ‘13 includes Wetland Restoration Techniques, taught on-line by T. Biebighauser and Wetland Restoration Practicum, a field course taught by T. Biebighauser. Enrollments for these summer session courses are substantial (31 and 17, respectively).

Summary of main courses taught by faculty and enrollment in each course
(as reported by each; does not include 420, 495, 498, 499, 798, 899, 999; Course prefix EFB unless otherwise noted)

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Course #</th>
<th>Course Name</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castello</td>
<td>217 (0.5)</td>
<td>Peoples, Plagues, &amp; Pests</td>
<td>132</td>
</tr>
<tr>
<td></td>
<td>303 (0.5)</td>
<td>Intro Environmental Microbiology</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>340</td>
<td>Forest and Shade Tree Pathology</td>
<td>31</td>
</tr>
<tr>
<td>Cohen</td>
<td>493/693</td>
<td>Wildlife Habitats and Populations</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>496/796</td>
<td>Parameter Est&amp;MDL</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>797</td>
<td>Grant Writing in Fish and Wildl.</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>797</td>
<td>Adaptive Peaks Seminar (two semesters)</td>
<td>39</td>
</tr>
<tr>
<td>Dovciak</td>
<td>445/645</td>
<td>Plant Ecology &amp; Global Change</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>535</td>
<td>Flowering Plants: Diversity, Evol., &amp; Syst.</td>
<td>16</td>
</tr>
<tr>
<td>Farrell</td>
<td>388</td>
<td>Ecology of Adirondack Fishes</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>496</td>
<td>Senior Synthesis AFS</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>681</td>
<td>Aquatic Restoration Ecology</td>
<td>13</td>
</tr>
<tr>
<td>Fernando</td>
<td>326</td>
<td>Diversity of Plants</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>(BTC) 497</td>
<td>Research Design &amp; Prof Development</td>
<td>13</td>
</tr>
<tr>
<td>Fierke</td>
<td>101</td>
<td>General Biology Lecture I</td>
<td>304</td>
</tr>
<tr>
<td></td>
<td>796</td>
<td>EFB Core Course</td>
<td>6</td>
</tr>
<tr>
<td>Folta</td>
<td>404 (sum.)</td>
<td>Natural History Museums &amp; Modern Sci.</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>404 (fall)</td>
<td>Natural History Museums &amp; Modern Sci.</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>416/616</td>
<td>Intro/Environ. Interpretation</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>417/617</td>
<td>Non-Personal Environ. Interp. Methods</td>
<td>27</td>
</tr>
<tr>
<td>Frair</td>
<td>491</td>
<td>Applied Wildlife Science</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>496 (0.5)</td>
<td>Hunter Trapper Education for Wild. Prof.</td>
<td>36</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>496 (0.5)</td>
<td>Wildlife Techniques</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>650</td>
<td>Landscape Ecology</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td><strong>Gibbs</strong></td>
<td>(on sabbatical leave)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>Global Environment</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>(ESC) 325/525 (0.5)</td>
<td>Energy</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>516</td>
<td>Ecosystems</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>518</td>
<td>Systems Ecology</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>522</td>
<td>Biophysical Economics</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Horton</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>320</td>
<td>General Ecology</td>
<td>228</td>
<td></td>
</tr>
<tr>
<td>428/628</td>
<td>Mycorrhizal Ecology</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>305/605</td>
<td>Indigenous Issues and the Environment</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>337</td>
<td>Field Ethnobotany</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>446/646</td>
<td>Ecology of Mosses</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>496</td>
<td>Plants and Culture</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td><strong>Leopold</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>336</td>
<td>Dendrology I</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td><strong>Lomolino</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>444</td>
<td>Biodiversity and Geog. Nature</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>483</td>
<td>Mammal Diversity</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>796</td>
<td>Biodiversity of Mammals</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>797</td>
<td>Soundscape Conservation</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td><strong>McGee</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>General Biology Lab I</td>
<td>267</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>General Biology Lab II</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>132</td>
<td>Orientation Seminar: EFB</td>
<td>121</td>
<td></td>
</tr>
<tr>
<td>202</td>
<td>Ecological Monitor. Biodiversity Assess.</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td>(ESF) 296</td>
<td>Integrated Biology/Chemistry I Lab.</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>(w/ N. Abrams)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>McNulty</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>484/684</td>
<td>Winter Mammalian Ecology</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>Mitchell</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>415</td>
<td>Ecological Biogeochemistry</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>610</td>
<td>Ecological Biogeochemistry</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>797</td>
<td>Hydrology/Biogeochemistry Seminar</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td><strong>Nakas</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>301</td>
<td>Latin for Scientists</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>303 (0.5)</td>
<td>Intro. Environmental Microbiology</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>403/796</td>
<td>Microbiological Diseases of Fish &amp; Wildlife</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>505</td>
<td>Microbial Ecology</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td><strong>Newman</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(BTC) 401/EFB 601</td>
<td>Molecular Techniques</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>325</td>
<td>Cell Biology</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>(BTC) 499</td>
<td>Senior Synthesis</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td><strong>Parry</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>504</td>
<td>Plant Herbivore Interactions</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>502</td>
<td>Ecology &amp; Mgt. Invasive Species</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>797</td>
<td>Insects and a Changing Climate</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Powell</td>
<td>12</td>
<td>Orientation Seminar</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>307</td>
<td>Principles of Genetics</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td>308</td>
<td>Principles of Genetics Lab</td>
<td>180</td>
</tr>
<tr>
<td>(BTC)</td>
<td>425/EFB 625</td>
<td>Plant Biotechnology</td>
<td>15</td>
</tr>
<tr>
<td>Ringler</td>
<td>385</td>
<td>Comparative Vertebrate Anatomy</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>554</td>
<td>Aquatic Entomology</td>
<td>13</td>
</tr>
<tr>
<td>Rundell</td>
<td>311</td>
<td>Principles of Evolution</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>355</td>
<td>Invertebrate Zoology</td>
<td>40</td>
</tr>
<tr>
<td>Ryan</td>
<td>360</td>
<td>Introduction to Epidemiology</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>496</td>
<td>Emerging Infectious Diseases</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>497/796</td>
<td>Emerging Infectious Diseases Wild. &amp; Hum.</td>
<td>5</td>
</tr>
<tr>
<td>Schulz</td>
<td>424/624</td>
<td>Limnology: Study of Inland Waters</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>525</td>
<td>Limnology Practicum</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>797</td>
<td>Aquatic Ecology Seminar</td>
<td>6</td>
</tr>
<tr>
<td>Shields</td>
<td>(ESF) 109</td>
<td>Freshmen Honors Seminar</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>(ESF) 296</td>
<td>Sophomore Honors Seminar</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>480</td>
<td>Animal Behavior</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>496/796</td>
<td>Ecology of Adirondack Insects</td>
<td>11</td>
</tr>
<tr>
<td>Stewart</td>
<td>486</td>
<td>Ichthyology</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>523 (0.5)</td>
<td>Tropical Ecology</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>797 (0.5)</td>
<td>Grant Proposal Writing for F&amp;W</td>
<td>14</td>
</tr>
<tr>
<td>Teale</td>
<td>351</td>
<td>Forest Entomology</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>352/552</td>
<td>Entomology</td>
<td>89</td>
</tr>
<tr>
<td>Turner</td>
<td>200</td>
<td>Physics of Life</td>
<td>132</td>
</tr>
<tr>
<td></td>
<td>462/662</td>
<td>Animal Physiology: Environ. &amp; Ecol.</td>
<td>66</td>
</tr>
<tr>
<td>Weir</td>
<td>210 (lead)</td>
<td>Diversity of Life I</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>211 (lead)</td>
<td>Diversity of Life II</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td>440/640</td>
<td>Mycology</td>
<td>34</td>
</tr>
<tr>
<td>Whipps</td>
<td>103</td>
<td>General Biology Lecture II</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>453/653</td>
<td>Parasitology</td>
<td>24</td>
</tr>
</tbody>
</table>
### Courses by Instructional Support Specialists, Adjuncts, & Visiting Instructors

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Research CH</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrigoni</td>
<td>485</td>
<td>Herpetology</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>414</td>
<td>Senior Synthesis in Con. Biol.</td>
<td>41</td>
</tr>
<tr>
<td>Ettinger</td>
<td>496</td>
<td>Plant Propagation</td>
<td>7</td>
</tr>
<tr>
<td>Folta</td>
<td>390</td>
<td>Principles of Wildlife Management</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>482</td>
<td>Ornithology</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>496</td>
<td>Issues in Mgt. &amp; Conflict Resolut.</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>496</td>
<td>Hunter &amp; Trapper Ed.</td>
<td>35</td>
</tr>
<tr>
<td>Giegerich</td>
<td>381</td>
<td>Vertebrate Museum Techniques</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>496</td>
<td>Hunter &amp; Trapper Ed.</td>
<td>35</td>
</tr>
<tr>
<td>Helenbrook</td>
<td>413</td>
<td>Intro to Conservation Biology</td>
<td>82</td>
</tr>
<tr>
<td>Hough</td>
<td>496</td>
<td>Flora of Central New York (Maymester ’12)</td>
<td>11</td>
</tr>
<tr>
<td>Kapuscinski</td>
<td>487/687</td>
<td>Fisheries Science and Management</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>488</td>
<td>Fisheries Science Practicum</td>
<td>14</td>
</tr>
<tr>
<td>Lucas</td>
<td>419</td>
<td>Problem Solving in Cons. Biology</td>
<td>50</td>
</tr>
</tbody>
</table>

### Course teaching load summary by faculty members

The following data are from the Faculty “Workload” Report (sent 5/24/13) by Dr. Maureen Fellows, and summarize the number of students multiplied by the number of credit hours for courses categorized as Research (e.g., EFB 498, 798, 899, 999), Problems/Seminars (e.g., EFB 420, 495, 797), and regular classes. The first number in each column is for undergraduate credit hours, the second for graduate. Co-taught courses yield the number of credit hours for that course divided by number of instructors. All courses are credited, regardless of departmental prefix. Note that although these data come from an administrative report titled “Workload”, only the teaching portion of a faculty member’s complete workload is included.

### Teaching Load Summary by Faculty Member

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Research CH</th>
<th>Prob./Sem. CH</th>
<th>Class CH</th>
<th>Total (U/G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horton (1*)</td>
<td>15/15</td>
<td>12/21</td>
<td>1096/25</td>
<td><strong>1184 (1123/61)</strong></td>
</tr>
<tr>
<td>McGee (2)</td>
<td>0/0</td>
<td>79/0</td>
<td>1074/6</td>
<td><strong>1159 (1153/6)</strong></td>
</tr>
<tr>
<td>Weir (2)</td>
<td>5/2</td>
<td>21/0</td>
<td>1131/0</td>
<td><strong>1159 (1157/2)</strong></td>
</tr>
<tr>
<td>Fierke (4)</td>
<td>2/22</td>
<td>24/14</td>
<td>939/9</td>
<td><strong>1010 (965/45)</strong></td>
</tr>
<tr>
<td>Hall (5)</td>
<td>12/45</td>
<td>24/0</td>
<td>796/92</td>
<td><strong>969 (832/137)</strong></td>
</tr>
<tr>
<td>Powell (6)</td>
<td>18/10</td>
<td>15/0</td>
<td>671/15</td>
<td><strong>729 (704/25)</strong></td>
</tr>
<tr>
<td>Rundell (7)</td>
<td>0/0</td>
<td>6/0</td>
<td>675/12</td>
<td><strong>693 (681/12)</strong></td>
</tr>
<tr>
<td>Whippes (8)</td>
<td>15/17</td>
<td>18/0</td>
<td>622/18</td>
<td><strong>690 (655/35)</strong></td>
</tr>
<tr>
<td>Castello (9)</td>
<td>5/26</td>
<td>6/0</td>
<td>633/6</td>
<td><strong>676 (644/32)</strong></td>
</tr>
<tr>
<td>Leopold (10)</td>
<td>6/56</td>
<td>20/1</td>
<td>533/6</td>
<td><strong>622 (559/63)</strong></td>
</tr>
<tr>
<td>Name</td>
<td>Credit Hours</td>
<td>In-House Credits</td>
<td>Teaching Load</td>
<td>Rank</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td>------------------</td>
<td>---------------</td>
<td>------</td>
</tr>
<tr>
<td>Turner (11)</td>
<td>594/6</td>
<td>10/0</td>
<td>610</td>
<td>604/6</td>
</tr>
<tr>
<td>Newman (12)</td>
<td>405/33</td>
<td>32/0</td>
<td>595</td>
<td>510/85</td>
</tr>
<tr>
<td>Shields (13)</td>
<td>461/0</td>
<td>19/0</td>
<td>519</td>
<td>498/21</td>
</tr>
<tr>
<td>Lomolino (14)</td>
<td>452/44</td>
<td>2/3</td>
<td>508</td>
<td>454/54</td>
</tr>
<tr>
<td>Folta, E. (15)</td>
<td>308/28</td>
<td>19/13</td>
<td>412</td>
<td>358/54</td>
</tr>
<tr>
<td>Stewart (16)</td>
<td>282/9</td>
<td>4/7</td>
<td>357</td>
<td>290/67</td>
</tr>
<tr>
<td>Frail (17)</td>
<td>209/75</td>
<td>5/25</td>
<td>343</td>
<td>243/100</td>
</tr>
<tr>
<td>Schulz (18)</td>
<td>242/20</td>
<td>9/6</td>
<td>322</td>
<td>268/54</td>
</tr>
<tr>
<td>Ringler (19)</td>
<td>200/15</td>
<td>3/52</td>
<td>292</td>
<td>221/71</td>
</tr>
<tr>
<td>Teale (20)</td>
<td>204/12</td>
<td>0/42</td>
<td>267</td>
<td>205/62</td>
</tr>
<tr>
<td>Dovciak (21)</td>
<td>158/63</td>
<td>6/24</td>
<td>257</td>
<td>164/93</td>
</tr>
<tr>
<td>Nakas (22)</td>
<td>219/14</td>
<td>3/20</td>
<td>256</td>
<td>222/34</td>
</tr>
<tr>
<td>Kimmerer (23)</td>
<td>204/24</td>
<td>0/10</td>
<td>244</td>
<td>210/34</td>
</tr>
<tr>
<td>Cohen (24)</td>
<td>134/46</td>
<td>3/45</td>
<td>228</td>
<td>137/91</td>
</tr>
<tr>
<td>Parry (25)</td>
<td>159/39</td>
<td>0/9</td>
<td>216</td>
<td>159/57</td>
</tr>
<tr>
<td>Ryan (26)</td>
<td>155/23</td>
<td>6/5</td>
<td>211</td>
<td>164/47</td>
</tr>
<tr>
<td>Fernando (27)</td>
<td>174/0</td>
<td>3/15</td>
<td>210</td>
<td>195/15</td>
</tr>
<tr>
<td>Mitchell (28)</td>
<td>87/30</td>
<td>5/15</td>
<td>155</td>
<td>92/63</td>
</tr>
<tr>
<td>Farrell (29)</td>
<td>60/22</td>
<td>20/15</td>
<td>123</td>
<td>86/37</td>
</tr>
<tr>
<td>Gibbs (30)</td>
<td>23/2</td>
<td>12/37</td>
<td>76</td>
<td>37/39</td>
</tr>
<tr>
<td>McNulty (31)</td>
<td>42/3</td>
<td>2/29</td>
<td>76</td>
<td>44/32</td>
</tr>
<tr>
<td>Limburg (32)</td>
<td>0/0</td>
<td>10/24</td>
<td>57</td>
<td>10/47</td>
</tr>
</tbody>
</table>

*rank out of all faculty; 1 highest, 32 lowest

**Teaching Load Statistics by Adjunct Faculty, Emeriti, Instructional Support Specialists, AEC Staff, Visiting Instructors, etc.**

<table>
<thead>
<tr>
<th>Name</th>
<th>Credit Hours</th>
<th>In-House Credits</th>
<th>Teaching Load</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams</td>
<td>0/0</td>
<td>0/0</td>
<td>0/1008</td>
<td>1008 (0/1008)</td>
</tr>
<tr>
<td>Arrigoni</td>
<td>363/0</td>
<td>0/0</td>
<td>366</td>
<td>366/0</td>
</tr>
<tr>
<td>Ettinger</td>
<td>33/6</td>
<td>0/0</td>
<td>41</td>
<td>35/6</td>
</tr>
<tr>
<td>J. Folta</td>
<td>551/2</td>
<td>0/0</td>
<td>571</td>
<td>551/2</td>
</tr>
<tr>
<td>Giegerich</td>
<td>55/0</td>
<td>0/0</td>
<td>57</td>
<td>57/0</td>
</tr>
<tr>
<td>Hager</td>
<td>0/42</td>
<td>0/0</td>
<td>42</td>
<td>0/42</td>
</tr>
<tr>
<td>Helenbrook</td>
<td>243/3</td>
<td>0/0</td>
<td>246</td>
<td>243/3</td>
</tr>
<tr>
<td>Hough</td>
<td>27/6</td>
<td>0/0</td>
<td>33</td>
<td>27/6</td>
</tr>
<tr>
<td>Kapuscinski</td>
<td>204/24</td>
<td>0/10</td>
<td>244</td>
<td>210/34</td>
</tr>
<tr>
<td>Kirby</td>
<td>150/0</td>
<td>0/0</td>
<td>150</td>
<td>150/0</td>
</tr>
<tr>
<td>Musselman</td>
<td>17/0</td>
<td>0/0</td>
<td>17</td>
<td>17/0</td>
</tr>
<tr>
<td>Shriver</td>
<td>21/0</td>
<td>0/0</td>
<td>21</td>
<td>21/0</td>
</tr>
<tr>
<td>Underwood</td>
<td>1/0</td>
<td>0/47</td>
<td>48</td>
<td>1/47</td>
</tr>
</tbody>
</table>

Dr. Horton had the highest teaching workload (1184 total credit hours), followed by Drs. McGee (1159), Weir (1159), Fierke (1010) and Hall (969). EFB faculty were responsible for 15,225 credit hours (versus 14,848 last reporting period) of campus instruction, an average of 476 credit hours per faculty per year. Another 2,844 credit hours were delivered by Visiting Instructors and others (versus 1,692 in last reporting period) for an EFB total of 18,069 credit hours.
Undergraduate Student Advising Loads

Listed below is the number of undergraduate advisees assigned to each faculty member, as reported by that faculty member. Some faculty members also regularly and informally advise a much larger number of undergraduates, and some advise ES undergraduate students.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Advising Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castello*</td>
<td>18</td>
</tr>
<tr>
<td>Cohen</td>
<td>16</td>
</tr>
<tr>
<td>Dovciak</td>
<td>21</td>
</tr>
<tr>
<td>Farrell</td>
<td>17</td>
</tr>
<tr>
<td>Fernando</td>
<td>13</td>
</tr>
<tr>
<td>Fierke</td>
<td>23</td>
</tr>
<tr>
<td>Folta*</td>
<td>24</td>
</tr>
<tr>
<td>Foltz</td>
<td>20</td>
</tr>
<tr>
<td>Gibbs*</td>
<td>40</td>
</tr>
<tr>
<td>Hall</td>
<td>25</td>
</tr>
<tr>
<td>Horton</td>
<td>19</td>
</tr>
<tr>
<td>Kimmerer</td>
<td>30</td>
</tr>
<tr>
<td>Leopold</td>
<td>7</td>
</tr>
<tr>
<td>Limburg</td>
<td>19</td>
</tr>
<tr>
<td>Lomolino</td>
<td>20</td>
</tr>
<tr>
<td>McGee**</td>
<td>38</td>
</tr>
<tr>
<td>Mitchell</td>
<td>15</td>
</tr>
<tr>
<td>Nakas</td>
<td>12</td>
</tr>
<tr>
<td>Newman</td>
<td>31</td>
</tr>
<tr>
<td>Parry</td>
<td>24</td>
</tr>
<tr>
<td>Powell*</td>
<td>21</td>
</tr>
<tr>
<td>Ringler</td>
<td>0</td>
</tr>
<tr>
<td>Rundell</td>
<td>11</td>
</tr>
<tr>
<td>Ryan</td>
<td>23</td>
</tr>
<tr>
<td>Schulz</td>
<td>27</td>
</tr>
<tr>
<td>Shields</td>
<td>36</td>
</tr>
<tr>
<td>Teale</td>
<td>16</td>
</tr>
<tr>
<td>Turner</td>
<td>18</td>
</tr>
<tr>
<td>Weir</td>
<td>21</td>
</tr>
<tr>
<td>Whipps</td>
<td>23</td>
</tr>
</tbody>
</table>

*Also coordinator for one of EFB’s majors

** Undergraduate Curriculum Director and coordinator for the environmental biology major

Curriculum changes

The most significant change in EFB undergraduate majors was the complete overhaul, led by Beth Folta, of the Natural History and Interpretation major. With only one faculty member (i.e., Folta) solely devoted to this major, redundancies in the former program, and many non-teaching obligations for that person, the major has been streamlined. Dr. Folta has also initiated a change in name for this major, to better reflect its purpose and make the content easier for potential students to understand. The new name for this major, Environmental Education and Interpretation, should be approved sometime during this coming academic year.

Undergraduate students enrolled in each EFB major

Enrollment numbers change throughout the year, especially after December and May graduations, e.g., there were 641 EFB undergraduate students enrolled in classes during the fall ’12 semester and 614 registered for the spring ’13 semester. The number of EFB undergraduates enrolled during the fall ’12 is the largest number ever in the history of the department, above the previous record number of 633 enrolled at the beginning of fall ‘11. The total number of undergraduates in EFB represented nearly 38% of all full and part-time undergraduates (1698) at ESF in the fall. Fall ‘12 undergraduate enrollments (and percent of total) in each major were:

- Conservation Biology: 172 (26.8%)
- Environmental Biology: 156 (24.3%)
- Wildlife Science: 149 (23.2%)
- Biotechnology: 68 (10.6%)
- Aquatic and Fisheries Science: 53 (8.3%)
- Natural History and Interpretation: 30 (4.7%)
- Forest Health: 13 (2.0%)

Total 641 undergraduates in EFB (fall ’12)
Listing of awards and recognition
Melissa K. Fierke: SUNY-ESF Undergraduate Student Association Best Teacher Award
Gregory G. McGee: SUNY-ESF Undergraduate Student Association Best Advisor Award

Research/Scholarship

Summary of publications/presentations
Appendix C lists books and refereed publications of the EFB faculty; papers submitted, in review, or pending decision are shown in Appendix D. Presentations by EFB faculty at science meetings are shown in Appendix E. Other products of scholarship are shown in Appendix L (Miscellaneous Publications…).

Past annual reports have included the number of papers published by EFB faculty, and papers in press. Because many journals are releasing papers on line months to a year or more before the printed versions, these annual numbers are no longer easy to track and accurately report so are excluded here.

Science Citation Indices

The “impact” of one’s overall publication record can be objectively assessed by a variety of citation indices. The following summary of the measures reported here was written by the Director of the ESF College Libraries, Stephen Weiter.

Citation analysis is a quantifiable measure of academic output. SUNY-ESF has access to two subscription resources used for citation metrics – Web of Science and Scopus. Web of Science contains authoritative, multidisciplinary content and covers over 10,000 of the highest impact journals worldwide, including Open Access journals and over 110,000 conference proceedings. The database includes current and retrospective coverage in the sciences, social sciences, arts, and humanities. Thompson-ISI is very selective in the journal selection process and this database includes only the most highly regarded publications in a field. Coverage begins in 1900.

Scopus is the world’s largest abstract and citation database containing both peer-reviewed research literature and quality web sources. Scopus includes nearly 18,000 titles from 5,000 international publishers in the scientific, technical, medical and social sciences fields and, more recently, also in the arts and humanities. Full coverage begins in 1996. It contains 41 million records, 70% with abstracts; 70% of its content is from international sources. It includes over 3 million conference papers and provides 100% Medline coverage.

There are limitations and incongruities in the use of citation metrics. The databases referenced above do not correct errors in citing papers. This means that one paper may be cited many different ways and appear as separate entries in these tools. Also, author and institutional naming inconsistencies complicate these analyses. Comparisons between these tools should be avoided. The databases use different sources to generate data and some are more comprehensive than others. In addition, the literature suggests that these tools are skewed towards the STM (science, technical and medical) community of scholars.

The h-index is rapidly becoming the standard accepted measurement of academic output and can be generated in both Web of Science and Scopus. The h-index is defined as:
A scientist has index h if h of [his/her] $N_p$ papers have at least h citations each, and the other ($N_p - h$) papers have at most h citations each.

However, the h-index has significant limitations in terms of what it measures: (1) it does not include citations to the same work that have small mistakes in their referencing (of which for some publications there are many); (2) it only includes citation to journal articles (not to books, book chapters, working papers, reports, etc.); and, (3) it only includes citations in journals that are listed in the database being searched, which is never comprehensive of academic journals in the field. Therefore, the h-index should be viewed as one metric among many in considering academic output and productivity.

The following table (produced by ESF assistant librarian, Jessica Clemons, June 2013) shows the science citation indices for each faculty member. Using the number of citations for 2003 to 2012 as determined by Scopus, Dr. Karin Limburg had the highest number of citations followed by Drs. Myron Mitchell, James Gibbs, Tom Horton, and Mark Lomolino. Using this same data base for only last year, Dr. Karin Limburg had the highest number of citations followed by Drs. Myron Mitchell, James Gibbs, Tom Horton, and Jacqui Frair. Applying the Web of Science citation index for EFB faculty last year, Dr. Gibbs had the highest number of citations, followed by Drs. Mitchell, Horton, Lomolino, and Limburg. Dr. Mitchell had the highest SCOPUS h-index, followed by Drs. Gibbs, Lomolino, Hall, and Limburg.

<table>
<thead>
<tr>
<th>Last Name</th>
<th>SCOPUS # Citations 2012</th>
<th>Web of Science # Citations 2012</th>
<th>SCOPUS # Citations 5 years 2008-2012</th>
<th>SCOPUS # Citations 10 years 2003-2012</th>
<th>SCOPUS h-Index</th>
<th>Web of Science h-index</th>
<th>Number of Cited Documents in Scopus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castello</td>
<td>32</td>
<td>30</td>
<td>146</td>
<td>231</td>
<td>7</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td>Cohen</td>
<td>21</td>
<td>28</td>
<td>75</td>
<td>75</td>
<td>6</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Dovciak</td>
<td>27</td>
<td>26</td>
<td>118</td>
<td>163</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Farrell</td>
<td>30</td>
<td>32</td>
<td>82</td>
<td>109</td>
<td>7</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>Fernando</td>
<td>14</td>
<td>11</td>
<td>84</td>
<td>155</td>
<td>10</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Fierke</td>
<td>30</td>
<td>31</td>
<td>119</td>
<td>141</td>
<td>7</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Folta</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Frair</td>
<td>197</td>
<td>142</td>
<td>654</td>
<td>758</td>
<td>15</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Gibbs</td>
<td>334</td>
<td>474</td>
<td>1297</td>
<td>2097</td>
<td>31</td>
<td>39</td>
<td>90</td>
</tr>
<tr>
<td>Hall</td>
<td>183</td>
<td>45</td>
<td>806</td>
<td>1165</td>
<td>22</td>
<td>7</td>
<td>119</td>
</tr>
<tr>
<td>Horton</td>
<td>219</td>
<td>218</td>
<td>915</td>
<td>1643</td>
<td>18</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>Kimmerer</td>
<td>24</td>
<td>17</td>
<td>137</td>
<td>277</td>
<td>13</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Leopold</td>
<td>61</td>
<td>51</td>
<td>283</td>
<td>511</td>
<td>14</td>
<td>14</td>
<td>46</td>
</tr>
<tr>
<td>Limburg</td>
<td>768</td>
<td>193</td>
<td>2853</td>
<td>4154</td>
<td>21</td>
<td>17</td>
<td>71</td>
</tr>
<tr>
<td>Lomolino</td>
<td>117</td>
<td>217</td>
<td>875</td>
<td>1515</td>
<td>25</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>McGee</td>
<td>31</td>
<td>24</td>
<td>165</td>
<td>282</td>
<td>8</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>McNulty</td>
<td>1</td>
<td>2</td>
<td>13</td>
<td>24</td>
<td>2</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Mitchell</td>
<td>478</td>
<td>381</td>
<td>2080</td>
<td>3280</td>
<td>32</td>
<td>37</td>
<td>163</td>
</tr>
</tbody>
</table>
Summary of grant activity

From May 1, 2012 to April 30, 2013, EFB submitted 39.5% of all proposals (of 255 total) submitted by all units at ESF, versus 26.2% during the previous reporting period. These EFB proposals represent 33.9% of the $74,688,022 amount for all proposals submitted by all units to the ESF Office of Research Programs. The average amount per EFB proposal was $251,495 (versus $257,406 the previous reporting period). Nearly 40% of EFB proposals submitted during this period (for $13,530,847) have already been awarded, with another nearly 40% still pending (for $7,979,434) and 22% rejected (for $3,815,290).

The proposal submission activity of each faculty member for the 12 month period ending April 30, 2013 follows. Drs. J. Frair and J. Gibbs had the highest credited number of proposals submitted, followed by Drs. S. Ryan, D. Leopold, and L. Newman. Dr. D. Leopold had the highest credited dollar amount of proposals submitted, followed by Drs. J. Gibbs, E. Folta, S. Ryan, and W. Powell; these five accounted for $10,834,984 of the total.

Proposal Activity Summary by PI/CoPI
(12-Month Period ending 4/30/12)

<table>
<thead>
<tr>
<th>Name</th>
<th>Credited* Number</th>
<th>Credited Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrahamson, Lawrence</td>
<td>0.60</td>
<td>$58,610 (**25)</td>
</tr>
<tr>
<td>Castello, John</td>
<td>2.33</td>
<td>$154,527 (21)</td>
</tr>
<tr>
<td>Cohen, Jonathan</td>
<td>3.00</td>
<td>$123,392 (23)</td>
</tr>
<tr>
<td>Dovciak, Martin</td>
<td>3.00</td>
<td>$403,537 (18)</td>
</tr>
<tr>
<td>Farrell, John</td>
<td>2.17</td>
<td>$1,035,897 (6)</td>
</tr>
<tr>
<td>Fernandez, Danilo</td>
<td>0.00</td>
<td>$0 (30)</td>
</tr>
<tr>
<td>Fierke, Melissa</td>
<td>2.58</td>
<td>$150,454 (22)</td>
</tr>
<tr>
<td>Folta, Elizabeth</td>
<td>2.58</td>
<td>$2,074,399 (3)</td>
</tr>
<tr>
<td>Frair, Jacqueline</td>
<td>8.07</td>
<td>$765,539 (9)</td>
</tr>
<tr>
<td>Gibbs, James</td>
<td>8.07</td>
<td>$2,383,107 (2)</td>
</tr>
</tbody>
</table>
Hall, Charles 0.00  $0 (30)
Horton, Thomas 3.00  $37,183 (28)
Kimmerer, Robin 1.33  $456,860 (16)
Leopold, Donald 5.37  $3,903,570 (1)
Limburg, Karin 4.00  $594,951 (11)
Lomolino, Mark 0.00  $0 (30)
McGee, Gregory 0.17  $14,821 (29)
McNulty, Stacy 3.83  $325,231 (19)
Mitchell, Myron 1.17  $510,008 (13)
Nakas, James 0.00  $0 (30)
Newman, Lee 4.67  $429,653 (17)
Parry, Dylan 3.58  $567,518 (12)
Powell, William 3.33  $1,086,433 (5)
Ringler, Neil 2.00  $766,490 (8)
Rundell, Rebecca 1.00  $100,000 (24)
Ryan, Sadie 6.33  $1,387,475 (4)
Schulz, Kimberly 0.87  $458,874 (14)
Shields, William 1.00  $40,000 (27)
Stewart, Donald 2.00  $46,600 (26)
Teale, Stephen 4.17  $217,853 (20)
Turner, Scott 2.00  $907,432 (7)
Weir, Alexander 0.00  $0 (30)
Whipps, Christopher 1.75  $669,776 (10)

* credit percentages are calculated by ORP to distribute credit for award and proposal activity to each faculty member identified as a PI or CoPI on each Sponsored Program proposal or award, as well as their respective college Departments. As an initial starting point this fiscal year, ORP has issued credit as follows: the identified Principal Investigator of a proposal or award will receive 2-parts credit and each CoPrincipal Investigator will receive 1-part credit. For example: For a proposal or award with a PI and two CoPIs, the PI and his/her respective Faculty will receive 2/4=50% credit, and each CoPI and respective Faculty would receive ¼=25% credit, for all sponsored program activities. This procedure generally results in fractional numbers of proposal/awards credited to each faculty member and his/her respective college Department, as well as the respective fractional portion of the total proposal, award or expenditure amount.

** rank by credited amount; 1 highest, 30 lowest

Appendix F lists all active grants of each EFB faculty. For the 12-month period ending 4/30/13, EFB accounted for 36.1% of all active sponsored research projects at ESF (of 382 total, all units) and 37.5% of the $13,255,587 of all sponsored program expenditures by all units at ESF. The average amount of expenditure per project was $35,959 versus $32,524 in the last reporting period.

Sponsored program expenditure activity by PI/coPI among EFB faculty for the 12-month reporting period ending 4/30/13 follows. Dr. Leopold had the highest credited number of program expenditures, followed by Drs. Gibbs, Limburg and Farrell (tie), and Kimmerer. Dr. Leopold had the highest credited dollar amount of program expenditures, followed by Drs. Farrell, Powell, Schulz, and Teale.
### Sponsored Program Expenditure Activity Summary by PI/CoPI
(12-Month Period ending 4/30/13)

<table>
<thead>
<tr>
<th>Name</th>
<th>Credited Number</th>
<th>Credited Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrahamson, Lawrence</td>
<td>1.45</td>
<td>$135,648 (12*)</td>
</tr>
<tr>
<td>Castello, John</td>
<td>0.58</td>
<td>$3,148 (29)</td>
</tr>
<tr>
<td>Cohen, Jonathan</td>
<td>6.00</td>
<td>$212,655 (6)</td>
</tr>
<tr>
<td>Dovciak, Martin</td>
<td>4.03</td>
<td>$61,802 (20)</td>
</tr>
<tr>
<td>Farrell, John</td>
<td>8.33</td>
<td>$623,453 (2)</td>
</tr>
<tr>
<td>Fernando, Danilo</td>
<td>1.33</td>
<td>$76,795 (18)</td>
</tr>
<tr>
<td>Fierke, Melissa</td>
<td>2.50</td>
<td>$34,361 (23)</td>
</tr>
<tr>
<td>Frait, Jacqueline</td>
<td>8.17</td>
<td>$100,474 (14)</td>
</tr>
<tr>
<td>Gibbs, James</td>
<td>9.07</td>
<td>$83,389 (17)</td>
</tr>
<tr>
<td>Hall, Charles</td>
<td>3.00</td>
<td>$71,114 (19)</td>
</tr>
<tr>
<td>Horton, Thomas</td>
<td>3.17</td>
<td>$92,571 (15)</td>
</tr>
<tr>
<td>Kimmerer, Robin</td>
<td>8.00</td>
<td>$119,782 (13)</td>
</tr>
<tr>
<td>Leopold, Donald</td>
<td>15.37</td>
<td>$855,990 (1)</td>
</tr>
<tr>
<td>Limburg, Karin</td>
<td>8.33</td>
<td>$167,547 (10)</td>
</tr>
<tr>
<td>Lomolino, Mark</td>
<td>1.00</td>
<td>$6,038 (28)</td>
</tr>
<tr>
<td>McGee, Gregory</td>
<td>0.20</td>
<td>$2,883 (30)</td>
</tr>
<tr>
<td>McNulty, Stacy</td>
<td>3.03</td>
<td>$85,246 (16)</td>
</tr>
<tr>
<td>Mitchell, Myron</td>
<td>7.92</td>
<td>$201,963 (8)</td>
</tr>
<tr>
<td>Nakas, James</td>
<td>2.00</td>
<td>$2,883 (30)</td>
</tr>
<tr>
<td>Newman, Lee</td>
<td>3.17</td>
<td>$203,813 (7)</td>
</tr>
<tr>
<td>Parry, Dylan</td>
<td>1.58</td>
<td>$19,339 (25)</td>
</tr>
<tr>
<td>Powell, William</td>
<td>5.67</td>
<td>$257,401 (3)</td>
</tr>
<tr>
<td>Ringer, Neil</td>
<td>2.33</td>
<td>$181,059 (9)</td>
</tr>
<tr>
<td>Ryan, Sadie</td>
<td>2.67</td>
<td>$36,385 (22)</td>
</tr>
<tr>
<td>Schulz, Kimberly</td>
<td>6.70</td>
<td>$242,748 (4)</td>
</tr>
<tr>
<td>Shields, William</td>
<td>0.00</td>
<td>$16,612 (26)</td>
</tr>
<tr>
<td>Stewart, Donald</td>
<td>0.00</td>
<td>$0 (31)</td>
</tr>
<tr>
<td>Teale, Stephen</td>
<td>7.92</td>
<td>$218,068 (5)</td>
</tr>
<tr>
<td>Turner, Scott</td>
<td>2.00</td>
<td>$37,753 (21)</td>
</tr>
<tr>
<td>Weir, Alexander</td>
<td>1.00</td>
<td>$28,887 (24)</td>
</tr>
<tr>
<td>Whipps, Christopher</td>
<td>2.08</td>
<td>$164,167 (11)</td>
</tr>
</tbody>
</table>

*rank by credited amount; 1 highest, 31 lowest

### Patents and Patent Applications

**Listing of Awards and Recognition**

Charles A.S. Hall: SUNY Chancellor’s Award for Excellence in Scholarship and Creative Activities

Kimberly L. Schulz: SUNY-ESF Exemplary Researcher Award
Outreach and Service

Service to the department, college, and university

A summary of service by each faculty member to the department, college, and university is given in Appendix G.

Enumeration of outreach activities

Appendix H shows unfunded service by EFB faculty to government agencies, public interest groups, etc. This list does not include the many hours of outreach made by our Instructional Support Specialists, graduate students, and undergraduate students. For example, the Instructional Support Specialists who manage our Roosevelt Wildlife Collection and the Illick greenhouses (Ron Giegerich and Terry Ettinger, respectively) host numerous tours for the ESF community (e.g., Family & Friends Barbeque, Annual Alumni Tour, college visitors which include many school groups).

Besides the numerous phone and email inquiries that faculty receive from the public, news channels, and newspapers, Ron Giegerich, Terry Ettinger, and Kim Adams respond to many similar requests for information from these sources. For example, Kim Adams receives hundreds of requests for information. Terry Ettinger assisted in the development and delivery of dozens of episodes of the ESF/Time Warner Cable “Going Green” collaboration which is broadcast weekly across all of upstate New York, western Massachusetts, and northern Pennsylvania and available on the web. Ron Giegerich coordinates EFB’s day at the NYS Fair each August which attracts hundreds of visitors.

Although there are no data to support this claim, the Department generates more print in the Syracuse Post-Standard than all other academic departments combined, and all other offices at ESF and Syracuse University (except their athletic programs). Most of the dozens of local newspaper articles of this past year are posted in the main foyer of Illick. Much media attention often comes from beyond central New York, e.g., the Wall Street Journal featured the American chestnut research being done by Drs. William Powell and Charles Maynard (FNRM); later in the fall their work was highlighted in Nature. Increasingly, important web sites are featuring work done by EFB faculty, e.g., Marketplace (American Public Media; radio and website), National Geographic, Science Daily, Our Amazing Planet, MSNBC, and CBS News.

Unfunded service to professional societies and organizations is summarized in Appendix I. Appendix J summarizes the funded service by EFB faculty to government agencies, public interest groups, etc. Appendix K lists the presentations made to the public by EFB faculty and Appendix L includes miscellaneous publications and outreach materials.

Summary of grant panel service (by agency)
J. Gibbs: National Science Foundation / Population and Community Ecology Pre-proposal review panel 27-29 March 2013.
K. Schulz: National Science Foundation Panel, Division of Environmental Biology; 26-29 March 2013

Summary of journal editorial board service
Animal Conservation: S. Ryan
Bio-Complexity: S. Turner
Ecology and Society: K. Limburg
Ecology of Freshwater Fish: N. Ringler
Estuaries and Coasts: K. Limburg
Frontiers of Biogeography: M. Lomolino
Frontiers in Ecology and the Environment: K. Limburg
Journal of Great Lakes Research: J. Farrell (Guest Editor for special issue on Great Lakes Connecting Channels)
Intelligent Buildings International: S. Turner (Guest Editor for special issue)
International Journal of Phytoremediation: L. Newman (co-Editor-in-Chief)
Mycorrhiza: T. Horton
Northeastern Naturalist: D. Leopold
PLoS One: S. Ryan
Reviews in Ecological Economics: K. Limburg (Founding editor with R. Costanza and I. Kubieszewski).

Number of journal manuscripts reviewed by faculty (#journals/total #manuscripts reviewed; excludes numerous reviews of NSF, EPA, USDA, McIntire-Stennis, etc. proposals)

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Journal Manuscripts Reviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castello, J.</td>
<td>1/1</td>
</tr>
<tr>
<td>Cohen, J.</td>
<td>3/4</td>
</tr>
<tr>
<td>Dovciak, M.</td>
<td>4/4</td>
</tr>
<tr>
<td>Farrell, J.</td>
<td>1/6</td>
</tr>
<tr>
<td>Fernando, D.</td>
<td>2/2</td>
</tr>
<tr>
<td>Fierke, M.</td>
<td>5/6</td>
</tr>
<tr>
<td>Folta, E.</td>
<td>3/4</td>
</tr>
<tr>
<td>Frair, J.</td>
<td>1/14</td>
</tr>
<tr>
<td>Gibbs, J.</td>
<td>?</td>
</tr>
<tr>
<td>Hall, C.</td>
<td>3/5</td>
</tr>
<tr>
<td>Horton, T.</td>
<td>3/6</td>
</tr>
<tr>
<td>Kimmerer, R.</td>
<td>2/3</td>
</tr>
<tr>
<td>Leopold, D.</td>
<td>4/7</td>
</tr>
<tr>
<td>Limburg, K.</td>
<td>11/11</td>
</tr>
<tr>
<td>Lomolino, M.</td>
<td>12/14</td>
</tr>
<tr>
<td>McGee</td>
<td>0</td>
</tr>
<tr>
<td>Mitchell, M.</td>
<td>2/3</td>
</tr>
<tr>
<td>Nakas, J.</td>
<td>5/5</td>
</tr>
<tr>
<td>Newman, L.</td>
<td>5/5</td>
</tr>
<tr>
<td>Parry, D.</td>
<td>4/5</td>
</tr>
<tr>
<td>Powell, W.</td>
<td>3/5</td>
</tr>
<tr>
<td>Ringler, N.</td>
<td>2/2</td>
</tr>
<tr>
<td>Rundell, R.</td>
<td>8/8</td>
</tr>
<tr>
<td>Ryan, S.</td>
<td>6/10</td>
</tr>
<tr>
<td>Schulz, K.</td>
<td>0</td>
</tr>
<tr>
<td>Shields, W.</td>
<td>4/4</td>
</tr>
<tr>
<td>Stewart, D.</td>
<td>?</td>
</tr>
<tr>
<td>Teale, S.</td>
<td>3/4</td>
</tr>
<tr>
<td>Turner, S.</td>
<td>7/8</td>
</tr>
<tr>
<td>Weir, A.</td>
<td>2/2</td>
</tr>
<tr>
<td>Whipps, C.</td>
<td>10/17</td>
</tr>
</tbody>
</table>

Listing of Awards and Recognition
Melissa K. Fierke: SUNY-ESF Quality of Work Life Presidential Award for Public Service/Outreach

Service Learning

Besides the engagement of students in classes listed below, EFB students were also very involved through independent studies (EFB 498) and internships (EFB 420).
EFB faculty indicate that the following courses have specific service learning components:

**EFB 496/796 Introduction to Environmental Interpretation and EFB 498 (Folta)** - Nine students volunteered to give a plant program at Wheeler Elementary School. One student as part of her independent research project (EFB 498) designed the plant program and then led students from EFB
496/796 as they presented the program to each of the three 4th grade classes. Each student volunteered approximately 5 hours of his or her time to this project. This is the second year we have partnered with Wheeler Elementary.

**EFB 417/617 Non-Personal Environmental Interpretative Methods (Folta)** – The students worked with Baltimore Woods, NYS Project Learning Tree (managed by the Department of Environmental Conservation), Clark Reservation State Park, Green Lakes State Park, Franciscan Earth Corps, Rosamond Gifford Zoo, New York State Outdoor Education Association, and NY State Parks – Albany Office. The students created brochures and podcasts for the organizations to use. A couple of the hiring organizations also asked students to create waysides exhibits for them. Below are links to the podcasts created by the students in EFB 417/617:

- **Baltimore Woods Nature Center -** [https://docs.google.com/file/d/0B5Gq8xMtqyrZTWmV5QU5Ub0ezZU0/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZTWmV5QU5Ub0ezZU0/edit?usp=sharing)
- **Clark Reservation State Park (Augmented Reality) -** [https://docs.google.com/file/d/0B5Gq8xMtqyrZREppT283cjFOems/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZREppT283cjFOems/edit?usp=sharing)
- **Clark Reservation State Park (Nature Play) -** [https://docs.google.com/file/d/0B5Gq8xMtqyrZYWVRUTIXX1RjZWM/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZYWVRUTIXX1RjZWM/edit?usp=sharing)
- **Franciscan Earth Corp -** [https://docs.google.com/file/d/0B5Gq8xMtqyrZUU9FaFRONGhMcTQ/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZUU9FaFRONGhMcTQ/edit?usp=sharing)
- **Rosamond Gifford Zoo (FrogWatch USA) -** [https://docs.google.com/file/d/0B5Gq8xMtqyrZNC1BUS1sUkJwTTQ/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZNC1BUS1sUkJwTTQ/edit?usp=sharing)
- **New York State Parks (Great Lakes) -** [https://docs.google.com/file/d/0B5Gq8xMtqyrZQWFFQmphNk1tLWM/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZQWFFQmphNk1tLWM/edit?usp=sharing)
- **New York State Outdoor Education Association –** [https://docs.google.com/file/d/0B5Gq8xMtqyrZR0FTeFJTT3V0S28/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZR0FTeFJTT3V0S28/edit?usp=sharing)
- **New York State Project Learning Tree -** [https://docs.google.com/file/d/0B5Gq8xMtqyrZSmVRNTVpNUFsMkU/edit?usp=sharing](https://docs.google.com/file/d/0B5Gq8xMtqyrZSmVRNTVpNUFsMkU/edit?usp=sharing)

In total, the students donated over 788 hours to the eight different community organizations. The majority of the organizations have worked with us for several years now and would like to participate again in the future.

**EFB 496/796 Advance Interpretation & Certification (Folta)** – This was a trial course that was offered for the first time this year. As part of this course, the students created and delivered programs at Baltimore Woods Nature Center and Beaver Lake Nature Center. Each group of students had to present the same program at both locations to gain experience in adapting their programs for different locations and different audiences. Students presented six different programs focusing on the following topics: bird watching, wildlife tracks and signs, Leave No Trace, tree life cycle, and nature journaling. The students contributed over 120 hours to the development and delivery of these programs.

**EFB 496 Wildlife Techniques (Frair)** has a service-learning component where students engage with both the NYS Department of Environmental Conservation and the general public on a long-term wildlife population survey at the Wilson Hill Wildlife Management Area. This annual “goose round-up” involves herding flightless (molting) geese into pens to affix or read existing leg bands. The goals are to collect biological data on the Canada goose populations and also to bring together as many people and organizations as possible at a conservation event to improve communication and understanding. Each year over 140 people participate in the drive, and this wildlife techniques class has been involved for the past 4 summers through my class. Students receive training on how to handle large numbers of birds, proper techniques of aging and sexing geese, as well as techniques for involving the public in conservation activities. In some years we participate in additional goose drives, such as one at Saranac
Lake two years ago that gave a much more personal involvement of students with the public and even led to interviews with the press.

**EFB 496 Hunter and Trapper Education for Wildlife Professionals (Frair)** is fundamentally a service-learning oriented course. Students actively engage with the hunting and trapping public both through the training they receive for the different certification components and also in spending weekends at hunter check stations recording the demographic composition of harvested waterfowl and deer.

**Introducción a la Investigación Científica (Introduction to Scientific Investigation) (Gibbs),** 40 hours, 21 students, 1 lab section, Universidad Central del Ecuador / Galapagos Campus. Service learning component: the laboratory for this course spans a six-month period during which time students are implementing course concepts in experimental design to assess a problem identified by the Galapagos National Park Service, that is, whether the impacts of feral chickens on native plants warrant Park implementation of control measures.

**EFB 446/646 The Ecology of Mosses (Kimmerer),** the students are responsible for developing an outreach program to communicate their growing knowledge of bryophytes to a public audience. This year they chose to create a bryophyte ecology education program for the Heiberg Forest Nature Trail. They conducted a bryophyte biodiversity inventory to support planning at the forest, developed an interactive learning activity involving geo-caching to teach about the diversity and ecological roles of bryophytes in the forest. These materials will be shared with the Heiberg Forest.

**EFB 305/605/NAT300 Indigenous Issues and Environment (Kimmerer),** the students hosted a forum on Indigenous Issues and the Environment with visitors from the College of the Menominee Nation, sharing ESF programs with their tribal college counterparts.

**EFB 524, Limnology Practicum (Schulz),** had a significant service learning component for the third time this year. Students worked with two allied local lake associations (Song Lake Association and COFOKLA – Cortland Onondaga Federation of Kettle Lake Associations) to develop their independent projects on topics that were both scientifically relevant and of interest to the homeowners. About half of student time in the course was devoted to developing and performing these independent projects, in cooperation with homeowners. This culminated in a scientific poster session and reception in 12 Illick Hall during finals week that was open to the public and attended by over 50 individuals including other undergraduate and graduate students not in the Practicum, faculty, and members of the Song Lake Association and COFOKLA, as well as the community. The projects continue to expand a database of water quality and species presence data that will be useful to the homeowners in lake management decisions. Among other projects, the students looked at potential reproduction of introduced grass carp in Song Lake, microsite diversity of organisms in Song Lake, and salt tolerance of organisms in one of the other kettle lakes that is potentially exposed to large amounts of road salt runoff in winter and spring. One group also followed up on previous work the past two years related to potential presence of an endangered fish, the lake chubsucker, which has not been seen in NY for 60 years in Song Lake (my lab is following up on these discoveries along with Donald Stewart and Christopher Whipp's groups following funding from the GLRC that will support genetic analyses in summer 2013). After the ESF poster presentation, the students were invited to present their posters at a COFOLKLA meeting on April 22, 2013 (after the fall term limnology class and during a busy time in the spring term), and students from every group brought the class posters to this meeting and met with the public and regional lake association members. Even a student who graduated in December 2012 and was about to start a job as working in the Caribbean as a dive assistant and marine ecology educator the following week came with his poster. This service learning component seemed highly beneficial for both students and the public, and I hope to continue similar efforts in the future with this class.
Graduate Students

By the end of this reporting year, 28 (38, previous year) graduate students (Appendices N and O) completed all degree requirements for the Ph.D., M.S., or M.P.S. degree.

Number of students by degree objectives

At the beginning of this past academic year, there were 156 graduate students officially enrolled in EFB, which ties the highest number of graduate students ever enrolled in EFB graduate programs, set last year. The lowest number of graduate students in EFB since 2005 was 128, at the beginning of fall 2008. The average number of EFB graduate students each fall since 2005 is 142.

EFB graduate students are about 27% of the total number of all full- and part-time graduate students at ESF. Of this EFB total, about 54% (55% previous year) were in our M.S., 9% (10%) M.P.S., and 37% (35%) Ph.D. programs. The approximate percentage of students in each of our nine graduate areas of study is as follows (with percentages of previous year in parentheses):

<table>
<thead>
<tr>
<th>Graduate Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology</td>
<td>30% (33%)</td>
</tr>
<tr>
<td>Fish and Wildlife Biology and Management</td>
<td>25% (24%)</td>
</tr>
<tr>
<td>Conservation Biology</td>
<td>19% (19%)</td>
</tr>
<tr>
<td>Plant Science and Biotechnology</td>
<td>6% (8%)</td>
</tr>
<tr>
<td>Entomology</td>
<td>5% (4%)</td>
</tr>
<tr>
<td>Environmental Interpretation</td>
<td>5% (4%)</td>
</tr>
<tr>
<td>Forest Pathology and Mycology</td>
<td>3% (3%)</td>
</tr>
<tr>
<td>Chemical Ecology</td>
<td>3% (2%)</td>
</tr>
<tr>
<td>Undeclared</td>
<td>3% (2%)</td>
</tr>
<tr>
<td>Applied Ecology</td>
<td>&lt;1% (1%)</td>
</tr>
<tr>
<td>Environmental Physiology</td>
<td>0% (0%)</td>
</tr>
</tbody>
</table>

Graduate student national fellowships/awards (new awards only; all graduate student awards listed in Appendix P)

Juan Carlos Alvarez-Yepiz  Ecological Society of America Plant Population Ecology Section Travel Award
Michelle Avis              Garden Club of America 2012 Francis M. Peacock Scholarship
Michelle Avis              Northeast Bird Conservation Conference Travel Grant
Michelle Avis              The Goldenrod Foundation Equipment Grant
Ceili Bachman              Edna Bailey Sussman Foundation Fellowship
Silvia Saldivar Bellassai  Sequoia Park Zoo grant
Elaina Burns               The River Otter Alliance grant
Elaina Burns               SUNY Potsdam Walker Fellowship
Jonathan Cale              Northeastern States Research Cooperative Graduate Research Grants
Jenna Carlson              Edna Bailey Sussman Foundation Fellowship
Anand Chaudhary            Edna Bailey Sussman Foundation Fellowship
Joelle Chille              Edna Bailey Sussman Foundation Fellowship
Thomas Evans               Edna Bailey Sussman Foundation Fellowship
Daniel Gurdak              Society of Wetlands Scientists Student Research Grant
Danielle Marie Hurley      Edna Bailey Sussman Foundation Fellowship
Georgia R. Keene           Edna Bailey Sussman Foundation Fellowship
Georgia R. Keene           Entomological Society of America Annual Meeting, 2nd place, poster
presentation in the Plant-Insect Ecosystem section

Stewart LaPan  Edna Bailey Sussman Foundation Fellowship
Jill Mandel  Sigma Xi Grant-in-Aid of Research
Michael O’Brien  Northeastern States Research Cooperative Graduate Research Grants
Jay Ward Wason III  Edna Bailey Sussman Foundation Fellowship
Patrick Raney  The A.V. Stout Fund/The Norcross Wildlife Foundation, Inc. grant
Stephanie Smith  Rosen Fellowship

Graduate recruitment efforts

There were 140 graduate applications to EFB for spring ’13 (16) and fall ’13 (124) matriculation, versus 183 in the last reporting period. This total number of applications, specifically the decrease compared to the past two years (183 applications last reporting period was the largest number ever; 169 the year before), is misleading as a number of EFB faculty strongly discourage potential applicants to formally apply if a review of submitted materials indicates that acceptance and funding are unlikely. Some of us individually recommend to two or three dozen potential applicants each, not to formally apply. The EFB faculty with the most robust graduate programs are generally those who receive the largest number of grad school inquiries and formal grad applications. Of the 124 applicants for fall ’13 matriculation, 72 (58%) were rejected, versus a rejection rate of 32% last year.

Despite this significant decrease in total number of applications, EFB has recruited at least 36 new graduate students (i.e., “new” since August 2012) for this coming academic year versus 34 last year. As of mid July 2013, at least 22 new graduate students (i.e., “accepted/coming” applicants) will matriculate this fall ’13 semester (versus about 25 for fall semester 2012). Ten additional students have been accepted but have not yet indicated whether they will matriculate this fall. Another eleven applicants are still being considered for matriculation this fall. Illick Hall was not designed to accommodate the current number of graduate students in EFB. As tight as office and lab space were for the 128 graduate students in 2008, with 28 additional grads in the program now we have exceeded our capacity to provide sufficient space for all graduate students, especially after loosing two of the largest graduate offices on the fifth floor of Illick due to construction.

Recently, EFB has not had sufficient capacity to increase graduate enrollment in Wildlife Sciences and Toxicology. With the addition of new faculty in these areas (Drs. Shannon Farrell and Gordon Paterson, respectively) we should quickly see graduate enrollments increase in EFB although finding adequate space will only become a greater challenge than it is now.

After many years of debate at EFB faculty meetings the faculty agreed in January 2012 to a greatly revised ranking system of all graduate applicants. The ranking system used for decades was based only on an applicant’s gpa and GRE scores, never including other measures of potential success in our graduate program. Although many of the top-ranked graduate applicants did complete their graduate programs in a timely manner and produced the products (including peer-reviewed journal papers) expected by the faculty, an unacceptable number have not. Beginning this past January, all EFB graduate applicants were ranked according to this scheme:

• 1st authored peer reviewed pub: 100 pts, or 125 pts if done while an undergrad; (PER PAPER)
• 2nd authored/multi-authored: 50 pts  (PER PAPER)
• Master's degree (not MPS): 75 pts
• Discretionary points for each faculty person to dispense: 150 pts
This new scheme has now been applied to three cohorts of applications, i.e., those who applied for fall ’12 and ’13 and spring ‘13 matriculation. The use of this new ranking scheme did indeed greatly alter the ranking of all applicants, and the faculty generally seemed very pleased by the change. However, it will take a few years to evaluate whether our new scheme helps us accept and support the applicants who are likely to be most successful in our graduate program.

The most exciting news about EFB’s graduate program is that after many months of negotiations and planning by Dr. James Gibbs, five Ukrainian graduate students entered the department’s MPS program in Conservation Biology in January 2013, with the hope that a new cohort will come in future years. These exceptional students, from National University of Kyiv-Mohyla Academy (NAUKMA), will jointly earn a NaUKMA Master’s Diploma in Environmental Studies from NAUKMA and MPS from EFB. Dr. Gibbs is pursuing similar programs with other international partners.

Graduate recruitment remains highly dependent on the efforts of individual faculty members in attracting graduate students into their programs. We stress the importance of updated faculty web pages and the importance of faculty obtaining research grants to provide graduate stipends and tuition-waivers through graduate research assistantships (GRAs). In recent years, EFB has been allocated 39.5 graduate teaching assistantships (GTAs); our graduate enrollment at the beginning of the past two AYs has been at least 150. Although we have about 40% of the full-time graduate students at ESF, we receive about 30% of the 132 state-funded graduate assistantships. GRAs are critical for maintaining and expanding our graduate support. These GRAs can provide a larger stipend than that provided by TAs and include support for the full calendar year. Teaching assistantships only provide academic year support. A robust graduate program can only be sustained by recruiting graduate students who are competitive for GTAs and national fellowships, and having an active research program that provides GRAs.

**Graduate student advising**

Below shows the approximate number of graduate students advised last academic year by each EFB faculty member, as each have reported. Some EFB faculty advise graduate students in other departments, especially in GPES, and even at other institutions. Co-major professors are counted as 0.5 graduate students.

<table>
<thead>
<tr>
<th>Name</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castello</td>
<td>2</td>
</tr>
<tr>
<td>Cohen</td>
<td>5</td>
</tr>
<tr>
<td>Dovciak</td>
<td>4.5</td>
</tr>
<tr>
<td>Farrell</td>
<td>9</td>
</tr>
<tr>
<td>Fernando</td>
<td>5.5</td>
</tr>
<tr>
<td>Fierke</td>
<td>3.5</td>
</tr>
<tr>
<td>Folta</td>
<td>9</td>
</tr>
<tr>
<td>Frair</td>
<td>6.5</td>
</tr>
<tr>
<td>Gibbs</td>
<td>11.5</td>
</tr>
<tr>
<td>Hall</td>
<td>7</td>
</tr>
<tr>
<td>Horton</td>
<td>4</td>
</tr>
<tr>
<td>Kimmerer</td>
<td>6.5</td>
</tr>
<tr>
<td>Leopold</td>
<td>16</td>
</tr>
<tr>
<td>Limburg</td>
<td>5</td>
</tr>
<tr>
<td>Lomolino</td>
<td>3</td>
</tr>
<tr>
<td>McGee</td>
<td>1</td>
</tr>
<tr>
<td>McNulty</td>
<td>4</td>
</tr>
<tr>
<td>Mitchell</td>
<td>4</td>
</tr>
<tr>
<td>Nakas</td>
<td>2</td>
</tr>
<tr>
<td>Newman</td>
<td>6.5</td>
</tr>
<tr>
<td>Parry</td>
<td>1.5</td>
</tr>
<tr>
<td>Nakas</td>
<td>2</td>
</tr>
<tr>
<td>Newman</td>
<td>6.5</td>
</tr>
<tr>
<td>Parry</td>
<td>1.5</td>
</tr>
<tr>
<td>Weedon</td>
<td>1</td>
</tr>
<tr>
<td>Weir</td>
<td>1.5</td>
</tr>
<tr>
<td>Whipps</td>
<td>4.5</td>
</tr>
</tbody>
</table>
Courses having TA support and enrollment in each course:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Name</th>
<th># of Students</th>
<th># of GTAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>General Biology Lecture I</td>
<td>304</td>
<td>2.5</td>
</tr>
<tr>
<td>102</td>
<td>General Biology Lab I</td>
<td>267</td>
<td>7.5</td>
</tr>
<tr>
<td>103</td>
<td>General Biology Lecture II</td>
<td>180</td>
<td>3</td>
</tr>
<tr>
<td>104</td>
<td>General Biology Lab II</td>
<td>162</td>
<td>5</td>
</tr>
<tr>
<td>120</td>
<td>Global Environment (spring)</td>
<td>116</td>
<td>3</td>
</tr>
<tr>
<td>132</td>
<td>Orientation Seminar</td>
<td>121</td>
<td>0.5</td>
</tr>
<tr>
<td>200</td>
<td>Physics of Life</td>
<td>132</td>
<td>0.5</td>
</tr>
<tr>
<td>210</td>
<td>Diversity of Life I</td>
<td>175</td>
<td>3</td>
</tr>
<tr>
<td>211</td>
<td>Diversity of Life II</td>
<td>153</td>
<td>3</td>
</tr>
<tr>
<td>217</td>
<td>Peoples, Plagues, &amp; Pests</td>
<td>132</td>
<td>0.5</td>
</tr>
<tr>
<td>220</td>
<td>Urban Ecology</td>
<td>20+</td>
<td>0.5</td>
</tr>
<tr>
<td>300</td>
<td>Intro to Geospatial Information Systems</td>
<td>?</td>
<td>1</td>
</tr>
<tr>
<td>303</td>
<td>Intro Environ. Microbiology</td>
<td>56</td>
<td>2</td>
</tr>
<tr>
<td>305/605</td>
<td>Indigenous Issues and the Environment</td>
<td>30</td>
<td>0.5</td>
</tr>
<tr>
<td>307/308</td>
<td>Principles of Genetics</td>
<td>184</td>
<td>5</td>
</tr>
<tr>
<td>311</td>
<td>Principles of Evolution</td>
<td>170</td>
<td>1</td>
</tr>
<tr>
<td>320</td>
<td>General Ecology</td>
<td>228</td>
<td>5</td>
</tr>
<tr>
<td>325</td>
<td>Cell Biology</td>
<td>94</td>
<td>1</td>
</tr>
<tr>
<td>326</td>
<td>Diversity of Plants</td>
<td>55</td>
<td>2</td>
</tr>
<tr>
<td>336</td>
<td>Dendrology</td>
<td>177</td>
<td>2</td>
</tr>
<tr>
<td>340</td>
<td>Forest &amp; Shade Tree Pathology</td>
<td>31</td>
<td>0.5</td>
</tr>
<tr>
<td>351</td>
<td>Forest Entomology</td>
<td>89</td>
<td>2</td>
</tr>
<tr>
<td>355</td>
<td>Invertebrate Zoology</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>360</td>
<td>Epidemiology</td>
<td>32</td>
<td>0.5</td>
</tr>
<tr>
<td>385</td>
<td>Comparative Vertebrate Anatomy</td>
<td>42</td>
<td>1.5</td>
</tr>
<tr>
<td>390</td>
<td>Principles of Wildlife Management</td>
<td>71</td>
<td>1</td>
</tr>
<tr>
<td>401/601</td>
<td>Molecular Biology Techniques</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>413</td>
<td>Introduction to Conservation Biology</td>
<td>82</td>
<td>1</td>
</tr>
<tr>
<td>415/615</td>
<td>Biogeochemistry</td>
<td>39</td>
<td>0.5</td>
</tr>
<tr>
<td>416/616</td>
<td>Intro. Environmental Interpretation</td>
<td>34</td>
<td>1</td>
</tr>
<tr>
<td>417/617</td>
<td>Advanced Perspectives of Interpretation</td>
<td>27</td>
<td>1</td>
</tr>
<tr>
<td>419</td>
<td>Problem Solving in Conserv. Biol.</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>425(BTC)</td>
<td>Plant Biotechnology</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>424/525</td>
<td>Limnology/Limnology Practicum</td>
<td>67</td>
<td>1</td>
</tr>
<tr>
<td>428/628</td>
<td>Mycorrhizal Ecology</td>
<td>27</td>
<td>0.5</td>
</tr>
<tr>
<td>445/645</td>
<td>Plant Ecology</td>
<td>54</td>
<td>1</td>
</tr>
<tr>
<td>446/646</td>
<td>Ecology of Mosses</td>
<td>17</td>
<td>0.5</td>
</tr>
<tr>
<td>462/662</td>
<td>Animal Physiol.: Environ. &amp; Ecol.</td>
<td>93</td>
<td>0.5</td>
</tr>
<tr>
<td>480</td>
<td>Principles of Animal Behavior</td>
<td>100</td>
<td>3</td>
</tr>
<tr>
<td>482</td>
<td>Ornithology</td>
<td>45</td>
<td>1</td>
</tr>
<tr>
<td>483</td>
<td>Mammal Diversity</td>
<td>76</td>
<td>2</td>
</tr>
<tr>
<td>485</td>
<td>Herpetology</td>
<td>66</td>
<td>1</td>
</tr>
<tr>
<td>486</td>
<td>Ichthyology</td>
<td>73</td>
<td>2</td>
</tr>
<tr>
<td>487</td>
<td>Fisheries Science and Management</td>
<td>34</td>
<td>1</td>
</tr>
</tbody>
</table>
Governance and Administrative Structure

Components:

Chair (D. Leopold)

Duties:
- 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
- Supervise about 35 faculty, one administrative assistant, two Instructional Support Specialists and other staff
- Promote faculty and staff within and outside of the department and facilitate the many good ideas that regularly emanate from faculty
- Ensure 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
- Prepare annual department report

Associate Chairs (J. Castello and J. Gibbs)

Duties: One (J. Castello) assists with annual EFB preconvocation student awards recognition, supervises the Keyboard 1 and 2 Specialists in the main administrative office, assists in other miscellaneous ways. The other (J. Gibbs) is working on benchmarking.


Curriculum and Course Assessment Committee (K. Schulz, chair; C. Whipps, M. Fierke, J. Gibbs, G. McGee, L. Newman)

Duties: review all course and curricula changes in EFB and College; oversee course assessment of seven EFB undergraduate majors

Graduate Program Advisory Committee (K. Limburg, chair; M. Dovciak, D. Fernando, M. Fierke, T. Horton; Jeremy Hayward and Kean Clifford, graduate student representatives)

Duties: advise chair on graduate matters and facilitate department decisions about policies

Building and Space Committee (currently vacant)

Field Program (including International Programs) Committee (Stephen Teale, chair; R. Davis, J. Farrell, C. Nowak, A. Weir, C. Westbrook)

Awards Committee (chaired by J. Castello)
- Undergraduate and Graduate Academic Awards
Illustrious Alumni, Emeriti Awards

Supporting Offices, Committees, Directors, and Coordinators

Administrative Office

- Office Manager/Secretary 1 (Sandra Polimino)
  Duties: manages all department accounts (state, research foundation, and Development) and submits payment for department bills; manages ranking of graduate applicants and currently overseeing administrative aspects of EFB graduate program; assists with annual student recognition the day of convocation; manages EFB’s digital display in foyer; manages requests by faculty for all vehicles for their classes; assists in managing the chair’s calendar and schedule; assists in development activities; assists faculty in various ways; handles reimbursements, etc. for seminar speakers; assists the chair with a multitude of tasks.

- Keyboard Specialist 2 (AnnMarie Clarke)
  Duties: provides support to Undergraduate Curriculum Director (UCD) for undergraduate program (7 majors); schedules prospective/accepted undergraduate student visits with Admissions; assists UCD with open house and transfer days; oversees summer mailings to incoming students; revises undergraduate handbook; assists with data collection for Undergraduate Program Assessments; provides faculty support for manuscripts, class work, and report preparations; assists with arranging meetings, conferences, travel and hotel accommodations; orders department supplies; processes State and Research purchase requisitions for faculty and staff; modifies, updates and maintains EFB websites for EFB faculty; handles incoming and outgoing mail when KB 1 is out; handles routine maintenance of office equipment including fax and copier; assists with Cranberry Lake Biological Station registration; assists with assigning rooms for graduate students; provides support to Department Chair and Secretary 1

- Keyboard Specialist 1 (Joanne Rappleyea)
  Duties: responsible for meeting and greeting all visitors to EFB; responds to all inquiries made by faculty, staff, and students; handles all incoming mail for EFB faculty, staff, and graduate students; assists Secretary 1, Keyboard Specialist 2, and Department Chair; orders office supplies for EFB administrative office; sets up a chart of each EFB conference room; handles routine maintenance of office equipment; oversees sign-out of digital equipment; types roster of faculty, staff and other key campus numbers and distributes to EFB faculty, staff, and grads; processes all Work Orders to Physical Plant; types Class Schedules (fall & spring) and post outside main office; processes State and Research purchase requisitions.

Undergraduate Curriculum Director (G. McGee)
Duties:
Coordinate student recruitment events with Admissions;
Develop orientation materials and programs for freshmen and transfer students;
Update curriculum plan sheets, directed elective lists and the student handbook;
Facilitate petitions;
Coordinate department undergraduate advising;
Serve as the department’s representative on the Academic Standards Review Committee;
Compile and summarize ENB assessment data.
Undergraduate Curriculum Coordinators (by major)
   Environmental Biology (G. McGee)
   Aquatic and Fisheries Science (D. Stewart)
   Biotechnology (W. Powell)
   Conservation Biology (J. Gibbs until Dec. ’12; D. Parry since)
   Forest Health (J. Castello)
   Natural History and Interpretation (E. Folta)
   Wildlife Science (J. Cohen)

Graduate Program Director (D. Fernando)
   Duties:
   Act on petitions concerning different aspects of graduate program requirements and policies
   Review and sign (paper form and online) forms required for the completion of different majors and degrees (2A, 3B, 4, 5B and 6B)
   Reply to inquiries concerning EFB graduate program (through email, phone, and/or personal visits) on an almost daily basis from potential applicants and current graduate students
   Process each year about 150 graduate applications that involve the review of each application for initial assessment and designation of faculty reviewers, following up on the completion of the reviews on each application, summarizing the reviews for each application, and submitting EFB’s recommendation for each accepted and rejected applications to the Dean of Instructions and Graduate Studies
   Provide orientation seminars to new graduate students about EFB graduate program and the new faculty about the graduate application process
   Serve as the department’s representative to the Graduate Council and raise issues regarding problems/suggestions on how to improve the graduate program, application and review process; shared the ideas and activities of the Graduate School to the department’s graduate committee and faculty
   Review applications and participate in the deliberations in granting Fellows for SUNY Diversity Fellowship and Bristol Myers Squibb Sustainability Fellowship
   Work with the Graduate Secretary on the update and improvement of the various facets of the EFB’s Graduate Webpage and graduate application filing system

Cranberry Lake Biological Station (A. Weir, Director)
Roosevelt Wild Life Station (J. Gibbs, Director; J. Frair, Associate Director)
Thousand Islands Biological Station (J. Farrell, Director)
Animal Use and Care Protocols (college-wide committee; C. Whipps)
Exhibits Coordinator (E. Folta)

Instructional Support Specialist Supervisors
   • K. Adams – S. Teale
   • R. Giegerich – J. Frair
   • P. McHale – M. Mitchell
   • B. McMaster – D. Leopold
   • T. Ettinger – D. Leopold

Environmental Studies Program Coordinator (C. Hall)
Budget

EFB’s budget comes from four main sources, i.e., (1) state allocations; (2) funds generated from summer courses, grad tuition incentive program, and course fees beginning this next academic year; (3) the SUNY Research Foundation (RF) research incentives funds; and, (4) development funds through the College Foundation. A summary of the allocations from each source and expenditures follows.

State Budget Allocations: $61,750 (same as for ’11-’12, vs. $74,500 initial allocation in ’10-’11 which was reduced to $67,550 in November ‘10; state budget allocation to EFB in ’07-’08 was $79,500 for fewer faculty, students, and courses); excludes search committee allocations from the Provost, Biotechnology, Tree Pest Info Service, and Academic Equipment Replacement allocations – amounts of these shown below)

Initial Allocation (August 29, 2012): $61,750 ($57,000 OTPS; $4,750 TS)

Planned Expenditures:

<table>
<thead>
<tr>
<th>Category</th>
<th>Allocation</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices (administration, faculty, staff, grads)</td>
<td>$12,750</td>
<td>($2,250*)</td>
</tr>
<tr>
<td>Computers</td>
<td>$0</td>
<td>($1,000)</td>
</tr>
<tr>
<td>Photocopy</td>
<td>$5,000</td>
<td></td>
</tr>
<tr>
<td>Mileage/Travel</td>
<td>$2,000 ($-1,000)</td>
<td></td>
</tr>
<tr>
<td>Repairs</td>
<td>$2,000 ($-500)</td>
<td></td>
</tr>
<tr>
<td>Building, facilities, exhibits</td>
<td>$2,000 ($-1,250)</td>
<td></td>
</tr>
<tr>
<td>Seminars and receptions</td>
<td>$8,500</td>
<td></td>
</tr>
<tr>
<td>Chairman Operating (over expenditures, all categories)</td>
<td>$0 ($-4,500)</td>
<td></td>
</tr>
<tr>
<td>Greenhouses</td>
<td>$1,000 ($-2,500)</td>
<td></td>
</tr>
<tr>
<td>Faculty subaccounts and additional requests</td>
<td>$23,750 (+$500)</td>
<td></td>
</tr>
</tbody>
</table>

Total OTPS $57,000 ($-12,500)

Temporary services (TS) $4,750 ($-250)

*numbers in ( ) are the differences with ’10-’11 department budget

Biotechnology accounts: $8,450
Tree Pest Info Service account: $1,600
Academic Equipment Replacement: $34,695.71 (versus $34,696 previous year)
End-of-year allocation: $0 (versus $0 previous year)

Of the extraordinary expenditures that are covered by state funds, the cost of the Department’s pre-Convocation award ceremony and reception for graduating students, their families and friends, and faculty and staff was $5,036.75. The state budget allocation was also used to help cover the costs of invited speakers for EFB’s Adaptive Peaks Graduate Seminar Series. Last year we spent $11,883 on speakers’ travel, food and lodging, fees, and receptions ($6157 from state budget allocation to department during fall semester; spring semester covered by RF Research Incentives funds).
Funds Generated by Summer Courses and Grad Tuition Incentive Program

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Courses:</td>
<td>$4,539.00</td>
</tr>
<tr>
<td>Grad Tuition Incentive Program</td>
<td>$18,999.64</td>
</tr>
<tr>
<td></td>
<td>($6,125.47 fall ’12; $12,874.17 spring ‘13)</td>
</tr>
</tbody>
</table>

Funds from these sources have only recently been available and provide much incentive for the department to offer relevant summer courses during Maymester and Summer Session, as well as increasing enrollment in the department’s M.P.S. programs, the likely graduate programs to see an increase in self-paying students (i.e., those not on state or research graduate assistantships). All of these funds ($23,538.64 total) were used to help pay for the part-time salary and fringe benefits for the Executive Director of The Roosevelt Wild Life Station from 8/1/12 to 8/15/13.

SUNY RF Departmental Research Incentives Funds: $24,274 allocated 10/12 (versus $26,451 last year and $34,405 ’10-’11); carryover of $9,613 balance from previous year; total available $33,887.

Expenditures (by general categories):

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoclave cost-sharing with administration</td>
<td>$5,000</td>
</tr>
<tr>
<td>Department Seminars (incl. Adaptive Peaks)</td>
<td>$8,000</td>
</tr>
<tr>
<td>Faculty and Staff Development and Recognition</td>
<td>$3,600</td>
</tr>
<tr>
<td>Faculty and Staff Equipment and Supplies</td>
<td>$3,500</td>
</tr>
<tr>
<td>TIBS, CLBS undergraduate student fellowships</td>
<td>$0,000</td>
</tr>
<tr>
<td>Building Equipment and Supplies</td>
<td>$3,265</td>
</tr>
<tr>
<td>Student Development and Recognition</td>
<td>$1,300</td>
</tr>
<tr>
<td>Searches (Wildlife Habitat Ecologist, Toxicologist)</td>
<td>$1,647</td>
</tr>
</tbody>
</table>

Total Expenditures $26,312

Balance (July 9, 2013) $7,575

(an additional $1,322 was spent for similar purposes from the $4,412 EFB RI Chair allocation)

The Research Incentives allocation to EFB this past year was $10,000 less than two years ago. The Department could not function without these Research Incentive funds, i.e., the state allocation is insufficient to cover the basic teaching, research, and outreach expenses of a doctoral-granting biology program. Additionally, these funds have to cover expenses of faculty searches not covered by the Provost’s Office. Because of the significant reduction in Research Incentives funds the past two years and anticipated/unanticipated expenditures, the department suspended the TIBS and CLBS undergraduate student summer fellowship programs.

Development Funds ($60,550 budgeted for ’12-’13; does not include balance in EFB Fund nor College Foundation accounts for the RWLS, CNPE)

Undergraduate and graduate student awards come from the following endowments: Maurice and Annette Alexander Wetlands Research Fund, Robert L. Burgess Graduate Scholarship in Ecology, Betty Moore Chamberlaine Memorial Fund, Leroy C. Stegeman
Endowment in Invertebrate Ecology, Robert A. Zabel Endowed Scholarship, John and Etta Simeone Graduate Fellowship, Josiah L. Lowe-Hugh E. Wilcox Scholarship Fund, Phyllis Roskin, Joseph and Ruth Hasenstab, Edwin H. Ketchledge Scholarship, Lanier Memorial, Silverborg Memorial, and Patricia D. and Jeff J. Morrell Scholarship, and Dr. Samuel Grober ’38 Graduate Fellowship. At the annual EFB Spring Celebration and Awards Ceremony prior to the ESF Convocation, $40,840 was given out to EFB undergraduate and graduate students. The list of all awardees is in Appendix P.

A new undergraduate award was established this past spring in honor of Dr. Chun-Juan K. Wang. This award will be given annually to the outstanding graduating woman who best exemplifies Dr. Wang’s love of learning, teaching and research, in hopes that it will inspire her to achieve her highest goals. The Chun Wang Honor Award will be given each May in grateful recognition of the many contributions that Dr. Wang has made to the College since 1959 when she began here as the first woman professor at ESF. Dr. Wang is a Professor Emerita in Botany and Mycology and is a world renowned mycologist, known especially for her groundbreaking work with the Fungi Imperfecti. In addition to her exemplary research, Dr. Wang is highly respected for her years of service as a beloved teacher, introducing generations of students to the wonders of plants through her courses in Botany, Diversity of Plants and many aspects of Mycology. She has inspired hundreds of students with her knowledge, her enthusiasm and her passion for learning and has served as a wise mentor and role model for students and faculty alike. This award was established by the nine women faculty in EFB, representing over 25% of the current EFB faculty.

EFB had an additional $10,650 in a General EFB Fund, the result of occasional donations to the department, primarily from current and retired faculty, and used for end of year student awards that are made at our annual spring recognition ceremony. The total amount of Development funds made available to EFB are about half of the funds that were available in’07-’08 (i.e., $109,213) before substantial endowment losses due to the poor economy.

Over the next few years and beyond we hope to attract sufficient development funds for a variety of significant purposes, including: endowed chairs (in biotechnology, conservation biology, wildlife and fisheries management, etc.), a research and residential building at the TIBS, museum display cases for the Roosevelt Discovery Center, a graduate seminar series, graduate fellowships (to attract the top applicants) and scholarships (to fully fund attendance at professional meetings), and undergraduate scholarships (for recruiting top students and support for attending professional meetings and field trips offered in our program, e.g., to Russia, Ireland, Australia, and Africa).

To have a better chance of reaching these goals EFB took two unprecedented steps. Beginning in May 2012, the department, through ESF’s Development Office, hired a highly successful development person part time (about 20%) for one year. Funds to support this position came from a generous donation from a retired EFB faculty member. The primary focus of this person’s effort has been on fundraising for an endowed professorship in wildlife sciences, the specifics of which will be in a future annual report. In August 2012, the department hired a part-time (50%, first year) Executive Director of the Roosevelt Wild Life Station (Meredith Perreault) to assist Drs. Gibbs (Director) and Frair (Associate Director) with many tasks, including fund raising for numerous initiatives. Funding for this position was cobbled together from funds in the Roosevelt Wild Life Station account, summer salary in grants not taken by Dr. Gibbs, and new sources of funds to the department, i.e., money generated from summer course
offerings and self-paying graduate students. Our hope is that this position can be self-supportive by end of this calendar year.

In May ’12 the ESF College Foundation received a donation of $25K from an alumnus to establish a lecture series and other activities to publicly promote significant activities of ESF faculty. EFB was successful in working with the donor and the development office to craft programs to utilize this gift that will highlight significant activities of the Department. In March 2013 Dr. James Gibbs delivered the first Dale L. Travis Lecture as part of a longer term series that is planned. In April ’13 the ESF College Foundation received another donation of $25K from this alumnus.

**Student Learning Outcomes Assessment**

(please note that due to a sabbatical leave and health issues by key faculty, EFB has not made any significant progress with assessment since last year; therefore, the material presented in last year’s annual report is repeated in this year’s report, with the hope that much progress will be made by next year at this time).

The Department of Environmental and Forest Biology formed in 1977 with the amalgamation of three smaller departments, Forest Zoology, Forest Botany and Pathology, and Forest Entomology. EFB’s undergraduate curriculum has substantially evolved since then, at one point allowing students to pick from nearly one dozen options, but all under the umbrella of our Environmental Biology major. That is, between 1965-2002, the Bachelor of Science in Environmental & Forest Biology was the single undergraduate program offered by the Department of Environmental & Forest Biology.

As part of the department’s strategic planning we adopted a vision statement in November 2001 that included as a key task the importance of strengthening our undergraduate curriculum, which we planned to do by offering a number of distinct majors. By Fall ’04, all seven of EFB’s current undergraduate majors (i.e., Aquatic and Fisheries Science, Biotechnology, Conservation Biology, Environmental Biology, Forest Health, Natural History and Interpretation, and Wildlife Science) were being offered, replacing the elective concentrations or options. But with the implementation of these seven majors, explicit student learning objectives were not developed for each nor had any formal assessment process been implemented although during the spring ’05 semester, according to a SUNY mandate, an external review of the Environmental Biology major was made.

This past year the Course and Curriculum Assessment Committee (CCAC) began the task of obtaining, compiling and distributing to curriculum coordinators the assessment data required for each EFB major. The assessment plans developed in 2009 called for assessment data to be generated from (1) grades or Leikert-scale evaluations on targeted assignments, embedded exam questions and student surveys from EFB courses; and (2) final course grades. Last year, in anticipation of the sustained effort needed to manage the assessment data, the CCAC developed an “omnibus” spreadsheet to facilitate consistent, annual reporting of data across all majors to a central location. This year the CCAC began the first, concerted effort to populate that omnibus spreadsheet and realized the organizational challenges to obtaining and sorting data on hundreds of students from 49 courses and then redistributing those data to meet the reporting needs of seven curriculum coordinators. Last year we reported that turnover in the department’s secretaries disrupted the management (i.e., solicitation of data from faculty, data entry, file
management) of the database. With continued secretarial turnover, this disruption is anticipated to continue. Also, while we have been able to populate the omnibus database with most intra-departmental assessment data, we experienced frustration in having multiple requests for final course grades go unfulfilled.

It is our understanding from the ESF administration that field tests alone will not be acceptable as assessment metrics either to the college or to SUNY, nor would grades alone. We still need to develop multiple metrics, but ones that are simple to collect and analyze. Given the experience this past year of implementing the seven major assessment plans, the CCAC began considering alternatives to collecting assessment data; these include delivering internally prepared exit examinations, or subscribing to several major field examinations. We anticipate the eventual need to conduct a cost-benefit analysis of dedicating continuous faculty and secretarial resources to creating effective assessment instruments and sustaining a complicated long-term data management system to fulfill assessment requirements, versus conducting assessment through the subscription to multiple field examinations.

Following are the courses (by major) in which data are to be collected for assessment.

### Courses in which EFB majors are assessed (data are collected), by major

<table>
<thead>
<tr>
<th>Major</th>
<th>AFS</th>
<th>BTC</th>
<th>CB</th>
<th>ENB</th>
<th>FH</th>
<th>NHI</th>
<th>WS</th>
</tr>
</thead>
<tbody>
<tr>
<td>APM 105</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APM 106</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APM 391</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BTC 401</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BTC 420</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BTC 498</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BTC 499</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLL 190</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>CLL 290</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EFB 101</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 102</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 103</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 104</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 120</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 202</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EFB 215</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 307</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 308</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 311</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 320</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 325</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 340</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 351</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 352</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFB 390</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Objectives 2012-2013

Objectives, status, and relations to strategic plan

As a key part of our strategic planning process, the EFB faculty adopted the following vision statement in November 2001: “Environmental and Forest Biology will be a world leader in furthering our understanding of the structure and function of the world’s ecosystems and their biota, and in applying scientific principles to solving the pressing environmental problems of the biosphere. EFB will pursue this goal through excellence in basic and applied research, in service to the public, and in educating the next generation of environmental scientists, thinkers, and problem solvers”. The month before this vision statement was adopted, faculty discussions culminated in identifying the following tasks that if accomplished would help us realize this vision:

1. attraction and retention of top-flight scientists;
2. evolution of a stronger learning and mentoring environment for students, faculty, and staff;
3. development of a more fully integrated field program;
4. development of greater prominence and national/international recognition of our graduate program;
enhancement and formal recognition of our public service, informational outreach, and service learning program;
(6) development of new undergraduate programs;
(7) development of international perspectives and opportunities; and,
(8) collaboration as College partners on data development and utilization.

Numerous examples and data throughout this annual report indicate that EFB continues to make substantial progress towards accomplishing these tasks. The hirings of a new Wildlife Habitat Ecologist (Dr. Shannon Farrell) and Toxicologist (Dr. Gordon Paterson) are the most significant accomplishments of the department this past year.

The work by the EFB Promotion and Tenure Committee (PTC) to develop metrics to evaluate faculty at various points in their career, is very important although many faculty have expressed concerns about implementing such an evaluation. During the next academic year the PTC hopes to revise this plan such to eliminate these concerns and gain support from the majority of the faculty.

Laying the foundation and initiating the formal hosting of the New York Natural Heritage Program by EFB should lead to many significant opportunities for EFB faculty and students. This relationship should greatly strengthen now that the major contract hurdles have been overcome and EFB faculty continue to learn about unique collaborative opportunities with the talented NYNHP staff.

Although not a departmental accomplishment, the Environmental Health major to be a part of Environmental Sciences has been approved by SUNY. EFB will have the largest role in offering this major, which should greatly benefit ESF.

The primary foci of the ‘12-‘13 academic year were to: (1) figure out how to cope with the very disruptive construction activities throughout Illick; and, (2) dedicate substantial time towards development activities, including the revitalization of the Roosevelt Wildlife Station and installation into the Gateway Building display cases of Roosevelt Wild Life Station mounts. The launching of the Dale L. Travis lecture series in March could not have been more successful, with over 400 people (students, faculty, staff, alumni, the general public) packed into the Gateway Center

Objectives 2013-2014

Objectives and relations to strategic plan

We have recently learned that although we have implemented a mentoring program for new faculty, there sometimes has been a bit of a disconnect between guidance of a faculty member’s mentoring committee and evaluations made at various levels in the department and College-wide promotion and tenure process. Metrics being developed by the EFB Promotion and Tenure Committee are likely to objectively indicate to faculty pursuing promotion, which area(s) need strengthening.

Implementing a plan to fill the Systems Ecologist position in EFB, vacated by the retirement of Dr. Charles Hall, is one of the most urgent tasks of the new academic year. We hope to initiate the search to replace our Environmental Microbiologist (Dr. Jim Nakas, who recently retired) by late fall 2013. Although we were very fortunate to recently hire Dr. Lee Newman to cover some of the key teaching duties of Drs. Kretzer and Smart who are no longer
in the department, EFB is still without a plant physiologist. A doctoral granting environmental biology program must have a plant physiologist so we are anxious to explore options that would fill this significant void.

The Dale L. Travis Lecture Series will be greatly expanded this next academic year to include a lecture on campus on American chestnut in October by Dr. William Powell, two lectures in New York City by other faculty, and a lecture in March 2014 in the Gateway Center. Besides ongoing development activities for EFB programs, seeking external funds for the new undergraduate Environmental Health major is a high priority.

It has been increasingly difficult to impossible to meet department objectives when so much time is spent on basic building issues, so our objectives become more modest each year. A primary objective for this coming year is to gather data from peer departments and institutions on faculty teaching, research, and outreach to compare with data in these categories produced by EFB faculty. With substantial time invested in development activities, we hope that there will be some significant results eventually. Without funds from external sources, we will never fully reach the potential and aspirations of the faculty and students.

**Undergraduate Recruitment Efforts**

Most of EFB’s undergraduate recruitment efforts are made through existing college programs, especially open houses, Transfer Days, and receptions for accepted students. For open houses, an overview of all our programs is presented in 5 Illick; this is followed immediately by a dynamic, fair-like gathering in the foyer. There, tables are organized by major and attended by at least one faculty representative - and when possible a current undergraduate student - to provide information and handle inquiries. Hands-on displays complement the information in the glass display cases about our undergraduate program. Additionally, EFB meets all requests by prospective and accepted students for personal visits with faculty during both the academic year and summer; the Keyboard 2 secretary is responsible for organizing these meetings.

EFB’s undergraduate curriculum director sends a letter to all Fall-accepted undergraduates in the summer, welcoming each into our program. These letters are individualized to the student, and tailored to the circumstances, e.g., whether the accepted student is a Presidential Scholar, or in a particular major. Similar letters go to the few applicants who start in the Spring semester.

Five years ago, the chair and coordinators of our majors taped a web video message that all accepted students were encouraged in their acceptance letters to view. This message was tailored to accepted students within each major, highlighting unique aspects of the major and ESF. Acceptance letters include the link to this message.

As of June 19, 2013 we had received 864 total applications for fall 2013 (freshman + transfer students; vs. 880 last June and 1030 in June 2011). We have accepted 386 (vs. 401 and 444 the previous two years) applicants and have received 179 deposits (vs. 189 and 193). Of the total number of applications that we received, 66% were for freshman; about 59% of our deposits are from this group; about 45% (46% last year) of all applicants were accepted. The total number of deposits by EFB major and percent of total for the class entering fall 2013 (in parentheses) are: Aquatic and Fisheries Science, 18 (10% vs. 7% for class entering fall 2012); Biotechnology, 14 (8% vs. 5%); Conservation Biology, 47 (26% vs. 29%); Environmental
Biology, 45 (25% vs. 26%); Forest Health, 3 (about 2% vs. 1%); Natural History and Interpretation, 1 (<1% vs. <2%); and, Wildlife Science, 51 (28% vs. 30%).

**Longer Term Visioning and Planning**

The EFB Chair continues to spend a substantial amount of time on development efforts although has little to show for these efforts. Of the various purposes for which development funds are sought, the highest priority is still to fund at least two endowed chair positions. Additionally, the chair spends much time advising Physical Plant on campus plantings, which also are very important to EFB’s (and the Department of Landscape Architecture’s) teaching programs. This time commitment has greatly increased with the attention that the Gateway Building green roof and grounds plantings has required.

Program visioning and strategic planning have not been undertaken formally at the department level in EFB since the department’s strategic plan was developed in 2001-2002. Very limited space, resources, the inordinate amount of time it takes to get anything done at ESF, and understaffed Development Office greatly limit the extent to which many significant ideas can be pursued and implemented. However, with the addition of ten faculty the past eight years, greater use efficiency and enhancements of existing space, and improvements at our field stations, the department is closer towards realizing its basic goal of being one of the premier environmental biology programs. The EFB Chair hopes that with the department’s strong foundation and energy from many new faculty that the department is poised to discuss and move towards EFB’s aspirations beyond what has already been articulated and attained.
## Appendix A. EFB Faculty: Rank (at end of reporting period), Education, and Interests

<table>
<thead>
<tr>
<th>Name and Title</th>
<th>Degrees</th>
<th>Interest Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Castello, John</strong>&lt;br&gt;Professor and Associate Chair</td>
<td>PhD, Univ. of Wisconsin&lt;br&gt;MS, Washington State Univ.&lt;br&gt;BA, Montclair State College</td>
<td>Plant virology; viruses and mycoplasma in urban and forest tree decline; forest pathology; microbiology</td>
</tr>
<tr>
<td><strong>Cohen, Jonathan</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, Virginia Tech&lt;br&gt;MS, U. Connecticut&lt;br&gt;BS, Cornell University</td>
<td>Wildlife ecology and management, population and habitat ecology, threatened and endangered species.</td>
</tr>
<tr>
<td><strong>Dovciak, Martin</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, Univ. of Minnesota&lt;br&gt;Dipl. Engin., Zvolen Technical University</td>
<td>Plant ecology; forest ecology; biodiversity; plant population &amp; community dynamics; spatial ecology; ecosystem management &amp; restoration</td>
</tr>
<tr>
<td><strong>Farrell, John</strong>&lt;br&gt;Associate Professor</td>
<td>PhD, SUNY ESF&lt;br&gt;MS, SUNY ESF&lt;br&gt;BS, Cornell University</td>
<td>Fisheries management, aquatic ecology, wetlands restoration, St. Lawrence River studies, muskellunge and northern pike ecology &amp; mgt., invasive species</td>
</tr>
<tr>
<td><strong>Fernando, Danilo</strong>&lt;br&gt;Associate Professor</td>
<td>PhD, Univ of Alberta, Canada&lt;br&gt;MS, Univ of Phillipines&lt;br&gt;BS, Mountain State Agr. Coll.</td>
<td>Plant reproductive biology, plant structure and development, in vitro fertilization in conifers, pollen transformation &amp; gene expression during pollen tube development</td>
</tr>
<tr>
<td><strong>Fierke, Melissa</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, University of Arkansas&lt;br&gt;MS, Oregon State University&lt;br&gt;BS, Arkansas Tech University&lt;br&gt;AA, North Arkansas CC</td>
<td>Forest entomology and forest ecology; impacts of invasives in forested settings with a focus on wood-boring insects.</td>
</tr>
<tr>
<td><strong>Folta, Elizabeth</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, North Carolina State&lt;br&gt;MS, North Carolina State&lt;br&gt;BA, University North Carolina</td>
<td>Natural History &amp; Interpretation, informal biology education, environmental education.</td>
</tr>
<tr>
<td><strong>Frair, Jacqueline</strong>&lt;br&gt;Associate Professor</td>
<td>PhD, Univ of Alberta, Canada&lt;br&gt;MS, University of Wisconsin&lt;br&gt;BS, Cornell University</td>
<td>Wildlife and landscape ecology, animal movements and habitat use, predator-prey interactions</td>
</tr>
<tr>
<td><strong>Gibbs, James</strong>&lt;br&gt;Professor and Associate Chair</td>
<td>PhD, Yale University&lt;br&gt;MA, University of Missouri&lt;br&gt;BS, University of Maine</td>
<td>Conservation biology, ecological monitoring, wildlife management, population biology and conservation genetics</td>
</tr>
<tr>
<td><strong>Hall, Charles A. S.</strong>&lt;br&gt;Professor</td>
<td>PhD, Univ. of No. Carolina&lt;br&gt;MS, Penn State University&lt;br&gt;BA, Colgate University</td>
<td>Systems ecology; synthetic studies of population and ecosystems, including studies of fish migrations, estuaries, tropical land use change and energetics. Emphasis on measuring and modeling human-dominated eco-systems and geographic modeling.</td>
</tr>
<tr>
<td><strong>Horton, Thomas</strong>&lt;br&gt;Associate Professor</td>
<td>PhD, Univ of Cal.-Berkeley&lt;br&gt;MA, San Francisco State Univ.&lt;br&gt;BA, Humboldt State University</td>
<td>Mycorrhizal ecology and systematics, mycology, restoration ecology</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td>Education</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td><strong>Kimmerer, Robin</strong></td>
<td>Distinguished Teaching Professor</td>
<td>PhD, Univ. of Wisconsin; MS, Univ. of Wisconsin; BS, SUNY ESF</td>
</tr>
<tr>
<td><strong>Leopold, Donald</strong></td>
<td>Distinguished Teaching Professor and Chair</td>
<td>PhD, Purdue University; MSF, University of Kentucky; BS, University of Kentucky</td>
</tr>
<tr>
<td><strong>Limburg, Karin</strong></td>
<td>Professor</td>
<td>PhD, Cornell University; MS, University of Florida; AB, Vassar College</td>
</tr>
<tr>
<td><strong>Lomolino, Mark</strong></td>
<td>Professor</td>
<td>PhD, SUNY Binghamton; MS University of Florida; BS SUNY-Cortland</td>
</tr>
<tr>
<td><strong>McGee, Gregory</strong></td>
<td>Assistant Professor</td>
<td>PhD, SUNY ESF; MS, SUNY ESF; BS, Allegheny College</td>
</tr>
<tr>
<td><strong>McNulty, Stacy</strong></td>
<td>Research Associate</td>
<td>MS, SUNY ESF; BA, SUNY Geneseo</td>
</tr>
<tr>
<td><strong>Mitchell, Myron</strong></td>
<td>Distinguished Professor</td>
<td>PhD, University of Calgary; BA, Lake Forest College</td>
</tr>
<tr>
<td><strong>Nakas, James</strong></td>
<td>Professor</td>
<td>PhD, Rutgers University; MS, Seton Hall University; BS, Lemoyne College</td>
</tr>
<tr>
<td><strong>Newman, Lee</strong></td>
<td>Associate Professor</td>
<td>PhD, Rutgers &amp; RWJ Med. Sch.; MS, Rutgers &amp; RWJ Med Sch; BS, Stockton State College; AA, Atlantic Com. Coll.</td>
</tr>
<tr>
<td><strong>Parry, Dylan</strong></td>
<td>Associate Professor</td>
<td>PhD, Michigan State Univ.; MS, University of Alberta; BS, University of Alberta</td>
</tr>
<tr>
<td><strong>Powell, William</strong></td>
<td>Professor</td>
<td>PhD, Utah State University; BS, Salisbury State University</td>
</tr>
<tr>
<td><strong>Rundell, Rebecca</strong></td>
<td>Assistant Professor</td>
<td>PhD, Univ. Chicago; MS, Univ. Chicago; Cornell BS, Cornell</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td>Education</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ryan, Sadie</td>
<td>Assistant Professor</td>
<td>PhD, Univ. Cal. Berkeley BA, Princeton</td>
</tr>
<tr>
<td>Schulz, Kimberly</td>
<td>Associate Professor</td>
<td>PhD, University of Michigan BA, Cornell University</td>
</tr>
<tr>
<td>Shields, William</td>
<td>Professor</td>
<td>PhD, Ohio State University BA, Rutgers University MS, Ohio State University</td>
</tr>
<tr>
<td>Stewart, Donald</td>
<td>Professor</td>
<td>PhD, University of Wisconsin MS, University of Michigan BS, University of Michigan</td>
</tr>
<tr>
<td>Teale, Stephen</td>
<td>Professor</td>
<td>PhD, SUNY ESF MS, University of Kansas BA, College of St. Rose</td>
</tr>
<tr>
<td>Turner, Scott</td>
<td>Professor</td>
<td>PhD, Colorado State Univ MS &amp; BA University of California-Santa-Cruz</td>
</tr>
<tr>
<td>Weir, Alexander</td>
<td>Associate Professor</td>
<td>PhD, University of Newcastle upon Tyne BS, University of Bradford, UK</td>
</tr>
<tr>
<td>Whipps, Christopher</td>
<td>Assistant Professor</td>
<td>PhD, Oregon State University BS, University of Victoria at Malaspina University-College</td>
</tr>
</tbody>
</table>
Appendix B. Summary of Individual Faculty’s Most Significant Accomplishments

(As written by each faculty member in response to the following request for each individual’s annual report: [Provide a] “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?”

**John D. Castello**

I am still attempting to publish my manuscripts utilizing our baseline mortality method to evaluate forest mortality attributed to climate change. I was unsuccessful in getting it published in Frontiers in Ecology and the Environment, PLOS ONE, and J. Appl. Ecol. The manuscript currently is in review in Forest Science. I hope to get it published soon as well as other manuscripts, to continue with my plans to fund a large study utilizing the method to evaluate forest health worldwide.

**Jonathan B. Cohen**

A continued aim is to revise EFB 493/693. Although it is starting to become much more my own class, I have identified several areas for improvement and the biggest challenge remains balancing the needs of the undergraduates and graduates in the class. I have had several discussions with the rest of the curriculum faculty about how to better integrate all of our classes into a cohesive curriculum. We have also discussed with forestry faculty how we might serve the overlapping needs of undergraduates in our respective departments. I plan on introducing seminars, that may turn into fuller courses in ensuing years, this fall and next spring to provide advanced quantitative training for EFB graduate students. My hope is these courses will serve the many disciplines in our department, beyond wildlife majors.

I have several collaborations and pending grant proposals with outside Universities that hopefully will result in further support for graduate students here. My first Ph.D. student will be matriculating in the fall for a DEC-funded project on New England cottontails, and I am greatly looking forward to working with her and to my first project to not focus on birds. January will see the start of another M.S. project, focused on human disturbance to roseate terns on Cape Cod, Massachusetts. A main research focus in the coming year will be to help my students turn their work into their first publications.

For other professional development activities, I will be accompanying three of my students to Germany in the fall for the Waterbird Society Annual meeting, where we will all be presenting and where I will attend my first executive meeting as Councilor. My other students also will be presenting at annual meetings around the country in the summer and fall.

**Martin Dovciak**

Students: This year I taught Plant Ecology and Global Change (EFB 445/645) to the highest enrolment since I taught this class at ESF (54 students), and I taught Flowering Plants: Diversity, Evolution, and Systematics (EFB 535) to the second highest enrollment in this class since I started to teach it at ESF (16 students). I received some of my best teaching evaluations in the end-of-course surveys for EFB 535—compared to my long term average (4.5), my score in 2012 was 4.6, and 4.8 for the instructor knowledge, enthusiasm, and effectiveness (course evaluations for my Spring EFB 445/645 are not available yet, but likely to be >4 as in the past years). I continued to support our departmental series, EFB 210-Diversity of Life I, by contributing three lectures, and to contribute by a guest lecture to EFB 326-Diversity of Plants. I advised 21 undergraduates in Environmental and Conservation Biology majors, and 5 students in total in the Honors, NSF-UMEB, and CSTEP programs. I served as an MP or co-MP to 6 graduate students (3 Ph.D., 2 M.S., 1 M.P.S.) and completed the M.P.S. student (who is now gainfully employed as an environmental biologist). I served on steering committees for another 10 graduate
students (including two at Syracuse University), and on additional 4 graduate exam/defense committees. All of my 5 completed graduate students and several undergraduate researches continue to be successful, with professional positions at universities or in environmental consulting firms such as Jones Ecological Research Center, University of Arizona, University of Miami, or O'Brian & Gere.

Department/College: At the departmental level, I continued to serve as the Chair for the Selection Committee for the Burgess Graduate Scholarship in Ecology, a member of the Graduate Program Advisory Committee, faculty mentor in UMEB program, and by participating (informally) as much as possible in the departmental faculty searches (wildlife, toxicology, systems ecology) and other departmental events and meetings. At the college level, I served as a faculty mentor in the Honors and CSTEP programs, a member in two of the GPES Areas (Ecosystem Restoration, Environmental Monitoring and Modeling) and I contributed significantly to the program of visiting speakers Drs. Battles and Cogbill by organizing lab group meetings/lunch appointments. I continued to be as a core faculty member in the Center for Urban Environment, a founding member of ESF Beech working group, and a regular participant in ESF winter and spring Convocations. I continued to represent College/Department in my broader professional service, which included serving as a reviewer for NSF-Earth Sciences Program (1 proposal) and for four journals significant for my field (Forest Ecology and Management, Journal of Vegetation Science, Plant Ecology, and Northeastern Naturalist), as well as by my involvement as a co-PI or collaborator in larger research groups such as the Appalachian Trail Mega-Transect Study group, vegetation group in H.J. Andrews Experimental Forest LTER Program and DEMO Study. I informally represented college as a guest speaker at Tecumseh Elementary School where I talked to ~ 40 second graders and their teachers about ecology and botany and what it means to be an ecologist or botanist.

Self/Professional Development: As a lead PI, I continued studies of climate-vegetation gradients and climate change effects on coniferous-deciduous ecotone and on mountain spruce-fir forests in the Adirondacks and across northeastern US (NY, VT, NH, ME)—funded by McIntire-Stennis program, NSRC, and CONACYT ($120,310 in total). I also started a new 3-year collaborative study with Dr. Nowak (FNRM) to investigate the effects of cleaning techniques on the spread of invasive plants in New York’s power-line corridors—funded by EPRI ($414,551 total award, with $176,184 sub-award to me). In addition, I wrote a new research proposal on the effects of deer herbivory on forest regeneration in New York state ($174,724), slated for funding by the NYS DEC; co-PIs: Frair and Hurst). I continue to serve as a CoPI on the NPS-funded, multi-investigator Appalachian Trail MEGA-Transect Study ($747,242). This past year, I co-authored 5 papers (all published) on various aspects of global change effects on forest ecosystems in Ecological Applications, Philosophical Transactions of the Royal Society B, Biodiversity and Conservation, Climatic Change, and Canadian Journal of Forest Research (impact factors ranging from 1.7 to 6.4), and also 3 additional manuscripts submitted for review. As one of three speakers, I was invited to present my work in the Demonstration of Ecosystem Management Options (DEMO) Study at a symposium organized by Canadian Botanical Association at their annual meeting in British Columbia (pending, June 1-5, 2013). I co-authored tree presentations given at an annual meeting of the Ecological Society of America and an international workshop on the impacts of herbivores on forest ecosystems (held in Estonia) and I presented my research proposal on the deer impacts on forests in New York State to collaborators at the Cornell Cooperative Extension and at the Annual Northeast Fish and Wildlife Conference in Saratoga Springs. My summer travel to Slovakia continued to enhance my research on woody colonization of grasslands (e.g., 2013 paper in press in Biodiversity and Conservation).

John M. Farrell
Students: Providing quality research experience to students in my program was especially significant this reporting segment. During summer I supervised 22 students working at TIBS on the St. Lawrence River and nearly that many were working in our broader research group during the academic year. These students ranged from our own ESF grads and undergraduates and one student from Lemoyne College and
one from Boston University and a Clayton area High School student who was mentored as an American Fisheries Society Hutton Scholar. One of the ESF summer students was awarded a TIBS undergraduate research fellowship through EFB and conducted independent research on the diet and food web integration of invasive round goby. The research was presented at the Spotlight on Student Research symposium and won Best Poster out of 94 entries and we are now publishing the work. I advised several other undergraduates on independent research including two honors students and had many working in my lab with staff and other students. For graduate students I advised or co-advised 10 students including two MS and one PhD that finished this past spring semester and I brought on three new MS students (one co-advised with Dr. Whipps) following a search process. These graduates are all employed in their field and one has a permanent position with the NJ Department of Environmental Protection and another is working with USGS. I published papers with students and sent them to conferences (~20 talks this period at science meetings and in the community) and involved them in several significant outreach and community interpretive events including a field research experience with a large group of 6th graders from area districts at the Wellesley Island Nature Center.

Department/College: The facility improvements at TIBS are being realized and improving the quality of this campus. Following 8 years of fund raising in the community and elsewhere (that is continuing) the construction of the Frank Cean Researcher Building has started this past April at TIBS. This facility will provide student, faculty, and staff residence spaces, common areas, office and meeting spaces. During summer 2012 the boathouse was fully renovated with funding that stems from an NSF grant. We now have an advanced fish culture and holding capability and new laboratory and shop spaces to support faculty and student research. Other renovations include new roofs on all buildings and a well and updated septic system will be installed in summer 2013. At TIBS I hosted the ESF Board of Trustees Annual Meeting in September 2012. I provided a series of scientific presentations to inform the board of active research and were involved with all the preparations for this enjoyable 2-day meeting. I taught one offering each semester this year. I also developed a new Senior Synthesis course for the Aquatic and Fisheries Society major offered this past spring. The course focused on professional development and also integration of concepts learned at ESF through a series of modules based on current issues in AFS. My service on the Promotion and Tenure Committee was demanding this year including three class evaluations and evaluation of three candidates. I also served with the renovation of the aquatics facility at the Center for Integrative Teaching and Research with numerous meetings and events related to the NSF grant. I also am leading an effort to provide cyber infrastructure to TIBS at part of that effort.

Self/professional: I continued to have a significant research presence and led the Esocid Working Group and the St. Lawrence River Fish Habitat Conservation Strategy working with the major agencies, community groups and individuals. I remained active in collaboration with many scientific colleagues at ESF and beyond. I am serving as a Guest Editor for the Journal of Great Lakes Research helping to publish a special issue on the connecting channels of the Great Lakes with a group of colleagues. This is a significant collaboration bringing attention to these understudied habitats and has a focus on fish populations and habitat. During June 2012 I served on an International Scientific Committee for the International Sustainable Development of Rivers Conference at the University of Lyon in France. I also served as a session chair for the conference on Ecological Responses of River Restoration and Management and as a presenter. This was a rewarding experience meeting scientists from around the world who engage in river restoration, science and management.

Danilo D. Fernando

Students: This past academic year, I taught Diversity of Plants (EFB 326) and Research Design and Professional Development (BTC 497). Besides the interactions with the students in the lectures, I also interacted with the students during their labs through involvement in some of the lab activities (EFB 326) or writing assignments and interviews (BTC 497). Some of my students came in during my office hours for clarifications/short questions or conversations on certain topics. I have trained several undergraduate
students in my lab through independent research and internship, presented invited lectures to other courses (in ESF and SUNY Oswego), and advised at least 13 undergraduate students in various aspects of their curriculum. I also advised many graduate students from the department regarding their program requirements, filing up the required forms, and shifting from one major or degree program to another. I worked with my five graduate students (4 M.S. and 1 Ph.D.) on various aspects of the laboratory and/or field components of their research projects, draft manuscripts, grant/fellowship applications, and poster presentations. In total, at least 100 students have been served under various capacities.

Department/college: I served as EFB’s Graduate Director for the sixth year and my major responsibilities included the following: 1) acted on various types of petitions concerning different aspects of our graduate program requirements and policies; 2) reviewed and signed on various forms required for the completion of different degrees and majors (2A, 3B, 4 and 6A); 3) replied to inquiries concerning our graduate program (through email, phone, and/or personal visits) on an almost daily basis from several potential applicants and current graduate students; 4) processed a total of 127 applications (15 for spring and 112 for fall) that involved the review of each application for initial assessment and designation of faculty reviewers, followed up on the completion of the reviews on each application, summarized the reviews for each application, and submitted EFB’s recommendation for each accepted and rejected applications to the Dean of Instructions and Graduate Studies; and 5) provided orientation seminars to new graduate students about our graduate program and the new faculty about the graduate application pipeline. I served as the department’s representative to the Graduate Council and raised issues regarding problems/suggestions on how to improve the graduate program, application and review process; shared the ideas and activities of the Graduate School to the department’s graduate committee and faculty. I also worked with the EFB Graduate Secretary on the update and improvement of the various facets of the EFB’s Graduate Webpage, graduate application filing system, and continued the survey on the most effective means of attracting/recruiting graduate students. As a member of EFB’s Graduate Program Academic Committee, I provided connections between department and college on issues pertaining to graduate degree program offerings and requirements, admission/review process, policies, and other related matters.

Professional accomplishments: The following are what I consider as significant: 1) Successful completion of my third M.S student – Jeremy J. Discenza (Fall 2010 to Fall 2012); 2) Successful completion of my third Ph.D. student – Arnold M. Salazar (Spring 2007 to Spring 2013); 3) Invited to write a review paper for Annals of Botany with co-author Dr. Jim Seago (already available online, Annals of Botany); 4) Invited to write a review paper for New Forests with co-author Dr. John Owens (in review); 5) One of the invited speakers during the IUFRO Working Group 2.02.20 on Breeding and Genetics on Southern Pines’ Annual Meeting in Jacksonville, FL; 5) Invited as Panel Review Member for NSF’s Plants, Fungi and Microbial Evolution and Developmental Mechanisms; and 6) Finished eight chapters (out of 12) of the textbook (Sexual Reproduction in Forest Trees) that I am co-authoring with Dr. John N Owens through a contract with the Cambridge University Press.

Melissa K. Fierke

Students: In the fall semester, I taught General Biology for the fifth year with >300 students. I supervised three graduate and four undergraduate teaching assistants along with their workshops and grading - all went smoothly with overall class evaluations again strong for the two lecture sections. I facilitated the EFB Core Course for graduate students this past semester where the main goal was a solid research proposal. I oversaw five internships summer 2012, including several Natural History and Interpretation internships as well as two in Environmental Science and a Conservation Biology honor’s thesis. Two students worked on research projects under me this past fall/spring, one sorted samples for invertebrates along a calcium gradient and another evaluated beetle data from the same research project. The second project resulted in a 3rd place showing at the ESF Spotlight on Research event with >100 competitors. This past year, I wrote 17 UG student recommendation letters and many of these resulted in successful internships or positions. I am happy with the current state of my research program and the progress of my
graduate students. We’ve had several publications come out and I am still working with several others on their publications. Two of my graduate students presented at the Annual USDA Invasive Insect meeting in Annapolis and three at the National Entomological Society meeting in Knoxville, TN this past year. A new MS started in August and is working with the NYDEC and USDA APHIS this summer developing/refining trapping for emerald ash borer parasitoids. Another MS student is working with collaborators at USDA ARS on a potentially economically important ambrosia beetle. My PhD student presented his research proposal on *Sirex noctilio* and is off to a good start with a couple of publications and several presentations at local, regional and national meetings.

Department: I served on six departmental and college committees as well as taking an active part in the ESF Learning Community, working with other faculty on student retention and success, and serving as the departmental representative on the Urban Ecology minor. This past spring I founded a new Bicycle Safety Committee, which is under the umbrella of the Campus Climate Change Committee and am working with ESF partners, Syracuse University engineers, planners and safety officials as well as the City of Syracuse Transportation Planner to make bicycling a safer commuting option for faculty, staff and students. I’ve continued my outreach efforts, doing presentations and media interviews, however, I now pass most opportunities to my graduate students who are doing an excellent job of taking them on, being enthusiastic and getting our science out there. Two of my grads have presented entomology lectures at Bryant and Stratton this past year and another will be doing so over the summer.

Self: A particularly noteworthy opportunity this past year was an invitation to be the keynote speaker at Utica College’s Womyn’s Herstory Month luncheon. My presentation, “*Aspiring to be an intentional model: mother, scientist, advisor, and teacher*”, was well received and attended with ~100 students, staff, faculty and community members. Another honor was being asked to participate in Pearson’s annual Mastering Biology Summit in San Francisco, CA. Fourteen faculty were invited from around the country to participate in this event, to share their experiences and to provide feedback on new ideas and innovative tools. Other professional development has included attending conferences and accepting invitations to present my lab’s research. This past spring I again organized a symposium at the Eastern Branch Annual Meeting of the Entomological Society of America on emerald ash borer. I continue to work closely with the NY-DEC and collaborators with Cornell Natural Resources and the USDA-Ag and Research Station as well as cultivating other collaborators within ESF, e.g., Sadie Ryan and Chris Whipps, as well as agencies, e.g., USDA Forest Service and USDA Agriculture and Plant Health Inspection Service.

*Elizabeth Folta*

Students: This year I continued to focus mainly on the students. I taught five interpretive courses, which had a total enrollment of a 113 students. EFB 404 Natural History Museums and Modern Science was offered twice this year so it could be moved to its new schedule of Maymester without penalizing any of the students who needed it to graduate. It was offered in the fall with the hope of visiting the American Museum of Natural History in New York City over a long weekend but unfortunately, the planned weekend was the same weekend Hurricane Sandy hit New York City. EFB 404 was offered again for the first time this year as a Maymester course changing the format of the class. As part of the class, we visited Washington, DC again. The trip exposed the students to a variety of educational settings that house different types of collections including the National Museum of Natural History, the U.S. Botanic Gardens, and the National Zoo. The students in both sections of EFB 404 redesigned five of the lobby exhibits and the three display cases in Illick 12. This was also the first year that a recitation section was added to what used to be EFB 416/616, now EFB 312/512. The recitation allowed the students to experience more hands-on activities including training in Project WILD, Project Learning Tree, and Project WET and take a field trip to Beaver Lake Nature Center to evaluate programs delivered by their interpretive staff. The recitation still needs work to get it to the level that I am hoping for, but it is off to a good start. I offered a new course Advanced Interpretation & Certification. The new course exposed students to the business side of interpretation, allowed them to obtain the Certified Interpretive Guide
certification (CIG), and to gain more experience giving programs to the public. Katie Mulverhill from Baltimore Woods Nature Center helped teach the CIG portion of the course. This certification is an entry-level certification in the field of interpretation. Once again, this course is a work in progress, but the students appreciated the certification and the chance to present public programs. All 23 students successfully completed the certification process. Finally, I continued to work with my graduate students on their various research projects. My first master’s student successfully defended this past fall and has moved on to be the education director of a zoo here in New York. Of my remaining nine graduate students, three are moving along with their research projects. Two of the three were able to find funding on their own with international and state agencies to help fund their research projects. Eight of the nine students should be finishing up next academic year allowing for more recruitment into the program.

Department/College: In addition to teaching, I served on the CCAC for the second year and completed the assessment of Natural History and Interpretation program. I also worked with Bob French and Don Leopold to change the name of the Natural History and Interpretation program to Environmental Education and Interpretation. This change has been approved at the college-level and will be submitted this summer for SUNY approval. The purpose of the change is to help improve recruitment into the major from outside of ESF. We continue to have students from within the college transfer into the program, but the hope is to create a sustainable program that does not rely on these transfers. In addition, the term “Natural History” continues to confuse prospective students, so we are updating the terminology to reflect what is currently being used in the industry.

Self: This year was the first year for many of the changes to the Natural History and Interpretation program that were approved last summer, which was exciting but also meant putting the changes into place and making sure students were not left behind. I focused on the new recitation during the fall. I recruited three undergraduate teaching assistants to help with the recitations. Together with the graduate teaching assistant, they prepared materials and ran most of the recitation periods. I learned very quickly that a totally separate graduate recitation would not work because of the number of people in the section was too small to be completely beneficial. The activities did not work well with three people, but the reading discussions were beneficial. I will change this next year by offering the graduate section at the same time as one of the undergraduate sections so when appropriate they can participate with the larger group. During the spring, I focused on the new Advanced Interpretation and Certification course. One of my focuses of this course was the CIG certification, which I officially approved to teach this past fall. I am now a Certified Interpretive Trainer for NAI. With this certification came a couple of requests to certify local interpreters. I assisted Katie Mulverhill (the only other CIT in this area) with her first workshop at Baltimore Woods Nature Center and conducted a second CIG course during Spring Break at Beaver Lake Nature Center. Between the two CIG courses and the Advanced Interpretation & Certification Course Katie and I certified 38 interpreters in the local area. I had my first experience serving as a co-advisor for two students working on their honor’s thesis. Both successfully completed their projects. I continued to work with many of the environmental interpretation organizations in the local area and the state. I was one of two people invited by the DEC to attend the PLT Northeast Region Training along with the state coordinators. During this training, we created a draft action plan for Project Learning Tree in New York State and brought it back to be approved by the entire Steering Committee. It was also a chance to meet and talk with the national PLT staff. I participated in four large grant proposals totaling $4,102,124 and three smaller grant proposals totaling $68,000. The status of most of these grants is still unknown, but the most important thing is they led to new partnerships that will be beneficial for future projects.

Jacqueline L. Frair

Students: Significant achievements this past year involved seeing to completion my first honors student (David Keiter, who received a student poster award at a regional conference for his work, and is working with me to publish one of his chapters), two M.S. students of my own (Sara Hansen, with a statewide
assessment of coyote populations in NY State, and Ana Patricia-Calderon, with an assessment of jaguar movement corridors in Guatemala), and one M.S. student of Bill Porter’s (Brigham Whitman) who remained here after Bill’s retirement from ESF. This was also the second year I offered a graduate section to my Applied Wildlife Science course, and this year the graduate section gained traction with students successfully working together as a team to conduct a significant evaluation of a wildlife population using a site occupancy design and write a professional manuscript on their work. This is the first “stacked” class that I have offered, which complements the two full graduate classes I teach and makes unique contributions to the graduate program. Finally, this year we began publishing “Field Notes” from the Roosevelt Wild Life Station, and used that to highlight student research and achievements. In the January-March issue we announced a Roosevelt Young Explorers award given to Deanna Russell (EFB ’11) for her work on cheetah conservation in Kenya (this is an award we intend to give out annually).

For the department/college, I made an important contribution by serving as chair of a successful faculty search for a “Wildlife Habitat Ecologist”. Once this new person is in place, I look forward to working with her and Jonathan Cohen to re-envision our three key wildlife courses and the role of habitat-centric management training therein. Another significant achievement is an omnibus MOU between the NY State DEC and the Roosevelt Wild Life Station (should be completed this summer), which provides an umbrella for all projects eligible for Federal aid funds. This is a 5-year, $3.36M agreement that will support research projects on the New England Cottontail (Cohen, Ryan, and Whippes), white-tailed deer browsing impacts (Dovciak and Frair), moose in the Adirondacks (Frair), black duck/mallard hybridization (Cohen), and river otter in the southern tier (Frair) over the next few years. In addition this MOU will provide genetics tech support and a biostatistician for the DEC. And one final achievement was assisting with populating the Gateway exhibit spaces with the Roosevelt Wildlife Collection – something that has helped greatly enrich our campus environment (thank you Architerra for that lovely design, and to everyone who put in a lot of time and energy to seeing it to completion!).

Self: I would say my greatest achievement this past year was growing my international program which included bringing Silvia Saldivar-Bellasai into my lab (a Fulbright student from Paraguay, who is studying the endemic Chacoan peccary), two different collaborations with partners in Mexico through INECOL, and being asked by James Gibbs to serve as co-PI on an ultimately successful NSF proposal studying migration triggers in Galapagos tortoise. This summer I’ll also be spending three weeks in Brazil with my Ph.D. student Allison Devlin, working to deploy GPS collars on animals for her dissertation work. Solidifying my international research program is the focus of my upcoming sabbatical leave, and the accomplishments of this past year will help to do so.

James P. Gibbs
This year has been partially devoted to sabbatical leave (spring semester).

For students, I transitioned coordination of the sizeable Conservation Biology major to Dr. Parry, taught a course in introduction to applied scientific investigation at the Central University of Ecuador (Galapagos campus), recruited and established five new graduate students from Kyiv, Ukraine, and completed two graduate students (both MS: Johnson and Calderon [with Frair]). The problem-solving exercise book 2nd edition continues to be heavily used by some 5-6,000 students in > 25 countries and the third edition of Fundamentals of Conservation Biology text continues to be well-subscribed. New editions are sought by the publisher for both books and we will proceed with the 4th edition revision of Fundamentals in 2013-2014.

For the Department I continue to invest significant effort in collaboration with key colleagues to revitalize the Roosevelt Wild Life Station. I also served on several key Departmental committees that saw significant activity this year.
For myself professionally I am in the process of (1) completing a year-long fellowship as “Viejo Sabio” within the Prometeo Program of the National Secretariat of Higher Education, Science, Technology and Innovation of Ecuador (SENESCYT) building capacity for scientific investigation within the Galapagos National Park Service by collaborating with Park staff to complete 8 different applied research projects that are priorities for the Park, (2) launching with collaborators (Blake, Deem and Frair) a newly NSF-funded giant tortoise movement ecology research program, and (3) making good progress with collaborators in advancing a community-based endangered wildlife conservation program along the Altai Russia/western Mongolia border with substantial support from USAID.

Charles A.S. Hall
Students: In my last year of formal teaching I continued with my normal teaching: Systems Ecology and Energy in Fall, Global. Ecosystems and Biophysical Economics in Spring. All serious, demanding courses. Also as I think anyone knowledgeable will tell you, there is usually a line of students waiting for personal interaction with me essentially all afternoon every afternoon. My graduate students continue to do very well. Anna Stewart continues to receive about every possible prize including a Fulbright for her PhD research and receiving the best PhD student from ESF. She is now developing a program in Tropical Medicine at SUNY Upstate Medical Center. Leandro Castello (PhD with me and Don Stewart) was offered and has taken the new Fisheries professorship at Virginia Tech. One of my earliest students, Chris Neill, was appointed head of the Ecosystems Center at Woods Hole.

Research accomplishments: I published (again) 15 books and papers this year based on my research. I am eagerly sought in many venues for lectures on my research.

Outreach: I run an energy list serve with about 700 members where I distill and send out at weekly intervals what I believe to be the most important energy and energy/economic information. I continue to be interviewed for Television and Media Several times a year. My research and teaching in Argentina constitutes international outreach.

My assessment of my year: I have retired this year at 70. I view my professional life with wonder: I seem to have accomplished the goals I set for myself in my early 20’s far better than I ever could have imagined. These goals were mostly to become an excellent professor in Ecology. My teaching has always been strong but the importance of my research was recognized by only a few until the last few years, where interest in what I have done and do has grown exponentially (Google Charles Hall Energy). I received this year two of the highest award/s that are available for me to get (The Hubbert-Simmons Award and the SUNY Chancellor’s medal for Creative activity). Of greatest importance to me was that I was honored at a special retirement ceremony put on by my undergraduates on June 11 (nearly 100 attended) and by my former and present graduate students May 31-June 1st where about 50 people attended. I was deeply honored at and by these meetings, and enormously impressed at how their lives had been so positively effected through their very diverse applications of systems ecology. I retire with a great feeling of life time accomplishment.

Thomas R. Horton
Students: This past fall I had 228 students distributed into 10 lab sections. Every semester I learn so much from the students in this course. I get a lot of mileage out of teaching this course. It is wonderful to get to know each new cohort of ESF students as they pass through this course. I learn a great deal from them and thoroughly enjoy working with them. I also enjoy working with select undergrads as they gain research experience in my lab. Their primary contact is with a graduate student, but I have also get to advise and help them understand the research endeavor. Of course, I am also very engaged in working with my graduate students. Sam Tourtellot successfully completed and defended his master’s thesis. The primary chapter on mycorrhizal interactions with transgenic lines of American chestnut is largely ready
for submission and will prove useful for chestnut restoration efforts. I also learned that Sam is a great artist. I asked him to draw a mycorrhizal network for an invited commentary I was writing for New Phytologist. The next morning a draft figure was on my desk and the editors agreed that it was so effective we should include it in the final draft. This created a great mood in the lab as Sam and Jeremy Hayward were coauthors and it was great to see the lab getting press in an international journal. Jeremy Hayward also had a successful year, starting with passing his candidacy exam in the fall. He also took the lead on two grant proposals that were unfortunately not successful (NSF DDIG and NSF Preliminary Proposal, both with the DEB Population and Community Ecology Panels). Rejection is always hard even in these highly competitive funding agencies, but the funding climate is incredibly difficult these days. His preproposal received very good reviews and I feel strongly that the experience will help Jeremy down the line. Jeremy was also a coauthor on two new manuscripts, one in New Phytologist on mycorrhizal networks and one in PLOS ONE on spore dispersal by mammals that highlighted Dan Simberloff’s ideas about biological invasions. Jeremy has also largely taken the lead on a chapter in my Mycorrhizal Networks book that focuses on specificity interactions between plants and their fungi. Becka Walling (MS) has also been very successful. She was lead author on a number of small to medium sized proposals and some of the successful ones are not listed here because they are really hers. She presented her earthworm invasion work at a number of venues this past year that generated phone calls from the press and research community. I am very happy to see how well she mentors undergraduate students in the lab. They are helping her with her project and she is doing a wonderful job giving them real experience. Elisabeth Holmes (MPS) made significant progress on her degree. She has tapped into her excellent artistic abilities and worked with Beth Folta to help design interpretive signage at Clark Reservation. I also had quite an army of undergraduates in the lab this throughout the year and it was great to see the lab so active. I advised two honors students this year. Matt Cleere conducted a phylogenetic study of several putatively novel species from Mexico in collaboration with Tim Baroni at SUNY-Cortland. Jennifer Sun collected a bioluminescent fungus from Taiwan and used molecular techniques and a literature search to demonstrate that it had never been documented in western literature from Taiwan. Lauren Alteio recently received funding for her Honor’s thesis that stems from her interest in soil microbial ecology. Caitlyn Muller is pursuing her interest in Forest Health as she uses GIS to map earthworm invasions. Other students have had less interest in doing independent work, but have played a huge role keeping the research and lab running smoothly. It is wonderful to work with this group of motivated graduate and undergraduate students.

Department/college: I view my primary activity for the department and college as teaching a solid General Ecology course (see student section for some details). It is an incredibly important course and the topic encompasses what most of us do in EFB and at ESF in one form or another. Addressing everyone’s interests and needs is not trivial, but I do my best. I also enjoy helping young faculty navigate their first years here in EFB. I am a faculty mentor for several of our newer faculty and I am thoroughly committed to helping all faculty succeed. This is so important I accepted the invitation to serve on the Promotion and Tenure (P & T) committee. The P & T committee had a full slate this year that included reviewing dossiers of several colleagues up for promotion and/or tenure. The P & T committee also spent a considerable amount of time taking a serious look at our criteria and we made an attempt to add some transparency to the process. This is not trivial and is controversial but I strongly believe that this effort will pay off for everyone. Just as important as the work of the P & T committee for our department is the hiring of new faculty. This spring I accepted the charge to chair the Toxicology search committee. I was fortunate to have an engaged and effective committee and department, and we had very strong candidates. I also chaired the awards committee for the Lowe-Wilcox, Zabel, Morrell and Silverborg scholarship awards. I put this here because in addition to being a real treat to honor our best students with these awards, the awards are named in honor our emeritus faculty. The awards ceremony and graduation is probably the best day of the year for me. This year’s ceremony was especially poignant for me because of the passing of Dr. Hugh Wilcox this past spring. I am contributing to an obituary with Dr. June Wang and the family and students of Dr. Wilcox to be submitted to the appropriate outlet later this summer.
Self: My papers continue to receive attention and influence the field as evidenced by the high numbers of citations. I had a great year in terms of seeing three papers move from ‘in press’ to ‘2012’ or ‘2013’. Even better, I am an author on five new papers that were accepted for publication (one in revision). I also am pleased to note that the journals are strong: New Phytologist, PLOS ONE, Oecologia and American Journal of Botany. Two of these papers were labors of love that have been languishing in vials of DNA in my lab for years. The Kennedy et al. paper incorporates data I collected from my postdoc back in 1998. Similarly, the Dulmer et al. paper reports data from Kris Dulmer’s masters project signed off back in 2006. Some things take a while to mature! The project with Dan Simberloff and Martin Nuñez is rolling along nicely and we are peeling off manuscripts now. Jeremy has two that are in the final stages of molecular work and I am confident that new manuscripts will be landing on my desk shortly. The book on Mycorrhizal Networks with Springer (Ecological Studies series) is also moving along nicely. I have received and reviewed most of the chapters. The authors have revised the chapters and I am now soliciting outside reviewers. I will be very happy to bring this big project to a close this coming year.

Robin W. Kimmerer

Students: The scholarship of education remains my primary focus as a faculty member serving our students. I am very proud to have created two major educational programs which directly benefit ESF undergraduates and graduate students, totaling $912,000 this year through the Center for Native Peoples and the Environment. Thanks to an award ($712,000) from USDA Higher Education Challenge Grant,(with co-PI Colin Beier) we have designed and launched a cross-cultural research exchange program with a tribal college, the College of the Menominee Nation, instituting a sister forests exchange between the great Menominee Forest and the Huntington Forest. This program supports a total of 16 undergraduates in summer research which integrates scientific and traditional ecological knowledge, as well as supporting two Native American graduate students. In addition, I have brought $200,000 to campus in the Indigenous Environmental Leaders for the Future program sponsored by the USDA Multicultural Scholars Program. This award supports a cohort of 5 Native American students who will start in Fall semester 2013. These unique opportunities significantly increase the presence of indigenous students and perspectives on our campus and provide unparalleled learning experiences for ESF undergraduates. In addition, I have taught 4 regular courses which receive excellent evaluations, mentored graduate students, served as a CSTEP mentor, an Honors thesis advisor and an active advisor to the Primitive Pursuits Club.

Department and College: In addition to my responsibilities as a faculty member, I have served as founder and Director of The Center for Native Peoples and the Environment in 2012-2013 which has brought significant positive attention to the College’s leadership role in incorporating traditional ecological knowledge in environmental education and research. I’m particularly proud of the contributions of the Center as an emerging change agent in broadening the scientific dialogue to include traditional ecological knowledge, I travel a significant amount, disseminating the work of the Center as evidenced by over 20 invited talks, including multiple keynote addresses on traditional knowledge in forums around the nation. The Center’s reputation has grown to include participation in the Native Science Fellows Program and the Intertribal Timber Council. The many programs of the Center include on campus presentations by leading indigenous thinkers, collaborations with tribal colleges, a summer environmental internship program at Onondaga Nation and at Tuscarora nation, record enrollment in the successful “Native Earth Environmental Youth Camp” with funding from the National Science Foundation, which has received considerable public attention as an educational model. The camp has been a focal point for wide-ranging collaborations with 8 different indigenous nations in the region. The impact of the Center can be seen in the number of invited collaborations requested from colleagues and institutions around the nation. The validity of using TEK as a partner to ecological science in education and research is gaining traction through our efforts. The successful development of the Center has created a platform from which grant proposals have developed, including an emerging new collaboration with the nation’s leading tribal
college for natural resource education, Salish Kootenai College. In addition to these activities associated with the Center, I have served in a diverse array of College-wide capacities described above.

Contributions to Professional Growth: I am increasingly involved in initiatives which incorporate my writing and speaking on indigenous knowledge systems, into the arena of environmental ethics and philosophy. I was honored to be invited to serve as a Senior Fellow for the Center for Nature and Humans for 2013-2014. I created and delivered an invited TEDx talk last summer on environmental ethics entitled “Reclaiming the Honorable Harvest”. Working in this interdisciplinary arena of public dialogue and engaging teaching tools outside of my academic experience has been both challenging and rewarding, contributing to professional growth in new directions which can benefit my creative capacity as an educator and writer. After a publication delay last year, my book “Braiding Sweetgrass” will be released this fall by Milkweed Editions. The release has demanded an extraordinary amount of effort in final preparations, including the honor of its selection as a special handmade edition celebrating the “art of the book”. I’m looking forward to the new collaborations and opportunities for our students and the College which can emerge from this major publication.

Donald J. Leopold
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; about 200 people in attendance) at the School of Environmental Design at Temple University (Ambler campus), which they used as an alumni and friends event. 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.

Karin E. Limburg
Students: In the spring, I taught my grant-writing graduate seminar, in which I watch as students really start to understand what it means to write a well-worded, tight proposal. I also taught a graduate seminar titled “A Self-Help Course in R.” Why “self-help”? Because I was learning R alongside the students. My interest in teaching the course was to see if a very basic, introductory seminar on the subject would get the students over the “learning hump” and become comfortable with the language. It certainly seemed to do so. This was the second time through, and it really does seem to de-mystify the language to the students. I plan to teach this course again next spring, so that it precedes Jaqui Frair’s advanced modeling class, which requires the use of R. Having sat in that course a few years ago, I found that learning R at the same time as learning complex statistical concepts was challenging, to say the least. Hence, if
students can learn R in a separate course, they may be able better to grasp the modeling material in Frair’s class.

Department and college: I continued to chair the EFB Graduate Program Advisory Committee. This year had sparse activity, although we began to discuss re-invigorating the MPS programs. We also selected two excellent co-winners of the EFB Outstanding Doctoral Student Award. I also served on the department’s P&T committee, which had a busy year. Finally, I am part of the Biophysical and Ecological Economics Area of Study in the GPES program, and will be serving as the head of that in the fall of 2013 until Jack Manno returns from sabbatical.

For myself: I seem to be in a career phase where I get asked to do many things outside of the College. This is reflected in the lists above of presentations (most of them invited) and service. As I accept and carry out various commitments, I always remember that I represent ESF. I have been pushing to do more funded research on the topic of marine hypoxia, and have submitted four grant proposals (1 through ESF) this spring either entirely or in part on this topic. One has already been favorably reviewed. I am also increasingly concerned about the impacts of large dams in large rivers. Not only are there many in existence, but many more are on the books for construction in the developing world. After two near-misses at Science magazine, a group of us published a paper in Conservation Letters titled “Fish and hydropower on the U.S. Atlantic coast: failed fisheries policies from half-way technologies?” This paper, out early in 2013, has garnered some attention in the world of river conservation.

Mark V. Lomolino
Students: I have continued to teach courses that emphasize fundamental biological, geological and geographic factors that influence biodiversity, and challenge students to develop an integrative understanding of relevant patterns and to articulate this in writing (essay form exams that I grade myself). The biogeography course (undergraduate and graduate) continues to attract approximately 40 students from ESF and SU, and the mammal diversity course has now grown to approximately 80 students. Both of these courses receive excellent reviews from students. I also continue to offer a series of graduate seminars and courses on various topics in conservation biology – topics that change depending on interests of students and new emphases in the field.

Department/College: My service to the department and college have been limited because of personal issues, but have included meeting with prospective students and job candidates, hosting accepted student receptions and freshman/transfer orientation advising, serving on graduate student committees and as chair of exam and defense committees for the College.

Professional Development: I have developed my international network of colleagues and research programs in the areas of biogeography, ecology and macroecology. As a result, I have begun to publish with new collaborators, develop new proposal and received invitations to give guest lectures, keynote addresses and serve as external evaluator of faculty and research programs. I am about to serve in this capacity later this month, evaluating Denmark’s Center for Macroecology and Climate, which will also provide opportunities for new collaborations including a new program of research on long-distance movements as adaptations to climate change for North American wildlife.

Gregory G. McGee
This year I continued to explore innovative approaches to improving instruction and student engagement in my General Biology laboratories and EFB202 (Ecological Monitoring and Biodiversity Assessment). Neal Abrams, Betsy Hogan and delivered the first iteration of our NSF-TUES supported Integrated Biology/Chemistry Laboratory and Communication in the Sciences seminar. I believe Neal and I were very successful at rolling out seven fully integrated laboratory experiences for our chemistry and biology
students. Course evaluations indicate that students enjoyed this integrated approach to laboratory instruction, but it is not yet clear if they benefitted academically from the approach. Neal, Betsy and I all met weekly with the Communication in the Science seminar and developed engaging approaches to synthesizing student understanding of biological and chemical principles while developing communications skills. Students in this seminar practiced technical writing and peer review; wrote and recited children’s stories on complex biological and chemical processes; and studied and developed poster presentations. Our colleagues on the First-Year Learning Community Team are following this work as we investigate ways to more completely integrate the learning experiences of our first-year students. I continued my commitment to delivering a high quality field study experience for our students through EFB202. In addition to time spent organizing instruction and coordinating evaluation of 144 students, I spent 30 days at CLBS this year teaching four different components and administering the two 3-week sections of EFB202. I also instituted some small changes to the EFB202 instruction that I believe have improved student learning outcomes. For the first time this year I invited Jessica Clemons, Assistant Librarian, to provide instruction on information technology and source integration as students developed their research ideas at the end of the second week. Her contributions yielded more thoughtful use and discussion of the scientific literature and better quality source integration in student presentations. I also increased expectations for the students’ research project proposals that included consideration of experimental design and anticipated approaches for statistical analyses of data. This approach led to improved quality of proposals and better planned projects.

I served again this year as EFB’s Undergraduate Curriculum Director and as the Curriculum Coordinator for the Environmental Biology major. In my capacity as UCD I worked with Admissions to organize two departmental open houses and five accepted student receptions and personally participated in five of these seven events; coordinated undergraduate advising for the department; provided departmental orientation to freshmen and August/January transfer cohorts; represented EFB at two end-of-semester Academic Standards meetings; provided feedback to the Provost on potential consequences to EFB of SUNY-wide “Seamless Transfer” policies; and maintained currency of plan sheets and directed elective offerings for all seven majors. Apart from my own advisees, I advised numerous other EFB undergraduate students on a variety of curricular matters and facilitated numerous student petitions. I was gratified to receive this year’s ESF-USA Award for Excellence in Advising. Another substantial task was coordination of departmental assessment and preparation of the ENB assessment report. Along with my colleagues on the EFB CCAC I assisted the AEC staff in their development of courses for the new Adirondack Residential Semester that would be able to fulfill EFB curricular requirements. I finished my second and final year as chair of the Student Life Committee, which finalized details of the ESF report on the National Survey of Student Engagement last summer. Those NSSE data are now being used by various campus units for program development. This year we also continued working with the Office of Student Affairs to evaluate and, where necessary, amend ESF’s current policies and procedures on academic integrity. Finally the committee contributed to the formulation of a SUNY System position paper on improving diversity efforts across the system.

Stacy A. McNulty
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.

Myron J. Mitchell

Students: My major teaching commitment in recent years has been associated with an undergraduate and graduate course (Ecological) Biogeochemistry taught jointly as an ESF and SU course with me and Charles Driscoll as instructors. This has been a very successful course and has engaged a broad array of students. Last fall (2012) we had 45 students in this class. I have been responsible for organizing a “Cross-disciplinary Seminar in Hydrological and Biogeochemical Processes.” This past spring (2013) we had more than 80 students, faculty and staff who came from academic programs at both ESF and SU that participated in this seminar with an average attendance of 50 individuals. I currently have two Ph.D. students (Phil-Goo Kang, Tamir Puntsag) and two M.S. students (Daniele Baker and Ceili Bachman). For the two M.S. students I am a co-major professor with Kim Schulz. Phil-Goo Kang has had to return to Korea but he is still working on his Ph.D. Dissertation. He has had two chapters of his dissertation published and is working on two additional chapters that will also be published in international journals. He should complete his dissertation in 2013. Tamir Puntsag is supported by a Fulbright Fellowship and is working on project using the stable isotopes of water to analyze the effect of climate change on the hydrology at Hubbard Brook Experimental Forest in NH.

Department/College: I currently serve as Director of Council of Hydrologic Systems Science and also am the alternate ESF representative for the Consortium of Universities for the Advancement of Hydrologic Sciences, Incorporated (CUAHS). My largest current administrative commitments have been involved with the Research Foundation Board on which I serve as Vice-Chair, Member of the Executive Committee and also am a Member of the Committee on Research Supported Economic Development. During this reporting period, I have served in a number of capacities on the Research Foundation Board and also have served on various SUNY committees and tasks forces. Most recently I was a member of the Member of SUNY Empire Innovation Advisory Committee.
Self Professionally: I have continued the development of a major research program in biogeochemistry that has focused mostly on the role of air pollutants and climate change on forested watersheds, but has also expanded into other areas including the urban environment and international cooperative work in Asia and Europe. This research has resulted in 14 refereed papers published or in press for this reporting period and research grants totaling $1,507,937 for this reporting period. The Huntington Forest/Arbutus Lake facility is used by a variety of agencies and current plans are underway to expand this monitoring effort. Most recently NYSERDA has provided funding to cover basic monitoring from 2013-2017. This funding includes $497,176 in direct funds to ESF. This support also includes annual funds provided directly from NYSERDA for the analytical costs to the National Atmospheric Deposition Program (NADP) for the national trends network (NTN) -($5,018), Mercury Deposition Network (MDN) - ($12,000), Mercury Litter ($2,600), and atmospheric Hg ($6,000), for a total of $128,090 per year in support of deposition and network analyses at the Huntington Forest (HF) over the five (5) years of the project. Additionally, the Passive Ammonia Monitoring network (AMON) ($3,100/yr) analytical and network support is paid by EPA and addition Clean Air Status and Trends network (CASTNET) operational cost and analytical costs are paid directly by EPA. Because of the infrastructure and location of this site, the Huntington Forest/Arbutus Watershed has been involved with a broad range of intersite comparisons not only in eastern North America, but also worldwide. The other major research infrastructure that I have helped develop is in the City of Syracuse where we have two towers with one located in a residential area in Upper Onondaga Park for which details can be found at:
http://www.esf.edu/hss/em/onondaga/index.html. The other tower is located at the Center of Excellence (CoE) Headquarters at a downtown location. We are collecting meteorological data as well as using eddy correlation measurements for determining the fluxes of carbon dioxide, water and heat at both of these sites. In addition at the CoE site we are collecting traffic data from the two adjacent interstate highways (I81 and I690) as detailed: http://www.esf.edu/hss/em/coe/index.html. We are also working with the City of Syracuse to install some of our instrumentation in the newly refurbished “fire barn” at Upper Onondaga Park. I have other research projects including being involved with the Long-Term Ecological Study site in New Hampshire. I have been invited to give a keynote address at the meeting of the North American Forest Soil Meeting in June 2013.

Lee Newman
Students: I have continued to teach the three courses I am required to teach, Cell Biology, Senior Synthesis and Molecular Techniques. The Cell Biology course has been the one I worked the most on, and I feel that it is improving with each time that I teach the course. At the end of the last lecture, I was astonished and honored to have the class stand up and give me a round of applause – that is the first time that has ever happened in my teaching career. It inspires me to work even harder to continue to improve and bring elements to the course to engage the students. I also continue to teach Phytoremediation (EFB496/796). I will discuss this more in the service to the Department and College. This year I also started teaching EFB496/796 Cell Biology Recitation, to go into current research and literature articles on Cell Biology for students who want more depth than I can bring to the Cell Biology Course. This year I have had 27 students in the lab, PhD, MS and undergraduate. Two of my undergraduate researchers stayed on in the lab as MS students, and two other MS students plan to switch to the PhD program. Two students are visiting PhD students, one from Iran and one from Thailand. Both are fitting into the lab very well, and are extremely productive. In addition to these two students, there are two other international students in the lab, one for China and one from Nigeria. The lab also hosts students from a variety of ethnic backgrounds, including Trinidad, Philippines, India, China, and Native America. The lab hosts not only a diversity of nationalities, but also religious and political backgrounds. Several students are or were in the Honors program, and several others are in CSTEP. The best thing about this is how proud the students themselves are of being in this diverse group. The students are extremely hardworking, and this is reflected in the number of awards they have won locally and at internationally attended conferences. Graduate student Adam Hoffman and then undergraduate student were part of a group of ten students I
took to the Association for Environmental Health Sciences Annual Conference in Amherst, MA in October 2012, and they won first and third prizes respectively for their presentations. Adam also won third prize, and graduate student Scott Wolcott won honorable mention at the Spotlight on Research completion April 2012, and undergraduate Beverly Agtuca won first prize for student research at the Biotechnology Research Symposium in May 2012. I have continued to assist students to have quality internships, and helped one student have an internship with a USDA researcher in Fresno, CA, two to have internships with the Department Energy, one at Brookhaven National Lab and another one at the National Renewable Energy Lab in Golden, CO. Several had internships with a colleague who is manger of the largest greenroof company in the US, and had the chance to see and take part in installations in Manhattan. Adam Hoffman, my first PhD student at ESF passed his qualifying exam this spring. I continue to work with the students to develop their sense of community by hosting laboratory trips to places that are both fun and educational (Corning Museum of Glass and the Rosamond Gifford Zoo). I also work with the students to develop the importance of community service by participating in a food drive – last year the lab purchased and delivered over $1600 of food to a local food pantry.

College: I am continuing my work on the departmental Course and Curriculum Assessment Committee, the college Committee on Research, and the SUNY Catalyst Committee. I also continue to participate in three Hill Collaboration groups, Neuroscience, Cancer, and Wounded Warrior. As part of this last group, we have started work with a former ESF graduate, Dr. Stephen Lebduska, who currently serves as the head of the Spinal Cord Injury Unit at the Syracuse Veterans Hospital to develop a Horticultural Therapy program for inpatients in the unit. We are working not only with the hospital, but also with other community groups to obtain the plants and supplies for the program, and we currently have three students working at the VA on this program. I served on the departmental search committee for the new faculty hire in toxicology, and I was recently asked to take the lead on drafting the documents to hire a replacement for an environmental microbiologist. For the second year, I was chair of the organizing committee for the Biotechnology Research Symposium, which continues to attract both academic and industry representatives. This year, I invited as a plenary speaker Dr. Henry Daniels, who is recognized by the Bill and Melinda Gates Foundation and Nature Biotechnology as the leading scholars worldwide on the production of plant based pharmaceuticals. He has agreed to come back to ESF and give a seminar at the school, for the two of us to try to develop a collaborative research program, and to discuss ESF Biotechnology students to intern in his lab. During the past year in the EFB496/796 Phytoremediation course, I had four speakers give seminars that were open to the college and the public, Dr. Charles Reynolds from the Cold Regions Research and Engineering Laboratory, Dr. Tracy Punshon from Dartmouth College and Dr. Clayton Rugh, manager of Xeroflora, the largest green roof company in the US. The final speaker, Dr. Jerald Schnoor, Editor in Chief for Environmental Science and Technology, and a former EPA Scientific Advisory Board Member, not only agreed to give a talk in the class, but also gave the final Adaptive Peaks Seminar. His talk attracted guests from local industry and Syracuse University. I have recently started working with both ESF and UMU administration to develop and implement a joint MD/PhD program. I have continued to work with the Graduate Admissions office to attract the highest quality of students to ESF, and in this capacity worked the recruiting table at the Brookhaven National Laboratory Graduate Student Fair. Also at BNL, August 2012 I organized the signing of the Memorandum of Understanding between SUNY, BNL and the Research Foundation, signed by Garrett Sanders of the RF, and Drs Doon Gibbs, Associate Director of BNL (now director) and David Lavelle, SUNY Provost. I also organized a tour of the BNL facility for ESF Provost Dr. Bruce Bongarten and Dr. Lavelle. The following day, I worked with BNL staff to host SUNY Chancellor Nancy Zimpher during her visit to the lab, and her keynote presentation to student researchers at the lab. Chancellor Zimpher met with SUNY students doing research at the lab, and I co-hosted her tour of the lab with Director Sam Aronson, Research Foundation President Dr. Tim Killen, and Michael Frame, Director of Federal Relations.
Self: I continue as Co-Editor in Chief for the International Phytoremediation Journal, which has continued to increase the number of submissions received every year. The publishers continue to increase the number of issues, and from a quarterly journal we are now have 10 issues a year, and are slated to go to a monthly publication. Our impact factor continues to be strong for a specialized journal, even considering the increasing number of articles published every year. I continued to serve as the Immediate Past President of the International Phytotechnology Society after service 6 years as President. The Society continues to grow and the conferences remain strong every year. I am also the chair of the organizing committee for this year’s conference, which will be held in Syracuse in October. I also continue my role on the Scientific Advisory Board for the Association for Environmental Health Sciences. This past year, with travel to Mexico, Belgium, Italy and China I have continued to increase international contacts, with the aim of developing more international collaborations. I also am developing collaborations with colleagues in the Czech Republic and Thailand, and I have been asked to go to Kazakhstan to teach course of biotechnology. I am also working to developing more collaborative ties within the SUNY system, and I am starting to work with new colleagues from SUNY Binghamton (Chemistry Dept) and Buffalo (Engineering) to develop joint research programs. While my publications remain excellent in quality and are published in top journals in my field, I look forward to increasing the number as more graduate students move through the lab. And finally, I recently was asked to join an international team of editors to work on the book Phytoremediation: Management of Environmental Contaminants.

Dylan Parry

Students: In January I became the coordinator of the undergraduate major in Conservation Biology (152 students). In addition to the myriads of petitions and assessment requirements, this also entailed attending open houses and accepted student receptions to promote the major, and EFB and ESF in general. I teach demanding rigorous classes and refuse to use multiple-choice despite the significant time spent grading written answers. In spring 2013, I again taught EFB-502, continuing to add new components to this course to keep it fresh and current in this rapidly developing field and I turned over more than 20% of the lecture material this year. Not recognized by either the Chair or the College*, is the large input effort required to teach a course of this size (48 students) with continued utilization of labor-intensive written exams, term papers, and projects. Having previously taught a large service course with TA support, I can attest that instructing a demanding upper division course without TA’s is considerably more time demanding. While it would be easy to use a SCANTRON format, my philosophy has always been that the value of multiple choice tests are very limited and that student learning is best when they are required to synthesize material in solving the kind of problems they will encounter in the real world. Perhaps this is why this course continues to get excellent evaluations from the majority of students that take it every year.

*apparently the preceding phrase refers to the writer of this phrase making a request to the Provost this past February for a Presidential Salary Increase. The Provost requested the Chair's recommendation on this request. After reviewing the past five years of department annual reports the decision was made to not raise the salary of this individual, relative to this person's productivity the past five years and current faculty salaries in the department. The Chair does not believe that there is any relationship between course rigor and faculty productivity, nor that any one individual of the 34 EFB faculty member is unique in holding our students to high standards. The request for this raise and decision were communicated in a confidential manner. But since the writer of this statement has decided to air his dissatisfaction to this decision openly, then it's appropriate to respond in the same open manner (D.J.L.).

I served on CCAC as well as GPAC this year. In addition, I oversaw the Stegeman Award process and was once again able to provide two well-deserving students with an award and some supplemental funds for research.

Department and College: I served on two college-wide committees this year, CoR and have been a member and stand-in chair for hearing academic integrity violations. I represent the college’s interests
and perspective as a member on the NY State Invasive Species Advisory Committee, a group of
governmental, non-profit, private sector, and academic organizations who function to advise NY State on
invasive species issues and help to craft legislation that effectively combats targeted species or pathways.
Although budget cuts have taken a toll on the organization, we were still able to play a large role in
developing and changing the forth-coming ‘clean-boat’ bill that the governor signed into law this year.

Self: I have begun two collaborations with researchers working on climate change, one on integrating
insects into understanding the effects on forests (Colin Beier and Greg Lawrence - USGS), and another
with multiple investigators (particularly Derek Johnson and Kristine Grayson at VCU and Patrick Tobin
with the US Forest Service) looking at the effects of climatic shifts on invasive insects. My association
with the transgenic American chestnut program has also proved fruitful we (Powell et al.) received
another round of significant USDA funding (500 K) to continue research on the system. This proposal
was the number 1 ranked proposal in the USDA BRAG competition.

William A. Powell
The most significant accomplishment this year came from our field trials of two-year-old transgenic
American chestnut trees that express an oxalate oxidase enzyme. We were able to show for the first time
that it is possible to enhance resistance to chestnut blight. This is the culmination of 23 years worth of
research by myself, Dr. Maynard, and our excellent research team. But this isn’t the most exciting result.
The ‘Darling 4’ trees tested in the field demonstrated significantly enhanced resistance compared to wild-
type American chestnut trees, but still not quite as high as Chinese chestnut trees, and their smaller
branches are still susceptible to girdling. The good news is that seven of our newer tree lines, ‘Darlings 2,
11, 13, 18, 23, 24, and 311’, planted in the field this spring make much more of the oxalate oxidase
(OxO) than ‘Darling 4’ and, in leaf assays, appear to be even more resistant than Chinese chestnut. We
still need to grow these for two to three years so that field assays can confirm these results, but these
American chestnut trees are looking very promising. There is still much work to be done. The next step
is to petition the regulatory agencies for non-regulated status, a complicated process that can take 3 years
or more, depending on help and funding support. But once the trees are deregulated, they can then be
used freely in a restoration program that would return this keystone species to the forests. In addition, we
are continuing work to find additional genes to stack with the OxO gene to ensure sustainable resistance.
This year, using leaf assays of transgenic American chestnut, we have identified two genes from Chinese
chestnut, a laccase-like gene and a proline-rich protein gene, that enhance blight resistance to an
intermediate level. We are now making to pyramid vectors to put these paired genes into the next
generation of trees. So there is plenty of work to do, but we have surpassed the biggest hurdle, proving we
can enhance resistance, during this past year.

These results described and the chestnut research in general has had a significant impact on our students,
department and college, and myself professionally. This has led to a National Geographic sponsored
TEDx talk and many articles in significant publications such as The Wall Street Journal, The Economist,
The Atlantic, and Nature, as well as news reports on NPR. This enhances the reputation of our
department and college and will help attract future students. This research has brought close to $5 million
of research to the college since the beginning of the chestnut project in 1990, which has supported and
was used to train visiting scientists, postdocs, graduate students, undergraduate students, and even high
school students. Professionally, I have learned to be a much more effective speaker at all levels, from
giving talks to scientists and to the general public. The key now is to ride this wave of success to
continually benefit our college, students, and the environment. It would be very easy to have a gap in
funding or support that could make the project collapse by losing some of our highly trained
professionals or campus research space. This is not expected to happen as long as we continue to have
the full support of ESF.
Neil H. Ringler

This was an active year with regard to student activities at graduate and undergraduate levels: Two Masters and one Ph.D. candidate graduated in May, and another Ph.D defense is scheduled in mid-June, and another in August. Three new graduate students were accepted, to arrive between June 2013 and January 2014. They will work on projects that include restoration of Onondaga Lake, potential new studies of the fisheries and invertebrates of the Mohawk River (funded via NYS DEC), and/or a proposed Sea Grant study of Atlantic salmon. A proposed NYSERDA study of mercury in fish populations of NY lakes, jointly with Dr. Charles Driscoll of Syracuse University, provides enormous thesis/dissertation potential. Two off-campus interns joined our Onondaga Lake program this year. I believe that the courses in Aquatic Entomology and Comparative Vertebrate Anatomy went well this year; the undergraduate teaching assistants have provided an increasingly valuable contribution in synergy with graduate teaching assistants.

The most evident contribution to the Department is the virtual completion of our new CIRTAS laboratory on the second floor of Illick Hall, in collaboration with aquatic scientists Kim Schulz, John Farrell, Chris Whipps, and Chair Leopold, and with support from much of the ORP and ESF teams. The facility is already finding its way into new proposed research, and the TIBS component of this NSF project is functioning already. I believe that our Environmental Medicine initiative, now entering its third year, has contributed to genuine collaboration among faculty at ESF, SU, UMU and the Syracuse Veterans Administration. This was presented as a component of the Biotechnology Conference in the Gateway Center on May 23, 2013. In addition, continued work on the Syracuse Center of Excellence Biofuels facility, in conjunction with Art Stipanovic and Tom Amidon is gradually fulfilling its original promise on behalf of ESF.

Among the most significant contributions to professional development was participation in a set of planning and strategic meetings for SUNY and the Research Foundation. Both entities are striving to really make SUNY more than the sum of its parts, and succeeding in various ways. I think that it has helped to be able to discuss issues and opportunities with the research leads at Stony Brook, Buffalo, and Albany. I believe that conferring with the research administrators at SU, UMU, VA (Hill Collaboration) has also helped to broaden my perspectives. With regard to professional scientific development, this year has brought an increase in diversity of projects and aquatic science collaborations to include those from Syracuse University, Upstate Medical University, US Geological Survey, NYS DEC, US Fish and Wildlife Service, and the NY Natural Heritage Program. The latter has recently been brought within the ESF framework, which should add to our overall opportunities.

Rebecca J. Rundell

Students: This spring I taught EFB311 Evolution and EFB355 Invertebrate Zoology (with two labs). Factoring in the students from my guest lectures in Weir’s Diversity of Life course and Folta’s Natural History Museums & Modern Science course, I taught over 400 ESF students this year. I took the assignment of teaching both Evolution and Invertebrate Zoology as an opportunity to incorporate the latest findings into both courses and infuse them with new ideas. In Evolution the students sharpened their critical reading and thinking skills by producing mini-posters based on the latest and most compelling research in evolutionary biology. We exhibited the posters at Moon Library to focus regional and campus attention on the central role of evolutionary biology as part of the International Darwin Day celebration. Our event was facilitated by Assistant Librarian and EFB Liaison Jessica Clemons and Director Stephen Weiter, and was publicized on the International Darwin Day Foundation website and featured in ESF News. Weiter said he heard lots of positive and appreciative comments about the posters and noticed that people were actually coming in and reading them. I plan to keep this part of the course in future years as a way to not only engage students with the reality of recent evolutionary research, but to bring students in close proximity to Moon Library’s critical intellectual resources. This year in Evolution I introduced two new texts: Doug Futuyma’s Evolution and Jerry Coyne’s Why Evolution is True. The latter author, a
world-renowned evolutionary biologist and geneticist, generously agreed to participate in a live Skype chat with the students in April. Students asked questions based on the book or their own curiosity and quickly learned that Coyne does not shy away from perceived controversy. It was a great experience for the class and I think everyone would have stayed for hours longer, had we a longer class period.

In both Evolution and Invertebrate Zoology I led field trips, which I believe are firsts for both courses. My main goal was to give students hands-on, visceral and unforgettable experiences with evolution and deep time. There were two weekend trips for the Evolution course and one for the Inverts course. We stopped at two Devonian fossil sites, where students learned some local geology, ecology and evolution and collected their own fossils. Each student came away with a physical reminder of deep time, and students uncovered some excellent specimens including cephalopods and large, whole trilobites. After fossil collecting we headed to the Museum of the Earth in Ithaca for an hour-long program by staff scientists on human evolution, conservation and genetics, or in the case of the inverts course a behind the scenes collections tour. Following the program students checked out Museum of the Earth exhibits, which include everything from Burgess Shale specimens to exquisite Paleozoic fossils, all the way up to a fully articulated mastodons skeleton. In both Evolution and Inverts courses I passed around specimens from my own collections and from our invaluable Invertebrates Teaching Collection. This year I started the Evolution course with a piece of dinosaur bone and ended it with a fossil ear bone from a whale. I plan to incorporate more specimens in my lectures in the future, since they generate great questions and curiosity from the students, as well as memory of the material.

The main experimental component of my Inverts course this year was using the flip classroom technique in lab, or as I like to call it, “invert-ed” classroom. Rather than directly teaching each dissection, students chose a dissection to lead via lottery on the first day of class. The TAs and I fed students information (videos, illustrations, etc.), and then on the lab day they taught that lab segment themselves. This pilot teaching project was well received and I plan to continue it. My main goals for this are to engage the class in questions and discussion and discover future New York State science teachers. In Inverts we also introduced several marine tanks, including a coldwater marine tank system that will enable us to bring in more northeast marine taxa, allowing students to learn our “local” biota. We have built a mangrove jelly flow-through tank system and we are also building a small pseudokreisel (circulating jellyfish tank) that will allow students to better interact with some of the most charismatic invertebrates. Live animals are so important for getting students excited about invertebrate animals and these tanks not only help to keep the animals alive, but also give students practical experience in aquatics. Although this course is certainly a work in progress, one of my students recently told me that Inverts has been his favorite course so far at ESF. This inspires me to keep building it for future undergrad and grad students.

With respect to graduate students in my lab, I took on one MPS student in Conservation Biology this year, and will welcome a new MS Con Bio student in the fall. I am cultivating a couple prospective students for the subsequent year.

Department/College: I very much appreciated the many warm and friendly colleagues who welcomed me to the department this year and helped balance the impacts of multifarious construction projects in Illick. I have not yet been extensively involved in departmental service, but served on the Burgess Award committee and presented an award for the Conservation Biology major at the EFB ceremony on graduation day.

Self: I am building my lab, which is largely focused on: 1) conservation research on local/northeastern and Pacific nonmarine snails, and 2) diversification and correlates of species diversity in species-rich and understudied invertebrate taxa. One prominent goal on the conservation management side of conservation biology is to thwart the extinction of species. Our local geographically restricted land snail Novisuccinea chittenangoensis allows us the opportunity to attempt this, and in so doing the species might inform
conservation of other severely impacted riparian snails elsewhere in North America. Following the Species Action Plan (and building on the work of other EFB faculty), through a collaboration with USFWS, I have submitted a grant that would allow us to breed *N. chittenangoensis* in captivity and partially support an incoming graduate student whose Master's project will be focused on conservation of this species. In the Pacific/Oceania region I have worked closely with the IUCN and land snail colleagues to assess and publish the conservation status and geographic range for 60 species and subspecies of Pacific Island land snails. This is the first time such a monumental effort has been undertaken, particularly for the biota of western Pacific islands. It provides a critical foundation for my future conservation efforts in the region, which include understanding how extinction risk is distributed within Pacific biotas. While some of our most species-rich invertebrate groups are rapidly going extinct, we still know relatively little about how these animals evolved. Reconstructing diversification and biogeographical patterns for Micronesian land snails, and Belau species in particular, is a major focus of my work and will resume as I finish cleaning up and putting together my lab this summer. In the meantime I have continued my research on the molecular phylogeny and morphology of marine meiofauna (microscopic interstitial invertebrates). I have also begun working with an undergrad interested in freshwater meiofauna research in the Adirondacks, which will help us build a local component to understanding invertebrate diversification patterns and ecological correlates for diversity. A related interest is to study larger-scale causes of speciation and bursts of diversification. Thus I have also continued my collaboration on whole genome duplication in animals, using computational facilities at University of Arizona.

Sadie J. Ryan

Students: This year was the second time around for my two main courses, offered as part of new Environmental Health curriculum at ESF; in some cases I applied lessons learned, and in other ways I had to adapt, for example to increased enrollment. This year in the Fall I offered Emerging Infectious Diseases (EFB 496/796), for the second time, but with a graduate section added; the class size more than doubled, and the addition of graduate students apparently made the discussions more complex and in-depth. I also co-instructed the graduate-level Adaptive Peaks seminar (EFB 797), which allowed us to bring in a series of interesting speakers and have graduate student led discussions, often examining methods and motivations more closely than peer reviewers – which was a lot of fun. In the Spring I offered EFB 360, Introduction to Epidemiology, also for the second time, which had increased enrollment also, which changed the dynamic of the classroom considerably; based on feedback from last year, I increased the number of in-class exercises, in which students dissect current health information, either articles, reports, editorials, and take on group activities shared with the class, to further critical thinking about communication of health concepts. The students had two major creative projects, one of which is to produce a piece of health communication – a pamphlet or poster that one might find in a health center, at the doctor, clinic, or another publicly accessible place. This project again resulted in some amazing products, the most exciting of which I will display in one of our display cases in Illick. In addition to this class, I also co-instructed the Adaptive Peaks seminar (EFB 797) again, instructed a seminar for the Cons Bio club called Conservation in Ecuador (EFB 496), comprising presentations and article critique, for which I also oversaw my first undergraduate teaching assistant (EFB 495), which was both an interesting experience, and very successful. In addition, I co-instructed the Parameter Estimation and Population Modeling (EFB 496/796) course with Dr Cohen, which we expanded this year to include an additional computer lab period, and which we opened up to upper-level undergraduates. In addition to teaching, I oversaw three undergraduates in my lab group doing work at the lab experience and internship levels, plus a senior synthesis student for Environmental Science, and co-advised with Dr Folta and Dr Whipps an undergraduate project on media impacts on perceptions of Lyme and West Nile diseases. One of my undergraduate’s projects was a joint internship at Upstate Medical University, expanding my realm of experience and offering much more hands-on work. My current graduate students (3) are all completing their first year of coursework well; one student has a manuscript in final stages for submission, and 2 others are doing full field seasons this summer. Both thesis-track students have had abstracts accepted for a fall conference, and are applying for fellowships and research funding for future work. In the fall, the
lab will add another 2.5 students; a former undergraduate researcher will be starting a MS, another MS student will be working on a DEC project (with Dr Whipps and Dr Cohen), and a PhD student will be co-advised with Dr Fierke to work on our Mc-Intire Stennis funded project. Two students whose committees I served on graduated, one PhD (Anna Stewart-Ibarra), one MS (Sarah Wilkinson). One co-authored manuscript is currently in the final stages, and ongoing projects with Dr Anna Stewart-Ibarra, and the Center for Global Health and Translational Science (CGHATS) at SUNY UMU, including grant-writing and bringing in a PhD student at SUNY UMU, have stemmed from this committee-mentoring experience.

Department/College: This year, I worked intensively on paperwork in aid of starting the new Environmental Health major at ESF. We were approved at the SUNY level in December, 2012, and, after revisions including the development of eight new course syllabi, the major was approved by the State Education Department (SED). The webpage now reflects the anticipated start date of Fall 2014 for the major, and we are looking forward to this new venture. I will serve as program coordinator for the major, which will reside within the Division of Environmental Sciences. I also joined EFB’s Graduate Program Advisory Committee (GPAC), largely with the agenda of reviewing our MPS offerings and helping to ease communication about their requirements and expectations. I reported this to the faculty in the Spring, and will continue to work on this, and explore both faculty and students expectations in the coming years. I also serve on both the college’s Institutional Animal Care and Use Committee (IACUC), and the Council for Geospatial Modeling and Analysis (CGMA), for which I donated my relevant research posters for GIS Day. I also served on a search committee for EFB, the first such experience as a faculty member.

Self: This year I focused significant time on primary and collaborative research outputs. I reanalyzed data and entirely rewrote and published the last chapter of my dissertation, which gained the cover of Journal of Wildlife Management, and was featured in the winter issue of The Wildlife Professional; this has been cited 3 times (Google Scholar) so far, plus multiple email inquiries to apply the methods in other ecosystems. I was a coauthor on an Issues in Ecology piece with a large number of conservation professionals, which arose from an ESA symposium a few years ago; this garnered considerable press in the blogosphere and several press releases. I also led an invited piece for a special issue of Ecological Restoration, which highlighted issues of sustainability of conservation corridors when humans are not taken into account; this also received several blog write ups, and has inspired interesting interdisciplinary discussions at conferences and provides a nice base for ongoing research in Uganda. I co-authored two papers in higher-impact journals (PLOS Computational Biology, 5.2; Ecology Letters 17.56), both involving modeling of disease; these received considerable press as well (New Scientist, ScienceDaily, Atlantic Wire, e.g.). The malaria work, now a distributed collaborative group, which grew out of a working group in Santa Barbara (at NCEAS), continues, with a book chapter, 2 papers in review, 2 talks, and a co-authored poster. This collaboration shows no signs of slowing, despite a notable lack of funding. With 6 manuscripts submitted, all collaborative work, and focusing in on issues of landscape change and disease ecology, I have been refining my statistical capacities, my modeling skills, and attempting to rely only on R software and packages; which I carry over to my teaching, so that students can take code with them wherever they will apply the knowledge. My work continues to accrue citations (Scopus H-index=9, Google Scholar H-index=12), and being invited onto a book chapter on my dissertation study subject (African buffalo), and invited to write a paper on conservation corridor issues, helps me continue to refine my role in the larger academic world. In addition to research and teaching, I also took on editorial roles at two journals, as an Associate Editor (Animal Conservation and PLOS ONE), which has been an interesting experience, and further insight into the reviewing and publication process. I have also been serving on the Board of Governors of the Society for Conservation Biology, as the Chair of Education and Student Affairs; understanding the inner workings of one of my own professional societies has been rewarding, and coordinating a merged standing committee has been interesting. In terms of my own skill development, I finally learned how to shoot a dart gun; this has been something I have wanted to train in for several years, and I was able to practice with a veterinarian while teaching in Mexico, as part of the
INECOL/ESF funded seed project looking at diseases in black howler monkeys (*Alouatta nigra*). I learned how to make extremely low-cost hair-snare darts for use in blow-guns to collect DNA samples, and did practice shots at toy monkeys in trees; we then calibrated the dart gun for our project, using water in place of tranquilizers, and shooting at old cable spools. This experience was invaluable for understanding how this works, what components are necessary, and thus being able to write the methods sensibly into future grants.

**Kimberly L. Schulz**

Students: This year I invested a significant effort into undergraduate and graduate training. First, I continued the service-learning component of Limnology Practicum and served as a mentor to a large number of undergraduate students doing research, including two honors students. I developed a new undergraduate course, Advanced Topics in Marine Ecology, which was two thirds seminar and one third professional skills building. This course was very well-received and I plan to propose it as a formal course alternating with Marine Ecology in the spring semester. A new M.S. student, Alexander Looi, entered in fall 2012, and is now working on a modeling project related to water levels in wetlands. I am working intensively with a number of graduate students as they work toward completion of manuscripts and dissertations over the coming year.

Department/college: I have served the college in several substantive ways during the past year. First, I helped negotiate a formal relationship between SUNY ESF and the Sea Education Association that provides special scholarship money for our students applying to these programs. I am continuing to work towards formalizing the marine science minor, which will likely incorporate these courses as potential options for students in the minor and a number of degree programs at SUNY ESF. I continue to serve as the Chair of the Course and Curriculum Assessment Committee and we passed field course guidelines, as well as a number of course proposals; we made some progress on assessment, although that is an ongoing project that is somewhat beyond the ability of our committee to complete for all of the majors without additional resources. I continue to spend a large amount of time writing quarterly reports, project execution plans and generally organizing the NSF renovation grant for CIRTAS (Center for Integrated Research and Teaching in Aquatic Science) and TIBS to apply for funds to renovate the laboratory spaces in Illick Hall (CIRTAS) and TIBS. This is a great opportunity for us to bring aquatic science at ESF to a new level. Finally I was elected as a faculty representative to the Presidential Search Committee at SUNY ESF that will be interviewing candidates in Fall 2013.

Self: This has been my most difficult year professionally at SUNY ESF, in no small part exacerbated by prolonged illness and subsequent health issues following the dust from the Illick Hall construction project. The continual disruptions to research activities in the lab due to construction have added to difficulties in carrying out research efforts for me and students in my research group, and contributed to a general malaise. For the most part I have been trying to catch up on missed time related to service, grant, and teaching responsibilities and work on a number of manuscripts. I have decided not to apply for grants that will require significant research within Illick Hall before the construction is complete, and look forward to that date. In the meantime I have been working on a publication backlog and have a number of manuscripts that will be submitted this summer and fall, as well as two planned grant submissions that will not require laboratory work.

**William M. Shields**

Students: I am officially advising the most students I have ever had (36UG, 5G). All of my courses get their usual very good reviews. My work load with students has increased beyond this, as I unofficially mentor many of our Honors students, especially many of the lower division honors students in all of the college's majors as well as my assigned advisees. Many of my advisees switch to me at some point during their careers. I rarely, if ever? have an advisee switch to someone else unless they change majors to another department. Student clubs (Earth Day Committee and Con Bio Club asked me to provide
lectures for them, which is a nearly annual occurrence). In essence I continue to do what I have always done.

Department/College: I no longer have any departmental responsibilities. As the Director of the Honors Program I have many. I have put two MOU's in place with outside agencies for Honors Internships which should last for quite some time. I interact with our primary donor by phone and email every couple of weeks. I shepherd applications to the program and for internships through the selection process with little assistance from my Honors Council. I administer the funds available to provide equipment and supplies to support Honors research and projects. I shepherd graduating seniors through the production of their theses regardless of their program. All in all I have lots of fun with our Honors students and wouldn't trade with anyone.

Professional Development: I am too old to develop much further and I am thinking hard about retirement.

**Donald J. Stewart**  
(nothing submitted)

**Stephen A. Teale**  
(nothing submitted)

**J. Scott Turner**  
EFB 200 Physics of Life was offered for the fourth time. Its enrollment continues to be strong.

EFB 462 was offered again, with continued healthy enrollment.
I have begun production for the planned rollout of Animal Physiology Online, which will be launched in Fall 2014. To date, 48 videos have been produced. Production will continue for the next 18 months.

Work began on my research project funded by the Human Frontiers Science Program (HFSP), for which I am the Principal Investigator. We have hired a post-doctoral fellow (Dr Paul Bardunias) for my portion of this multi-investigator project (which includes as co-PIs L Mahadevan (Harvard), Rupert Soar (Trent-Nottingham), Eugene Marais (National Museum of Namibia) and Sanjay Sane (National Centre for Biological Sciences, Bangalore, India). This grant will expand upon my previous work on termite mounds to include work on advanced fluid mechanics, neurobiology of termite swarms, species diversity of termite-built structures, and application to novel methods of wind-driven control of built environments.

Several invited papers, relevant to my current book project, have now been published.

I continue production on a new series of video lectures to supplement my current book project. Four videos in this series (entitled Biology’s Second Law) have been completed. Links to these videos are listed in “Unrefereed publications.”

I hosted three interesting speakers to campus this year: Bruce Brewer, who is managing director of the Cheetah Conservation Fund, who spoke about biofuels and range management, Laurie Marker, who is founder and director of the CCF, who spoke about cheetah conservation, and Addy Pross, Professor of Chemistry at Ben Gurion University in Israel, who spoke about emergence of life.

I negotiated a Memorandum of Understanding between ESF, Ben Gurion University, the National Museum of Namibia and the Cheetah Conservation Fund in Namibia to begin development of joint educational/training/research projects. Margaret Bryant, of ESF’s Department of Landscape Architecture, will travel to Namibia in October to begin the first of our ventures.
Alexander Weir
Students: This year I continued my second year as instructor/coordinator of the two semester required Diversity of Life sequence. Diversity of Life I had an ending enrollment of 175 students in 7 lab sections and Diversity of Life II had an ending enrollment of 153 students in 6 lab sections. Although there were some initial problems on the whole this 2-semester course was well-received and I am already working on a number of refinements for the upcoming year. I also taught my regular Mycology offering (34 students enrolled). I have continued to serve students in my capacity as Director of the Cranberry Lake Biological Station, answering many questions and queries throughout the year. At the graduate level I finished one MS and have one PhD student who successfully passed her Candidacy Exam and is now making good progress toward obtaining her degree. Rae Devan also successfully completed an undergraduate Honors thesis in my lab and is currently preparing her work for publication.

Department/College: My major contribution to EFB/ESF this past year has been my leadership role as Director of the Cranberry Lake Biological Station. Enrollments at the Station are still rising and we ran at almost full capacity for the summer of 2012, with similar enrollments expected for the summer 2013 program. Both the teaching and research programs were successful with almost 200 undergraduate students present at the Station during the summer of 2012, and research groups from Indiana State University, Cornell University as well as our own Grober Research Fellow (graduate) and one Cranberry Lake Fellowship awardee (undergraduate) in residence. Another important assignment this past year was my continued development and coordination of the new required two-semester sequence in Diversity of Life (see above). I have also continued to serve the Department as Curator of the Herbaria, and as the contact point for international opportunities for our students.

Self: This has been another good year on the NSF PEET grant with resolution of the phenomenon of “position specificity” arising from Lauren Goldmann’s MS work. Lauren presented the results of this work at the 9th International Mycological Congress in Edinburgh, Scotland in August 2010 and was one of 18 award winners (out of 1092 entries). This research has now been formally written up and published in Mycologia. Discovery of additional levels of position specificity in the genus Hesperomyces (Goldmann, Weir, and Rossi, in review) was surprising and has led to the conclusions that 1/ a thorough systematic revision of the Laboulbeniales is urgently needed and 2/ that the theory of “position specificity” needs to be revised in light of our findings that link a morphotype and not a species to specific body parts of host insects. In addition to this, we have also added many new sequences to our growing database for a phylogenetic overview of the order, including at least 5 new genera. We now have more than enough results for publication of at least 3 additional manuscripts.

Christopher M. Whipps
Students: This past year I was pleased to see my first PhD student, Megan Kirchgessner, through to the completion of her degree. In the course of her project, Megan and I co-authored 5 publications and it was a pleasure to see her writing skills quickly develop to the point where later manuscripts required minimal editing on the first draft. Similary my Masters student Eric Bauer plans to defend this year, and he and I have one manuscript in press, one submitted, and a third on the verge of submission. Eric has been accepted to a PhD program at Auburn University. I co-advise 3 other graduate students. PhD student Will Helenbrook is making significant progress in his research at the same time as he has been taking on some departmental teaching responsibilities (Conservation Biology and Genetics). Emily Ogburn is nearing completion of her Masters and has learned Parasitology from scratch and is now helping with a microbiology project. I had 6 undergraduates working in my lab this year on a range of projects, either directly supervised by me or my graduate students. I continue to teach General Biology II which had 180 students enrolled this year. As this is now my fifth year of teaching the course, I believe I have found a good balance of requirements for the course, including online tutorials and quizzes, written assignments, exams, and self assessment. This year I included a popular science article on all written assignments to bring in more depth (beyond what I cover in lecture) of interesting research that is relevant to the course
material and this gave students time to explore the subject. I also used popular science articles in EFB453/653 Parasitology. Here, I had students seek out an article in the primary literature and from that write an article for a general audience. I used a peer review system for initial review, followed by my own review prior to final submission, and the students really responded to this feedback. I plan to continue with this and incorporate more of these readings next year. My advising load was 23 this year and my focus has been primarily on students interested in the health professions. In the review period, I served on 3 graduate defense committees and am on 6 ongoing committees.

Department/College: My role as Institutional Animal Care and Use Committee chair takes up a significant amount of my time. On average I estimate at least 10% of my time is dedicated to the IACUC, reviewing protocols, writing reports, conducting meetings, and keeping up on the literature for huge range of vertebrate species we work with at ESF. In addition, either research on vertebrate animals has increased at ESF or compliance has improved (or both), as we have a record of 32 active protocols, and 4 more currently in review. I believe I have been able to streamline the review process and endeavor to turn around each protocol in a timely manner so research can proceed. My goal, as compliance improves, will be to emphasize the importance to faculty of completing these protocols well in advance. I also serve on our departmental curriculum committee (CCAC) and have just completed a 3 year term on the college level Committee on Curriculum (CoC). Serving on both committees has allowed for a great amount of overlap and flow of information between the committees, which I hope has served both the department and college beneficially. Perhaps related to both our students and the department, I led the purchase of 12 new stereozoom microscopes which will allow us to build up the number of functional and quality scopes for all classes.

Professional: My primary areas of research remain bacterial diseases of laboratory fish and parasites of wild fish. I was invited to a conference this winter to speak on zebrafish diseases and this has led to several collaborations I am excited about for the coming year. The zebrafish research has also led to some local collaboration with faculty at Upstate Medical. The work on parasites of wild fish has been productive as well, with several publications either in press or in review, and this also represents the work of graduate students. I have made several new international connections on the biodiversity of myxozoan parasites, and my future challenge will be to bring this together in a fundable proposal. I have branched out in my work, collaborating as a molecular biologist on parasitoid insects and using DNA sequence to identify fish and mammal species. Although not my main lines of research, these areas have been fruitful grounds for student training and collaboration within ESF. All together, 14 papers have been published or submitted in the review period and although this was a particularly good year for that, reflects much more where I want to be in terms of progress and publishing.
Appendix C. Faculty Publications (published or in press; papers in review or accepted and waiting revision not included)

**Books**

**Refereed Publications**

**John D. Castello**

**Jonathan B. Cohen**

**Martin Dovčiak**

**John M. Farrell**

Danilo D. Fernando

Melissa K. Fierke

James P. Gibbs
Marquez, Cruz; Gibbs, James P.; Carrion, Victor; Naranjo, Sixto; Llerena, Alizon 2013. Population response of Giant Galapagos Tortoises to feral goat removal. RESTORATION ECOLOGY 21: 181-185
Blake, Stephen; Yackulic, Charles B.; Cabrera, Fredy; Tapia, Washington; Gibbs, James P.; Kuemmeth, Franz; Wikelski, Martin 2013. Vegetation dynamics drive segregation by body size in Galapagos tortoises migrating across altitudinal gradients. JOURNAL OF ANIMAL ECOLOGY 82: 310-321
Milinkovitch, Michel C.; Kanitz, Ricardo; Tiedemann, Ralph; Tapia, Washington; Llerena, Fausto; Caccione, Adalgisa; Gibbs, James P.; Powell, Jeffrey R. 2013. Recovery of a nearly extinct Galapagos tortoise despite minimal genetic variation. EVOLUTIONARY APPLICATIONS 6:377-383
Edwards, Danielle L.; Benavides, Edgar; Garrick, Ryan C.; Gibbs, James P.; Russello, Michael A.; Dion, Kirstin B.; Hyseni, Chaz; Flanagan, Joseph P.; Tapia, Washington; Caccione, Adalgisa 2013. The genetic legacy of Lonesome George survives: Giant tortoises with Pinta Island ancestry identified in Galapagos. BIOLOGICAL CONSERVATION 157: 225-228
Campbell, Steven P.; Frair, Jacqueline L.; Gibbs, James P.; Volk, Timothy A. 2012; Use of short-rotation coppice willow crops by birds and small mammals in central New York. BIOMASS & BIOENERGY 47: 342-353.
Hunter, Elizabeth A.; Raney, Patrick A.; Gibbs, James P.; Leopold, Donald J. 2012. Improving wetland mitigation site identification through community distribution modeling and a patch-based ranking scheme. WETLANDS 32: 841-850

Gibbs, James P.; Smart, Lawrence B.; Newhouse, Andrew E.; Leopold, Donald J. 2012. A molecular and fitness evaluation of commercially available versus locally collected blue lupine Lupinus perennis L. seeds for use in ecosystem restoration effort. RESTORATION ECOLOGY 20: 456-461


Charles A.S. Hall


Thomas R. Horton


Robin W. Kimmerer
The Fortress, the River and the Garden: a new metaphor for cultivating mutualistic relationship between scientific and traditional ecological knowledge. in, “Contemporary Studies in Environmental and Indigenous Pedagogies” (Sense Publishers) edited by Kelley Young and Dan Longboat.

Donald J. Leopold

Karin E. Limburg

Stacy A. McNulty

Myron J. Mitchell


James P. Nakas


Lee A. Newman


White, J., De La Torre-Roche, R., Hawthorne, J., Musante, C., Xing, B., Newman, L., Ma, -X. 2013. Impact of Ag Nanoparticle Exposure on p,p’-DDE Bioaccumulation by Cucurbita pepo (Zucchini) and Glycine max (Soybean). Environmental Science and Technology.47:718-725

William A. Powell


Neil H. Ringler

Rebecca J. Rundell


Sadie J. Ryan


William M. Shields

Donald J. Stewart


**Stephen A. Teale**


**J. Scott Turner**


**Alexander Weir**

Position specificity in *Chitonomyces* (Ascomycota, Laboulbeniomyces) on *Laccophilus* - . *Mycologia* 104(5): 1143-1158. One of our plates from this paper was also chosen as the front cover for the journal.

**Christopher M. Whipps**


Appendix D. Papers Submitted, In Review, Accepted and Waiting Revision, and Pending Decision

John D. Castello

Martin Dovciak

John M. Farrell

Danilo D. Fernando
Quinn CR and Fernando DD. Computational Predictions and Expression Patterns of Conserved MicroRNAs in Lobolly Pine (*Pinus taeda*). Tree Genetics and Genomes (in review).

Jacqueline L. Frair
Campbell, S.P., J.L. Frair, and J.P. Gibbs. (Accepted, under revision) Coexistence of the endangered, endemic Chittenango Ovate Amber Snail (*Novisuccinea chittenangoensis*) and a non-native competitor. Biological invasions.
Warsen, S.A., J.L. Frair, and M.A. Teece. (submitted) Isotopic investigation of niche partitioning among native carnivores and the non-native coyote. Isotopes in Environmental and Health Studies. Submitted for consideration under an accepted proposal for a special issue dedicated to “Stable isotopes in mammals”.

Charles A.S. Hall
Hall, Charles, Jessica Lambert and Steven Balogh. (Accepted pending revision) Peak oil, declining EROI and the new economic realities. Ecological Engineering
Poisson, Alexandre and Charles A.S. Hall. (Accepted pending revision) Time Series EROI for Canadian Oil and Gas. Energies
Hall, Charles and John Day. (Accepted pending revision). The irrelevance of much contemporary academic ecology and economics for solving the major problems of the 21st century. Ecological Engineering.

**Thomas R. Horton**


Nuñez M, Hayward J, Horton TR, Amica GC, Dimarco RD, Garcia-Barrios N, Simberloff D. (Accepted) Exotic mammals disperse exotic fungi that promote invasion by exotic trees. PLOS ONE.

**Donald J. Leopold**


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).


**Karin E. Limburg**

Arend, K.K., and K.E. Limburg. 2013 in revision. Spatial heterogeneity in sources to Lake Ontario coastal embayment food webs: recognizing the influence of areal and temporal scaling on ecosystem and habitat connectivity. Estuaries and Coasts (in revision)


**Mark V. Lomolino**


**James P. Nakas**


Lee A. Newman


Dylan Parry


Parry, D. 201x. Fitness costs of hatch asynchrony in an outbreak insect and its implications for a changing climate. PLOS1. Submitted. 05/2013.

William A. Powell


Rebecca J. Rundell

Rundell, R.J. and Leander, B.S. Submitted. Molecular phylogeny of kalyptorhynch turbellarians (Platyhelminthes: Rhabdocoela), including descriptions of five meiofaunal species from the northeastern Pacific Ocean. Invertebrate Biology.

Sadie J. Ryan


Ben-Horin, T. Ryan, S.J., Johnson, L.R., Lenihan, H.S. in review. Do malaria-transmitting mosquitoes senesce?


Donald J. Stewart

Castello, L, D.J. Stewart, and C.C. Arantes. MS Accepted pending final edits. O que sabemos e precisamos fazer a respeito da conservação do pirarucu (Arapaima spp.) na Amazônia. Chapter for a book on ecology and management of Arapaima, being produced in Brazil, in Portuguese.
Alex Weir
Thompson, L. and A. Weir (submitted). Laboulbeniales on Elateridae (Coleoptera); a review. Submitted to Mycologia (in review)

Christopher M. Whipps
Appendix E. Papers/Posters Presented at Science Meetings

**Jonathan B. Cohen**


**Martin Dovciak**


**John M. Farrell**


Danilo D. Fernando

Melissa K. Fierke
D. Bullis, C.A. Bondi, M.K. Fierke, C.M. Beier. Distribution of beetle families across the Northern Forest Region. SUNY ESF Spotlight on Student Research, Syracuse, NY. 4/2013. 3rd place UG poster.
USDA Annual Interagency Research Forum on Invasive Species, Annapolis, MD, 1/2013. Poster.
Annual Meeting of the Entomological Society of America, 11/2012, Knoxville, TN. Poster.
C.A. Bondi, C.M. Beier, M.K. Fierke. Importance of soil calcium in the distribution and diet of eastern redback salamanders: Contrasting Results from Across the Northern Forest Region. 2012 Northeastern Natural History Conference, Syracuse, NY.

Elizabeth Folta
Folta, E. (June 22, 2012) Geocaching for Education-Connecting the Dots! Session presented at the Leopold Education Project (LEP) national conference, Peninsula, OH.

Jacqueline L. Frair
“Influence of bait type on small mammal captures in interior Alaska” (poster presentation), 7 April 2013, Northeast Association of Fish and Wildlife Agencies annual conference, Saratoga Springs, NY. Presented by undergraduate student David Keiter (A. Balternsperger, J. Frair, and F. Huettmann as coauthors. (won best student poster award)
“Eastern coyote predation of white-tailed deer in New York State”, 8 April 2013, Northeast Association of Fish and Wildlife Agencies annual conference, Saratoga Springs, NY. Presented by graduate student Robin Holevinski (J. Frair and G. Batcheller coauthors)
Charles A.S. Hall
The irrelevance of most contemporary academic ecology to solving the major problems of the 21st century. Ecosummit, Ohio State Sept 2012

Plenary presentations:
Welcome to 4th quasi Annual meeting on biophysical economics American Society for the study of Peak Oil. November Sustainability for the second half of the age of oil American Geophysical Union Quantity vs quality of oil: Implications for the future economy

Invited Lecture tours:
Sweden October 2012:
Peak oil, declining EROI and the new economic realities: Uppsula University
Overview of global oil situation (With Kjell Akerlett) Uppsula
Understanding real changes in energy efficiency Royal Swedish Academy, Stockholm
A biophysically-based economics for the second half of the age of oil. University of Stockholm

University of Hawaii
The Need for a Biophysical Approach to Economics & Implications for Hawai’i
A biophysically-based economics for the second half of the age of oil. Univ. Hawaii Hilo
Peak Oil, EROI and Your Financial Future in Hawai’i Univ. Hawaii Manoa
Peak oil, declining EROI and the new economic realities: New limits to growth? Univ. Hawaii Manoa

Thomas R. Horton
Hayward J, Horton TR. Thelephoroid symbionts of Pisoniae are limited to a small group of closely related taxa throughout the range of the plant tribe. Mycology Society of America Annual meeting. July 2012, Yale University, Connecticut.

Robin W. Kimmerer
Keynote Address, Traditional Ecological Knowledge Symposium, Oregon State University, April 2103
Keynote Address at Native Science Fellows Conference, Renewing Reciprocity: Indigenous Knowledge and Restoration. Missoula Montana February 2013
Plenary Address, International Student Conservation Conference, American Museum of Natural History October 9-11, 2012 “Restoration and Reciprocity: Finding Common Ground between western and traditional knowledge

Amerind Museum, Traditional Ecological Knowledge and Sustainability roundtable March 2013

Featured Speaker: Sharing the Stories Plants have told us. Returning the Gift: Native Writers Festival, Milwaukee WI September 4-6 2013

Invited Symposium Lecture, Ecological Society of America; “How Culture Sustains Ecosystems” August 7 2012


TED x Sitka Lecture August 21, 2012 “Reclaiming the Honorable Harvest”

Featured Speaker, “The Fortress, the River and the Garden: New Metaphors for integrating scientific and traditional knowledge”. Cornell University. American Indian Program Annual Symposium “Honoring the Two Row” April 12, 2013

Donald J. Leopold


Karin E. Limburg

Limburg, K.E. Otolith Chemistry in Brief. NOAA NMFS meeting on River Herring and Climate Change (for ESA listing); Gloucester, MA, July 2012.


Limburg, K.E. A plausible mechanism for uptake of manganese in fish otoliths - evidence and a model. ICES Annual Science Meeting, Bergen, Norway, September 2012.


Stacy A. McNulty


James P. Nakas

Lee A. Newman
Advances in Drug Delivery – Mini Plenary talk, Biotechnology Symposium: Building Bridges Between Academia & Industry, Syracuse, NY. 16-17 May 2013


Phytoremediation of Organic Compounds – Metabolic mechanisms to field applications. 1st International Conference on Contaminated Land, Ecological Assessment and Remediation, Hangzhou, China, 5-8 November 2012.


How small things (microbes and nanoparticles) impact plant uptake and degradation of environmental pollutants. 4th International Conference on Soil Pollution and Remediation, SoilRem 2012, Yantai, China, 23-26 September 2012.


Phytoremediation: Look how far we’ve come. 9th International Phytotechnology Conference, Hasselt, Belgium, 11-14 September 2012.


Dylan Parry


William A. Powell
Chestnut proposal workshop at Clemson, SC 8/2/12 – 8/312. Presented an update on our chestnut research to about 22 attendees.

Forest Health Initiative Board Meeting, Washington DC. 8/9/12 -8/10/12. Updated the board on our transgenic chestnut research progress and participated in discussions about restoration and regulation with researchers, NGO representatives, lawyers, and USDA, EPA, and FDA regulators.

Fifth International Chestnut Symposium, Shepherdstown, WV, My talk and talks I contributed are below:


The American Chestnut Foundation’s Board and Annual Meeting, Ashville, NC. 10/18/12 – 10/21/12. Four posters presented:


National Geographic "de-extinction" workshop, Washington DC, 10/22/12-10/25/12. New York State American Chestnut Research and Restoration Program at SUNY-ESF. Note: This presentation lead to the TEDx talk later.

The New Chapter of The American Chestnut Foundation Annual meeting, which we also hosted at SUNY-ESF, Syracuse. 10/26/12 – 10/27/12. American Chestnut Research and Restoration Project at SUNY-ESF. Gave the first announcement that we achieved enhanced blight resistance in our transgenic American chestnut trees.

Invited speaker, TEDx DeExtinction, National Geographic, Washington DC. 3/14/13 – 3/15/13. Reviving the American forest with the American chestnut. This TEDx talk was with an audience of over 300 in the auditorium and a live feed to over 3000 viewers on the web. The TEDx talk is on YouTube at http://www.youtube.com/watch?v=WYHQDLcmgyg&noredirect=1 and so far has over 2000 views.


Invited speaker at the IUFRO Tree Biotechnology 2013 conference. Asheville, NC. 5/26/13 – 6/1/13. Transgenics or cisgenics, which will save the American chestnut?
Neil H. Ringler

Rebecca J. Rundell
“Linking research and teaching through museum collections and natural objects,” 12 October 2013, Integrative STEM Learning: Pedagogy and Partners Conference, Trinity University and Howard Hughes Medical Institute, San Antonio, Texas

Sadie J. Ryan

Posters
Johnson, L.R., Ben-Horin, T., Mordecai, E., Paaijmans, K.P., Pawar, S., Ryan, S.J., McNally, A., Lafferty, K.D. Effects of uncertainty in temperature dependencies in physiological responses on


Kimberly L. Schulz


DellaVentura, T. and K.L. Schulz. Exploring whether bell pulsing rates of Cassiopea are more correlated to photosynthesis by their symbiotes, body size, or respiration. Spotlight on Student Research, SUNY ESF, 10 April 2013.


Stephen A. Teale

J. Scott Turner
There’s lots of room in the transients. Why the unsteady state is the key to understanding life and how to successfully imitate life. 8 June 2012. 3rd International Wyss Institute Symposium. Noise and Rhythm. Harnessing Complexity in Medicine and Robotics. Wyss Institute, Harvard University.

Christopher M. Whipps
Appendix F. Faculty Grants
(active during reporting period)

John D. Castello

Jonathan B. Cohen

Martin Dovciak
USDA CSREES/McIntire-Stennis. “Coupling local-scale climate change and forest ecosystems”. C. Beier and M. Dovčiak. $81,271. 2010-2012.

John M. Farrell


Ringler, N. H., K. A. Schulz, J. M. Farrell, M. A. Teece, and J. Brunner.  1/1/10-12/31/12.  Renovation of Wet Labs and Cyber-Infrastructure to Enhance Integrated Research and Teaching. National Science Foundation $1,470,000


Hanchin, P., B.L. Sloss, L. Miller, C. Wilson, K. L. Kapuscinski, K. Schribner, and J. M. Farrell.
Delineation of natural boundaries of muskellunge in the Great Lakes and the effects of supplementation on genetic integrity of native stocks. Great Lakes Fisheries Commission ($42,721; ESF share $4,705)


**Danilo D. Fernando**


**Melissa Fierke**


**Elizabeth Folta**


**Jacqueline L. Frair**


Secured by my graduate students:

Panthera, Inc., “Population persistence of jaguar (*Panthera onca*) in the Brazilian Pantanal, $8,832 in support at ESF, ~$60,000 in-kind field support. May 13-May 14. PI: Allison Devlin


**James P. Gibbs**


National Council on Science and Technology (CONACYT, Mexico), “Seed grant program to stimulate collaboration of research, outreach and instruction”, J. P. Gibbs and D. J. Leopold. $50,000. 12/15/11-12/14/12.


National Geographic Society, “Understanding Interactions among Three Globally Endangered Species -- the Waved Albatross, Giant Tortoise, and Giant Tree Cactus -- to Inform Conservation Management of Española Island, Galápagos,” J. P. Gibbs, $21,500, 6/1/10-5/31/12 (Extended to 12/1/14)

National Science Foundation, “BE/CNH: Biodiversity dynamics and land-use changes in the Amazon: Multi-scale interactions between ecological systems and resource-use decisions by indigenous peoples,” J. M. V. Fragoso, J. P. Gibbs, J. Read, K. Silvius. $1,192,518. 9/05-9/12.

Charles A.S. Hall
National Science Foundation  $ 5,000,000  (my share $152,000) ($25,000 per year) Long Term Ecosystem Research in the Luquillo Forest  Grant period 2006-2012
Social-Ecological System Change, Vulnerability, and the Future of a Tropical City” National Science Foundation Urban Long-Term Research Area Exploratory Award (ULTRA-EX), ($300,000, my research $30,000), Ariel Lugo (PI), Tischa Munoz (co-PI), March 2010 to March 2012.

United Kingdom Department of International Development $180,000 Consolidating and promulgating EROI Research. Through June 30 2013
An Environmental Basis for Rural Planning in the Province of Cordoba, Argentina. Argentine National Government Award, ($1,000,000, my research portion (about $10,000) is for travel, per diem, May 2010 to May 2013.

Thomas R. Horton
Horton, TR. Mianus River Gorge Preserve. The effects of invasive earthworms on soil microflora and nutrient cycling in hemlock forests. $21,000 total award, $7,000 annually. June 2012 – May 2015.
Yanai R, Horton TR. USDA-CREES/McIntire Stennis program. Sustainable nutrient supply after forest harvest: Characterizing the fungal link from soils to roots. 8/212011 – 9/30/2013. $54,105.
Simberloff D, Nuñez MA, Horton TR. NSF Population and Community Ecology panel. Collaborative
Research: Determinants of ectomycorrhizal fungal spread and its relation to Pinaceae invasion. Total
award = $571,637; Total award to ESF = $242,040; $75,732 2009/10, $83,226 2010/2011, $83,082

Robin W. Kimmerer
USDA Higher Education Challenge Grant, Learning From the Land: a cross-cultural partnership in forest
stewardship education for climate change adaptation in the Northern Forest. Co-PI Colin Beier,
$712,000 with College of the Menominee Nation. 2012-2015.
United States Department of Agriculture, Multicultural Scholarship Program, $200,000. supports 5
undergraduates, May 2012-May 2016.
National Science Foundation, Undergraduate Mentoring in Environmental Biology, $600,000 June 2006-
August 2012.
United States Forest Service, Traditional Knowledge of Black Ash Ecology, $47,000. 2009-2012
Onondaga Lake Partnership Minigrant: Environmental education with Onondaga Nation Youth $5000.
Ended 9/30/13
Tribes and Climate Change: engaging northeastern indigenous nations. US Forest Service $60,000. 2011-
2014

Donald J. Leopold
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; $928,754; 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.
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;
NYS-DEC, Invasive plants program coordinator; $216,500; 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 roseroor
(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 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.


Karin E. Limburg
In-kind grant awards, Cornell High Energy Synchrotron Source (CHESS): Beam time at the synchrotron for X-ray fluorescence analyses: October 2011, March 2012. Note that these are NSF sponsored awards.


USGS (via U. Florida): “Near Shore Fish Ecology in the Grand Canyon,” 10/01/2001 to 8/15/2013. $1,178,711 total, $272,976 to ESF. Role: co-PI, but PI at ESF.


NYS DEC and New England Interstate Water Pollution Control Commission: “Analysis of samples collected in the Hudson River Estuary for various Alosa projects.” $40,000, 2 years.

Riverkeeper Inc.: “Filling in the gaps: building the knowledge base on ecosystem function, utilizing partnerships to move forward.” $115,000, 3 years.


Fellowship awards to PhD student Tom Evans: “The Distribution of Larval Lamprey and their Potential Diet Overlap with Mayflies in the Hudson River” T.T. Polgar Fellowship, $2,000, summer 2013.; “Survey of Hudson River Sea Lamprey;” Sussmann Fellowship, $7,000, summer 2013.


Mark V. Lomolino
NSF – Of Mice and Mammoths: Toward a General Theory of Body Size Across Space and Time, $100,000; August 2010 to 2014.

Gregory G. McGee
Stacy A. McNulty

Myron J. Mitchell
Co-Investigator. Long-Term Ecological Research (LTER) at Hubbard Brook Experimental Forest (HBR) (MJ Mitchell, $90,000) 2011-2016.
Principal Investigator. Collaborative Research: Winter Climate Change in a Northern Hardwood Forest. NSF Ecosystems. $179,149. 2010-2013.
Co-Investigator. Positioning Rust-Belt Cities for a Sustainable Future: A Systems Approach to Enhancing Urban Quality of Life. NSF ULTRA-Ex. $300,000. 2010-2012

Lee A. Newman
USDA, Nanoparticle contamination of agricultural crop species, co-PI; $1,498,080; Mar 11-Mar 16.
NASA, Development of hyperspectral imaging of plants to detect contamination, PI; $207,829; Mar 11- Mar 14.
NSF, Plant uptake and interaction with nanoparticles, PI; $277,907; Sept 08–Sept 13.
Roux Assoc, Treatment wetlands for TCE degradation, PI; $12,000; May 13-May 14
Dylan Parry

William A. Powell
SUNY-RF Seed grant program, Protecting Trees from Diseases with Bacillus amyloliquefaciens. $8,000 (5/13/13-5/12/14). PI with Dr. Maynard and Andy Newhouse Co-PIs.
The New York Chapter of The American Chestnut Foundation. Getting Events in the Ground and Tested. $210,000 (8/1/12-7/31/15). Co-PI with Dr. Maynard as PI.
Forest Health Initiative. Phase II: Base Funding Level - Transgenic American Chestnut. $87,500 (1/1/13 – 12/31/13) PI with Dr. Maynard Co-PI (Possible extension and increases in following year)
The American chestnut Foundation. Preservation and multiplication of elite backcross American chestnut hybrids by micropropagation. $2,700 (9/1/12 – 10/1/13) Allison Oakes PI, myself and Dr. Maynard Co-PIs
USDA-Biotechnology Risk Assessment Grant program (BRAG), Evaluating Environmental Impacts Of Maturing Transgenic American Chestnut Trees Relative To Chestnut Trees Produced By Conventional Breeding. $500,000 (9/1/12-8/31/14). PI with co-PIs, Dr. Maynard, Dr. Parry, Dr. Briggs, Dr. Nowak, and Dr Tschaplnski (ORNL)
The New York Chapter of The American Chestnut Foundation. Supplemental grant for technician support for Chestnut research. $20,000 (1/1/11-12/31/13). PI with Dr. Maynard as co-PI.
Forest Health Initiative. Supplemental funding to develop an early blight resistance-screening assay for American chestnut. $105,000 (7/1/10 – 6/30/12). PI with Dr. Maynard as Co-PI. (Ended)
ArborGen LLC. Transformation of American chestnut with genes encoding transcription factors. $20,000 (1/1/11-12/31/13) PI with Dr. Maynard as Co-PI. Another year of 10 years of support beginning in 2002 totaling $500,000.
Forest Health Initiative. First and second-generation transgenic American chestnut trees. $900,000 (8/1/09 – 7/31/12). PI with Dr. Maynard as Co-PI. This is our part of a multi-institutional grant totaling $5.2 million.
The New York Chapter of The American Chestnut Foundation. Testing Transgenic Events for Gene Copy Number, Gene Expression, and Blight Resistance. $100,000 (5/08-12/31/12). PI with Dr. Maynard as co-PI.
The New York Chapter of The American Chestnut Foundation. Regenerating Transformation Events into Whole Plants and Expansion of Field Trials. $300,000 (5/08-12/31/13). Co-PI with Dr. Maynard, PI.

Neil H. Ringler
PI, Honeywell, Inc., $878,656; Onondaga Lake Biological Assessment and Monitoring; 1/15/08 to 12/31/13.
coPI, NSF; $275, 335; Collaborative research: Impacts of in-stream restoration on hydrological, chemical and biological heterogeneity in the hyporheic zone, 1/1/10 to 12/31/14.
PI, NSF; $1,470,000; Renovation of wet labs and cyber infrastructure to enhance integrated research and teaching in aquatic science at SUNY-ESF, 10/1/10 to 9/30/13.
PI, USDA-FS; $27,000; Enhanced effectiveness of planning and managing urban forest ecosystems; 9/22/11 to 12/31/13
PI, USDA McIntire-Stennis; $544,532; McIntire-Stennis FY 12-13; 10/1/11 to 9/30/13
Sadie Ryan
National Geographic: “Parks, People, and Climate Change: Assessing Household Vulnerability in Equatorial Africa” Hartter, J., UNH (PI), Ryan, S.J., SUNY-ESF (co-PI) - $20,000 (project costs only), 2012-2014.
INECOL/SUNY-ESF Seed Grant, “Emerging diseases and health status of black howler monkeys in degraded habitat in Balancan, Tabasco, Mexico” – Ryan, S.J., SUNY-ESF (PI), Serio-Silva, J.C. (co-PI) - $5,000, 2012/2013

Kimberly L. Schulz
SUNY ESF seed grant; S. Diemont, K. Schulz and N. Barlett; $8,000; May 2012-2013.
NSF; Collaborative Research – Eco-evolutionary feedback on community assembly; K.L. Schulz, C.E. Cáceres (U. Illinois); $300,000 ($143,667 to SUNY ESF); Sept 2009-Aug 2012.
NSF; REU Collaborative research: Eco-evolutionary feedback on community assembly; K.L. Schulz; $8,000; 1 May 2012-31 August 2012.
NSF; Renovation of wet labs and cyber-infra-structure to enhance integrated research and teaching in aquatic science at SUNY-ESF; Neil Ringler, J.M. Farrell, D.J. Leopold, K.L. Schulz (point of contact), C.M. Whipps; $1,470,000; October 2010-September 2013.
Great Lakes Research Consortium; Genetic analysis of potential lake chubsuckers (Erimyzon sucuta), a threatened fish in the Lake Ontario watershed; K.L. Schulz, C.M. Whipps and D. Stewart; $3,500.
SUNY-ESF McIntire-Stennis Research Program; Restoring small, ephemeral wetlands in forested landscapes of New York State: Initiating a large-scale, long-term collaborative research program based at Heiberg Forest; J. Gibbs, J. Stella, D.J. Leopold, K. Schulz; $80,000; May 2009-December 2012.
NOAA; National Estuarine Research Reserve Fellowship; Andrew Brainard and K.L. Schulz; $60,000; May 2012-May 2015.
NSF; Dissertation Research: Quantifying the role of mixotrophic feeding in aquatic food webs; K.L. Schulz and Jacob Gillette; $15,000; June 2011-May 2014.
NOAA; National Estuarine Research Reserve Fellowship; Salt Marsh Restoration: The Importance of a Better Biofilm; Cheryl Whritenour and K.L. Schulz; $60,000; June 2010-May 2014.

Stephen A. Teale
Alphawood Foundation, PI: Teale, S. “Asian Longhorn Beetle Research at SUNY-ESF” $92,082; 28-JAN-2011 To 27-JAN-2013
Alphawood Foundation, PI: Teale, S. “Asian Longhorn Beetle Research at SUNY-ESF” $ 92,016; 14-FEB-2012 To 13-FEB-2013

USDA Forest Service STDP, PIs: Teale, S., J.D. Castello, J.G. Millar. “Fungal Attractants for *Sirex noctilio* and its Parasitoids” $123,630 July 1, 2010 - June 30, 2013 ($42,000 in year ending 6/30/13)


**J. Scott Turner**

Human Frontiers Science Program, From swarm intelligence to living buildings. Novel concepts of managing internal climates; $1,350,000; August 2012 to July 2015; PI?, coPI(s)?

Jacob Blaustein Center for Scientific Cooperation (Ben Gurion University of the Negev), Visiting Foreign Scientist; $5,000; Dec. 1 to 31, 2012.

**Alexander Weir**

National Science Foundation – Monographic Approaches to the Laboulbeniales, Subtribe Stigmatomycetinae and the Genus *Stigmatomyces*. NSF PEET (Partnerships for Enhancing Expertise in Taxonomy) Program. Total Amount $750,000; January 2006 to December 2011; extended until June 2012. PI? coPIs?

National Science Foundation – Macrofungi Collections Consortium – Grants to Advance Digitization of Biological Collections. Total Amount unknown; ESF portion $34,000. PI? coPIs?

**Christopher M. Whipps**

Whipps CM, Fierke MK, Parry D. USDA-CREES/McIntire-Stennis Program (05/01/13-09/30/15) - $52,000. Development of Molecular Techniques to Inform Management of *Sirex noctilio*, an Introduced Woodwasp. Role: Lead development of molecular biology techniques in parasitoid insects.


Ringler NH, Schulz KL, Farrell JM, Leopold DJ, Whipps CM. National Science Foundation (1/1/10-12/31/12) $1,757,801. Renovation of Wet Labs and Cyber-Infrastructure to Enhance Integrated Research and Teaching in Aquatic Science at ESF. Co-Investigator.

Whipps, CM. SUNY-ESF Seed Grant Program (04/01/11-04/30/13) - $8,000. Molecular Prospecting: Genomic DNA Sequence Data for Myxozoans.
Appendix G. Service to Department, College, and University

John D. Castello
Chairman, EFB Promotion and Tenure Committee
Coordinator of the Forest Health major
Coordinator of the 2013 departmental spring awards ceremony
Point person for departmental autoclaves.
Associate Chair

Jonathan B. Cohen
Faculty advisor for student chapter of The Wildlife Society
CLBS and TIBS Undergraduate Fellowship Committee Chair
CCAC
GPAC
EFB Open House
Burgess Award Review
Dence Award Review
Committee on Research
Reviewer for Sussman Internship Applications

Martin Dovciak
Chair, Committee for Robert Burgess Graduate Scholarship in Ecology.
Graduate Program Advisory Committee, member (till 2/2013).
ESF Undergraduate Honors and CSTEP programs, mentor to four undergraduate students.
Graduate Program in Environmental Science–Ecosystem Restoration, member
Graduate Program in Environmental Science–Environmental Monitoring and Modeling, member
Beech Working Group, member
Center for Urban Environment, member
Regular participant in ESF winter and spring Convocations

John M. Farrell
Served on Promotion and Tenure Committee
Mentored an Assistant Professor in EFB
Supervised two EFB funded Federal Work-study assistants at TIBS
Served with team with Kim Schulz, Neil Ringler, Brian Boothroyd and Don Leopold on execution of a $1.4M NSF award to enhance EFB’s aquatics program via improvements at CIRTAS and TIBS laboratory facilities and cyber infrastructure. Participated in numerous meetings and site visits and reporting and served as lead for TIBS component of project leading to renovation of laboratory. Now serving as lead for cyber infrastructure upgrades for TIBS.
Served as mentor to TIBS undergraduate intern (funded by EFB) who is completed research and presented and won 1st place for poster in Spotlight on Student Research Conference. Now working on publication.
Advised Undergraduate Honors Thesis Project for student examining zooplankton community structure and quality in lakes of eastern NY.
Served as supervisor for 22 employees working at TIBS over the summer including 5 staff, 9 undergraduates, 7 graduate students, and 1 High School student. Also supervised 5 undergraduates working in lab during academic year.
Taught the Senior Synthesis in Aquatic and Fisheries Science and developed new curriculum for this offering
Participated in the Accepted Student Reception held at EFB
Helped plan and organize all arrangements for the ESF Board of Trustees Meeting held at TIBS in
September 2012. Organize a group of undergraduate and graduate student presentations to showcase research at TIBS and served as dinner speaker.

Managed large research program with staff of RF. Submitted grant to RF for SUNY Collaboration.

**Danilo D. Fernando**

Orientation for New EFB Graduate Students (August 2012) – topics covered include: Graduate program degree requirements, policies and forms (2A, 3B, 4 and 5A)


Director, EFB Graduate Program

Member, Graduate Program Advisory Committee

Coordinator, Committee on Optical Instruments and Equipment

Member, Graduate Council

---

**Melissa K. Fierke**

Graduate Program Advisory Committee

EFB’s representative, Urban Ecology minor, attend meetings and student capstones

Engaged with faculty searches for Wildlife and Toxicology

Scholarship committees: Roskin undergraduate award to outstanding female senior

Outstanding PhD student award

Stegeman invertebrate ecology graduate award

Simeone Endowed Entomology Fellowship

Ratzlaff Award

Chair, Committee on Public Service and Outreach

Faculty Governance Executive Committee

Chair, Bicycle Safety Committee – founded in January 2013 and engaging stakeholders at ESF, SU and the City of Syracuse to increase cycling safety for ESF commuters

Campus Climate Change Committee

Athletics Committee

ESF Learning Community - Participated in ESF’s professional Learning Community Retreat in June 2012 as well as at the Freshmen Learning Community Retreat at Orenda Springs in September 2012.

Graduate Assistant Colloquium on Teaching and Learning Blackboard training

Development of a college biology course, in collaboration with Outreach and local high school teachers and administrators, to be offered in local high schools

December and May Senior Soirees

---

**Elizabeth Folta**

Natural History & Interpretation Program Coordinator

EFB Course and Curriculum Assessment Committee Member

Help with departmental open houses: fall & spring; accepted student visitations: spring

Completed assessment of the Natural History and Interpretation Program

Submitted request for name change for Natural History & Interpretation to Environmental Education & Interpretation. Approved at university level, but still needs to be approved by SUNY.

Faculty advisor to the INTERP club (student environmental interpretation club)

Curriculum group participant of Environmental Science area Environmental Communication and Participatory Processes

EFB representative to the Recreation Resources and Protected Area Management minor

---

**Jacqueline L. Frair**

Associate Director, Roosevelt Wild Life Station

Significant time spent working with Meredith Perreault, James Gibbs, Don Leopold, and Bob Quinn to create an endowment for the Station.
Working to build an Advisory board, holding functions to begin fund-raising, producing display and promotional materials, and meeting with prospective donors.
Attended meetings and dinners with Boone and Crockett Club related to endowment campaign – 29 Nov-2 Dec 2012 (New York City) and 26-28 Mar 2013 (Washington, DC)
Attended Feinstone Dinner and gave presentation at an Adirondack “Friend-raiser” event.
Serve as liaison for wildlife program with NYS-DEC, working on omnibus MOU for wildlife research and related activities (see grants pending).
Oversee the Roosevelt Wildlife Collection

Roosevelt Wildlife Collection
Supervise curator, Ron Giegerich.
Secured grant for a Conservation Assessment of the collection through Heritage Preservation. On-site assessment completed 8-9 Nov 2012, written report received Feb 2013.
Purchased equipment for collection maintenance (HEPA vacuum).
Instrumental in IMLS grant proposal (pending) to inventory and digitize the collection and make it more accessible.
Coordinate student assistants working on collection inventory.
Worked with architects and ESF team on Gateway exhibit spaces.

Chair, Wildlife Habitat Ecologist Search Committee
Curriculum Coordinator for Wildlife Science major
Coordinate Betty Moore Chamberlaine departmental award.
Routinely represented the wildlife major at ESF Open House and Accepted Student Receptions
Science Advisor to NY State Fish and Wildlife Management Advisory Board (President’s representative)
Poster judge, Syracuse University student poster session in Biology, 22 Mar 2013 (involved students from ESF)
Council for Geospatial Modeling and Analysis, member
Attended winter student banquet and spring commencement

James P. Gibbs
Coordinator, Conservation Biology Major (transitioned to D. Parry Jan 2013)
Coordinator Internships for NYSDEC Fish, Wildlife and Marine Resources / SUNY-ESF internship program)
Member, Course and Curriculum Assessment Committee
Member, Promotion and Tenure Committee
Director, Roosevelt Wild Life Station
Associate Chair

Charles A.S. Hall
President’s committee on a carbon-neutral ESF
Informal committee to generate a program in Biophysical and Ecological Economics

Thomas R. Horton
Faculty mentoring committees: Martin Dovciak, Melissa Fierke, Lee Newman, Sadie Ryan
Promotion and Tenure Committee
Chair - Toxicology Search Committee
Graduate Program Advisory Committee (member through fall 2012)
Academic Research Building Committee

Robin W. Kimmerer
Peer classroom evaluation for Promotion and Tenure Committee
Mentor for junior faculty member
Director, Center for Native Peoples and the Environment
Chair, Search Committee Assistant Director Center for Native Peoples and the Environment
College Awards Committee, helped bring Dr. Sandra Steingraber as commencement speaker
Acting Director, Cranberry Lake Biological Station
College wide, Promotion and Tenure Review Committee 2012-2015
Assist Admissions Office with recruitment strategies for Native American students, contacted 10+
students
ESF Representative to Great Law of Peace Educational Center, Steering Committee Member
Presentation to New Visions Program, visiting students
Advisor to Primitive Pursuits student organization
Hiawatha Institute for Indigenous Knowledge, ESF liaison
CSTEP Mentor
SU Native Student Outreach Day, Fall 11/2/12
SU Native Student Outreach Day, Spring 4/21/13
Environmental Studies Promotion and Tenure Committee, external member 2012
Coordinated seminars and campus visits for Dr. Daniel Wildcat March 2013
Coordinated and sponsored “What do we do when the lifeboats are burning?” concert and reading 10/12
Taught basket making workshop for students March 2103
Coordinated and hosted a weeklong visit from students and faculty from the Menominee Nation to learn
about biocultural approaches to restoration and environmental education opportunities at ESF.
Serve as a member of the Native American Studies faculty at Syracuse University

Donald J. Leopold
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
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)
Presentation (with Tim Toland), Native Plants for Sustainable Landscapes, ESF Sustainability Training
Series (1st talk of series), February 2012, Moon Conference Room filled to capacity.
Member, Core Team for Academic Research Building
Member, Core Team for Illick Hall rehabilitation project
Member, SUNY-ESF Facilities Master Plan Committee
Member, Advisory/Steering Committee for ESF Campus Master Plan Study (now Gateway Building)
Reviewer of dossier for P&T candidate in Chemistry Department
With Tim Toland (lead) and others, was awarded $413,000 grant from the NYS Environmental Facilities Corporation to help pay for Gateway Building green roof project
Participant in press event for Gateway Building green roof project and award of $413,000 grant from the NYS Environmental Facilities Corporation, included interviews for print and radio (local WRVO), May 2012
Member (representing Academic Council as “academic dean”), SUNY ESF Presidential Search Committee

Karin E. Limburg
Chair, EFB Graduate Program Advisory Committee
Member, EFB Promotion and Tenure Committee

Mark V. Lomolino
Freshman and Transfer Student Orientation/Advising – Summer, 2012

Gregory McGee
EFB Undergraduate Curriculum Director
ENB Curriculum Coordinator
EFB CCAC member
Chair, Faculty Governance Committee on Student Life
Faculty Governance Executive Committee
ESF First-Year Learning Community Team
  Helped to organize and participated in day-long (Saturday, 9/15/12) First-Year Retreat at Orenda Springs.
  Participated in SU Dept. Education graduate student presentations on ESF learning community focus groups.
  Facilitated (w/ Donaghy and Fierke) a freshman orientation session on Civility during fall orientation. Facilitated a discussion on Academic Integrity during the ESF Faculty Mentoring Colloquium (1/8/13). Participated in Family/Alumni Reception, Saturday, 10/6/12.
  Chaired a Committee on Academic Honesty (5/7/13) for an academic integrity violation.

Stacy McNulty
Associate Director, Adirondack Ecological Center
Organizer, Huntington Lecture Series
Editor, Spruce Moose newsletter
Council for Geospatial Modeling and Analysis (CGMA)
Promotion and Tenure Committee (Callan), spring 2013

Myron J. Mitchell
Director of Council of Hydrologic Systems Science
Member of Search Committee for Data Manager for Hubbard Brook LTER (Syracuse University)
Member of SUNY Empire Innovation Advisory Committee
Member of Board of Directors of New York Research Foundation
Vice-Chair of Board of Directors of New York Research Foundation (January 2011-present)
Member of the Committee on Research Supported Economic Development

James P. Nakas
Resigned from Director, Institutional Biosafety Committee
Removed as member, Radiation Safety Committee
Relieved as Director, SUNY Center for Applied Microbiology
**Lee A. Newman**
Course and Curriculum Assessment Committee member.
Biotechnology Minor development group.
Core Team Member for the Academic Research Building.
Fall and Spring Transfer Student Advising
Participated in the updating of the Natural History and Interpretation major
Point person for deionized water treatment system
Member of Toxicology Search Committee
Lead, committee for replacement of Microbiology faculty position
Spoke at both EFB and BTC orientation seminars’
Pre-Med Advisor, Biotechnology Major students
Chun Wang Award Committee, member
Member, Committee on Research
Participated in developing new Environmental Health major
Curriculum group participant of Environmental Science
Mentor for Undergraduate Honors and CSTEP programs
Spoke at Environmental Science Orientation seminar
Lead in developing MD/PhD program with Upstate Medical University
Lead in developing NIEHS grant program
Curriculum group participant of Environmental Science Coupled Natural and Human Systems
Member of Hill Collaboration Nervous System Group
Member of Hill Collaboration Cancer Group
Member of Hill Collaboration Wounded Warrior Group
Chair, Biotechnology Research Symposium organizing committee
Member of the SUNY Catalyst Committee for Research

**Dylan Parry**
Coordinator – Conservation Biology Major
Chair the LeRoy C. Stegeman Award in Invertebrate Ecology committee; evaluate applications, and present award (as I have done since 2003)
Ad hoc committee member, Burgess Award.
Member GPAC (Graduate x Advisory Committee)
Member CCAC
Member, Committee on Research. Committee members evaluated and ranked McIntire-Stennis pre-proposals and full proposals, reviewed and ranked Seed Grant Proposals, determined exemplary ESF researcher, and organized and convened the Spotlight on Research.
Judge, Spotlight on Research (Ranked a subset of graduate student posters)
Member and stand in Chair (for Ken Tiss), Academic Integrity Committee. Convened hearings for students accused of academic integrity violations, evaluated the evidence, upheld or dismissed cases based on the documentation, and recommended punishments where appropriate.

**William A. Powell**
Faculty representative on ARB building Committee
Coordinator for the undergraduate Biotechnology major
Awards Ceremony: Gave the Distinguished Scholar in Biotechnology.
Represented the Biotechnology major at the Spring Open house.
Director of the Council on Biotechnology in Forestry
IBC (Institutional Biosafety Committee) member
Neil H. Ringler
Ex-Officio Committee on Research
SUNY/RF Research Council
SUNY/RF Research, Innovation and Entrepreneurship Committee
SUNY/RF Research Officers/VPR’s
Co-Director Hill Collaboration with UMU, SU, ESF, VA

Sadie J. Ryan
Graduate Program Advisory Committee, member
Toxicology Position Search Committee, member
Phyllis Roskins Award Committee, member
Chun Wang Award Committee, member
CGMA – Committee on Geospatial Modeling and Analysis, member
IACUC – Institutional Animal Care and Use Committee, member
Faculty member, Graduate Program in Environmental Science (GPES), CNH group
Program Coordinator, Health and Environment focus, Division of Environmental Science
Program coordinator, Environmental Health (EH) major
Faculty Advisor, Conservation Biology Club

Kimberly L. Schulz
EFB Course and Curriculum Assessment Committee Chair
Faculty mentor for Greg McGee, Beth Folta
Coordinating effort to develop CIRTAS – Center for Integrated Research and Teaching in Aquatic Science, to find funding to develop a collaborative aquatic science experimental facility for teaching and research at ESF, and efforts to organize aquatics group in EFB
EFB representative to the Water Resources Minor
Faculty advisor to the Nautilus Club (student marine science club)
Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science
Faculty representative to the SUNY ESF Presidential Search Committee

William M. Shields
Director of the Honors Program
C-Step Mentor (2 students)

Stephen A. Teale
EFB Promotion and Tenure Committee
Secretary, ESF College Governance

J. Scott Turner
Ad Hoc Technology Committee.

Alex Weir
Director, Cranberry Lake Biological Station, 08/06 –
Curator of the EFB Herbaria appointed 09/03-
Member, Field Programs Committee EFB
Active participant in EFB majors for Forest Health, Conservation Biology and Natural History and Interpretation.
Member, Lowe-Wilcox Award Committee, Zabel Award Committee, Morrell Award Committee
Christopher M. Whipps
EFB Curriculum Committee (Jan-Feb 2008, Aug 2008-present).
ESF Institutional Animal Care and Use Committee (Aug 2011-present). Chair
ESF Honors Program Faculty Council (Aug 2011-present).
ESF Academic Research Building Core Team (Apr 2010 – present).
ESC Health and the Environment Curriculum Group Participant (Mar 2011-present)
SUNY Center for Applied Microbiology (Feb 2013 – present) Director
Appendix H. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

Jonathan B. Cohen
Advisory board for the Goldenrod Foundation (private nonprofit)
Advisor to the U.S. Shorebird Conservation Plan (US Fish and Wildlife Service)

Martin Dovciak
National Science Foundation Grant Application Reviewer
Consulting for wetland monitoring at a Shingle Shanty Preserve and Research Station in the Adirondacks, NY.
Responding to various inquiries from the public (e.g., Global Student Embassy, Syracuse Botanical Club).

John M. Farrell
Cornell University – member of the Cornell Biological Station Advisory Board – attended CBFS Advisory Committee Meeting and provided recommendations on CBFS development.
NYSDEC – water levels research and policy – service to inform managers of research outcomes regarding water levels management influences on habitat and fauna
International Joint Commission – expert consulting on water levels issues
Thousand Islands Land Trust Zenda Farms Picnic, Provided live fish and poster displays as part of community event (June 2012; ~250 attendees)
Save The River, Clayton, NY, 2012 Board of Directors, advisory roles on environmental issues, development of teacher training initiative for North Country districts.
Ontario Ministry of Natural Resources – assisted with development of muskrat monitoring program.
International Joint Commission, participated as expert on 3 day Web dialogue to address questions online regarding Lake Ontario/St. Lawrence River water level regulation
Tour of culture facility – Chippewa Fish and Game Club
USFWS Partners for Fish and Wildlife Program – guidance on restoration project preliminary designs
Ducks Unlimited – restoration site tour to NOAA staff and Department of State staff.

Melissa Fierke
Serve as a science advisor to NYDEC on emerald ash borer and other forest invasives and attend meetings in Albany as needed.
Serve as co-director, along with Mark Whitmore (Cornell Natural Resources Dept), for the New York Forest Health Advisory Council. In this position I organize & facilitate annual/semi-annual meetings at ESF.
I serve on the City of Syracuse Emerald Ash Borer Task Force attending monthly meetings with other collaborators, e.g., Steve Harris, the Syracuse City Arborist, Jesse Lyons, Cornell Cooperative Extension, David Coburn, Onondaga Director of the Environment. I am a member of several sub-committees where we work on developing and implementing an emerald ash borer preparedness plan for the City of Syracuse and Onondaga County.
Answered questions from the public on insects/arthropods throughout the reporting period.

Elizabeth Folta
Project Learning Tree Focus on Forests at ESF April 2013 – 15 participants
National Association for Interpretation Certified Interpretive Guide Workshop at Beaver Lake Nature Center March 2013 – 8 participants
Project WILD at Beaver Lake Nature Center May 2013 – 11 participants
National Association for Interpretation Certified Interpretive Guide Workshop at Baltimore Woods Nature Center November 2012 – 7 participants
Project Learning Tree at SUNY-Cortland March 2013 – 15 participants
Rosamond Gifford Zoo, Education Committee 12/2010 – current
Friends of Beaver Lake, Board Member 1/2011 – current
Education Task Force Member 8/2011 – current
Future Planning Committee 4/2011 – current
Project Learning Tree Steering Committee (NY) 7/2011 – current
Leopold Education Project State Co-Coordinator 2011 (unofficial) – current (official)
New York State Outdoor Education Association, Board Member, 9/2012 - current

**Jacqueline L. Frair**
Student activities team member, Northeast Association of Fish and Wildlife Agencies annual conference.
NY State Fish and Wildlife Management Advisory Board, SUNY ESF Science Advisor 2 Oct 2012
(unable to make meeting because I was out of the country, but sent report) 4-5 Mar 2013, Madison, NY.
Coordinated Coyote Working Group meeting at ESF, 10 Jan 2013, that involved researchers from ESF, Cornell, Mianus River Gorge Reserve, and Fort Drum (~32 attendees).
Member, Forest Carnivore Working Group, established Mar 2013.

**James P. Gibbs**
Promotion and tenure dossier reviewer Colorado State University
Co-organizer and co-leader (with L. J. Cayot and W. Tapia) of two consecutive, week-long workshops funded by Galapagos Conservancy and convened by the Galapagos National Park entitled “Galapagos Citizen Science Workshop” and the “Galapagos Giant Tortoise Conservation Program Workshop” (June and July 2012) each involving 10 invited foreign scientists and 10 local scientists and managers.
Designated courier for the transfer of the giant tortoise “Lonesome George” from Parque Nacional Galapagos headquarters in Puerto Ayora, Santa Cruz Island to American Museum of Natural History in New York City March 10-11 2013 (for specimen preparation and eventual repatriation to Ecuador in 2014).
Co-organizer of giant tortoise webcams project funded by Galapagos Conservancy (GC) based at the Galapagos National Park Service’s (PNG) Giant Tortoise Breeding Center in Puerto Ayora, Santa Cruz Island.
Co-organizer of the “Wild Altai” participatory conservation research program recruiting and supporting paying volunteers participating in snow leopard, argali and grassland monitoring activities in June-July 2013 (to be expanded in 2014).

**Thomas R. Horton**
Scientific advisor – Central New York Mycological Society
Scientific advisory board – Mianus River Gorge Preserve

**Robin W. Kimmerer**
Orion Society, Board of Directors
Oregon Museum of Science and Industry, advisor to Generations of Knowledge Project
Fabius Pompey School District
Reviewer and Judge, John Burroughs Medal Award Committee
Neighbors of the Onondaga Nation
Great Law of Peace Education Center Initiative
Haudenosaunee Environmental Task Force
Onondaga Nation School
Donald J. Leopold
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.

Karin E. Limburg
Member, Fisheries Subcommittee, Hudson River Estuary Management Advisory Committee
Panelist for Maryland Sea Grant (December 2012; see below)
Panelist for NSF Ecosystems (April 2013; see below)
External reviewer for P&T decision, University of Vermont
External reviewer for P&T decision, Ohio State University
External reviewer for “Habilitation” promotion (like P&T), IRSTEA-Bordeaux, France
IMBER-LOICZ Continental Task Team (IMBER = Integrated Marine Biogeochemistry and Ecosystem Research; LOICZ = Land-Ocean Interactions in the Coastal Zone) – member, 2011-2014
Member, Conseil Scientifique (Science Advisory Board) for “LabEx COTE – Evolution, Adaptation and Governance of Continental-to-Coastal Ecosystems” – Bordeaux, France

Gregory G. McGee
Board of Directors – Orenda Springs Charter School for Outdoor Education, Marcellus.

Stacy McNulty
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

Myron J. Mitchell
Board of Directors of Upstate Freshwater Institute
Member of Finance Committee of Upstate Freshwater Institute

Lee A. Newman
Judge for 11th ESF Environmental Challenge Science Fair, 13 March 2013
Judge for International Genius Olympiad, SUNY Oswego, 26 June 2012
Dylan Parry  
Member, New York State Invasive Species Advisory Council

Albany Pine Bush Preserve. I have continued a long-standing relationship with the Albany Pine Bush preserve. The director, Neil Gifford, and I have collaborated on numerous projects, and I provide consultation on the effects of management on insect species that are of conservation concern. Although there is no direct compensation, we benefit through free labor from preserve staff and cheap housing for graduate students. Brian Hoven (MS 2010), in particular, was availed significant Pine Bush resources during the implementation of his project. MS student, Georgia Keene, is currently living and working at the Preserve. As a goodwill ambassador for ESF, I was able to connect Bill Shields with the APBP, facilitating opportunities for honors student internships within the preserve. Currently Amanda Dillon (MS), Chris Standley (MS), and Steve Campbell (ESF Post-Doc) are all full time Pine Bush employees highlighting the connection ESF has with this preserve.

NY DEC. I share ecological information on insect defoliators and exotic forest pests with Jerry Carlson, head of Forest Protection for NY-DEC. In addition, I have been running a pilot study on the use of forest tent caterpillar pheromone as a monitoring tool and coordinating sites with the DEC so that we can compare their traditional sampling methods with this new tool. The DEC will fund trapping costs (fuel, pheromone, traps, etc.). Jerry has been providing a state vehicle and gas, which given the thousands of miles of driving this project entails, is a real important contribution.

Project Advance – Syracuse University, Forensics for High School teachers. I continue to run a two-day workshop each summer for the best and brightest high school science teachers in the state. I run a forensic entomology lab for them and teach them how to introduce this material into their own teaching programs. As forensic science is a great way to gain and keep student interest in biology, this program is in high demand. Although I get a token honorarium, the time investment is significant and thus is functionally un-compensated.

William A. Powell  
Hosted an USDA APIS BRS workshop on biotechnology permits and BQMS at the ESF campus (7/16 – 7/17/12) 14 attended plus 4 representatives from the USDA.  
Advisor to the NY chapter of The American Chestnut Foundation  
Science advisory board member of the national American Chestnut Foundation

Neil H. Ringler  
Onondaga Lake Habitat Committees: Assistance via graduate mentoring program

Rebecca J. Rundell  
Served as a mentor for female 9th grade student interested in a career in biology; North Syracuse Central School District Humanities Course Career Enrichment Program  
Mark-recapture field study of the federally endangered Chittenango ovate amber snail, U.S. Fish and Wildlife Service  
Specialist, IUCN/Species Survival Commission, Mollusc Specialist Group  
Convened a celebration of International Darwin Day. The Moon Library/EFB311 event, featuring student-produced mini-posters and other Darwin-related information was advertised on the International Darwin Day Foundation website: darwinday.org. This was the only publicized Darwin Day event in Syracuse.

Kimberly L. Schulz  
Upstate Freshwater Institute Board Member October 2011-current  
Onondaga County Water Protection Scientific Advisory Boart 2012-current
William M. Shields
Consulted on 5 cases pro bono.
Board of Directors (1996- ) and Treasurer (1996-2001), Melinda Gray Ardia Environmental Education Foundation, P.O. Box 621, Skaneateles, New York 13152.
Pro Bono consulting and expert witness for various individuals and entities including the Alliance of Families of MIA’s and POW’s, the Russian Orthodox Church, and the Innocence Project.
Appendix I. Unfunded Service to Professional Societies and Organizations

Jonathan B. Cohen  
The Waterbird Society, Chair of Conservation Committee  
The Waterbird Society, Elected Councilor  
The Wildlife Society, Symposium-selection subcommittee, program committee, 20th Annual Meeting

Martin Dovciak  
Appalachian Trail Mega-Transect Research Consortium (member)  
Mountain Research Initiative Expert Database (member)  
H.J. Andrews Experimental Forest LTER Program, OR (collaborator)  
Demonstration of Ecosystem Management Options (DEMO) Study (collaborator)

John M. Farrell  
American Fisheries Society, Hutton Scholar Mentor for 2012 - applied to serve as mentor, sought applicants and an individual was awarded an 8 week scholarship to assist with research at TIBS (co-mentor with Chris Barry).  
Board of Directors, Save The River Inc. – 1200 member Environmental Advocacy organization on the St. Lawrence River.

Jacqueline L. Frair  
The Wildlife Society - College and University Wildlife Education Working Group (member, 2011-present)

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

Myron J. Mitchell  
Consortium of Universities for the Advancement of Hydrologic Sciences, Incorporated (CUAHS), alternate representative for ESF (2001-present).

Lee A. Newman  
Association of Environmental Health Sciences – Scientific Advisory Board, organizer for Annual Conference in Amherst, MA  
International Phytotechnology Society – Immediate Past President; Chair of Gordon Award Committee, Chair of Educational Award Committee, Member of Organizing Committee for Annual Conference in Hasselt, Belgium, 2012; Chair, Organizing Committee for Annual Conference to be held in Syracuse, NY in October 2013  
Chair of Organizing Committee for Biotechnology Research Symposium in May 2013

Dylan Parry  
Member, New York State Invasive Species Advisory Council (Not sure whether this should be listed here or as unfunded governmental service (or in both). It does have a designated legislative charter and is composed of professionals.  
Member, New York Forest Health Advisory Group. Share information, collaborate and coordinate activities of academic and government agencies involving major threats to the health of New York’s forests.
Christopher M. Whipps
American Fisheries Society Fish Health Section (AFS-FHS) Technical Standards Committee (elected position appointment June 2010-June 2014) and Current Chair (June 2012 – June 2013). 
American Fisheries Society Fish Health Section (AFS-FHS) Executive Committee (June 2012-June 2013).
Appendix J. Funded Service to Governmental Agencies, Industrial and Commercial Groups, Public Interest Groups, etc.

John M. Farrell
NYSDEC, Esocid Workgroup Meeting, Organizer 9/16-17/2012
USFWS, Fisheries Advisory Group, Research Progress updates presentation (Cortland, NY)
Saint Regis Mohawk Tribe Environmental Division, onsite visit to Snye Marsh to consult on restoration effort
Honeywell, Onondaga Lake Restoration

Jacqueline L. Frair
Consulted on wildlife injury assessment (~9 hours), continuation from prior AY.

James P. Gibbs
National Science Foundation / Population and Community Ecology Pre-proposal review panel 27-29 March 2013.

Robin W. Kimmerer
University of Wisconsin, consultant/advisor to POSOH indigenous environmental education project
College of the Menominee Nation, curriculum development

Karin E. Limburg
Wrapped up work for Marine Stewardship Council to evaluate Maryland striped bass fishery for potential certification

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

Kimberly L. Schulz
National Science Foundation Panel, Division of Environmental Biology; 26-29 March 2013

William M. Shields
Consulting and Testifying on Forensic DNA (5 times)

Alex Weir
National Science Foundation Grant Application Reviewer (1 application spring 2013)
Continued Liaison with Central New York Mycological Society
Appendix K. Presentations to the Public

**John D. Castello**
Forest Health: An Integrated Perspective, Northern Arizona University, School of Forestry, March 2013 (invited)

**Jonathan B. Cohen**
2013 – Avis, M.L., J.B. Cohen. Piping plover movements, flight heights, and avoidance of obstructions during the breeding season: implications for risk of collision with turbines and other human structures. The Goldenrod Foundation, Advisory Board meeting, Plymouth, MA. 25 attendees
2012 – Avis, M.L., J.B. Cohen. Piping plover movements, flight heights, and avoidance of obstructions during the breeding season: implications for risk of collision with turbines and other human structures. MassWildlife Piping Plover Cooperator Meeting, Cape Cod, MA. 75 attendees

**Martin Dovciak**
Tecumseh Elementary School (April 12, 2013). Presentation to ~ 40 second graders and their teachers about ecology and botany and what it means to be an ecologist or botanist.

**John M. Farrell**
Thousand Islands Land Trust, Board of Directors Presentation on Habitat Restoration Programs at TIBS (15 participants)
American Ecological Engineering Society Meeting - 12th Annual Meeting – provided tour to meeting participants (10 participants)
Jefferson County Soil and Water Conservation District – provided tour of TIBS programs for annual retreat (14 participants)
Tour of restoration sites for the Braddock Bay Interagency Technical Committee May 2013 (eight participants)
Ichthyologist for a Day, Thousand Islands Land Trust, Kids Trek Program (20 participants)
Save The River, In the Schools Program – research experience for 6th grade students in North Country regional districts held at Wellesley Island State Park (60 participants)

**Danilo D. Fernando**

**Melissa K. Fierke**
Presentation at Utica College’s Womyn’s Herstory Month luncheon March 5, 2013. (~100 attendees)
“Aspiring to be an intentional model: mother, scientist, advisor, and teacher”
Entomology presentations: Chittenango Garden Club 6/12/12 (22 gardeners), Ed Smith Kindergarten classes 5/24/13 (80 students)
Channel 3: Wild parsnip and giant hogweed:

ESF Going Green segment: Update on New York State Law on movement of invasive species
http://buffalo.ynn.com/content/features/646284/ash-borer-beetle-killing-trees-throughout-the-state/

Article on cicadas in Saratogian:
http://www.saratogian.com/articles/2013/05/07/news/doc5188615c5f797157565950.txt

Channel 3 & 5 Interview on new quarantine regulations on emerald ash borer
http://www.cnycentral.com/m/news/story?id=894329#.UZGC2GS9Kc0

Pearson Mastering Biology meeting. 3/2013, Syracuse, NY. Presented on my experience using Mastering
Biology, an online homework program developed by Pearson, Inc., the publisher of the Campbell
Biology textbook we use in EFB101. The presentation was to university lecturers considering using
Mastering in their classrooms. (~30)

Jacqueline L. Frair
“Celebrate Wildlife”, Roosevelt Wildlife Station friend-raiser, Lake Placid, NY, May 2013. ~42
attendees.
“Eastern coyote predation of white-tailed deer in New York State”, Ulster County Sportsmens Club, New
Paltz, NY. June 2012, ~30 attendees.
“Top Dog: Understanding the ecological role of coyotes in NY State”, NY State DEC distributed lunch
seminar, Albany, NY (broadcast to all the regions). Nov 2012, ~45 attendees in central office (not
sure how many in regional offices).

James P. Gibbs
Lecture Series Jan 25 2013 ~40 attendees
“On the Brink: Saving Russia’s Last Snow Leopards,” Dale L. Travis Public Lecture Series, SUNY-ESF,
March 20, 2013 ~400 attendees

Thomas R. Horton
Horton TR. Three things you should not avoid: Death, taxes...and DNA! Or, "Nothing in Biology Makes
Sense Except in the Light of (DNA) Evolution. Central New York Mycological Society monthly
meeting. April 15. ~10 attended (taxes were due at midnight!).
Numerous mushroom forays and meetings with the Central New York Mycological Society, average
attendees 10 – 20/event.
Vincent Neil Mushroom Festival at Beaver lake. A joint program with myself as faculty advisor,
members of the CNYMS, Mid-York Mycologcial Society and Beaver Lake Nature Center. September
2012. ~100 attendees.

Robin W. Kimmerer
University of Washington Seattle, Mindlin Lecture for Leadership in Biology May 2013
College of the Menominee Nation, Sustainable Development Institute November 5-6, 2012
Featured Speaker, College of Menominee Nation, Climate Change Symposium June 6-8, 2012
Haudenosaunee Language class, Syracuse University October 16, 2012
Trent University Indigenous Environmental Studies Program, November 20, 2012
Syracuse University, Native American Studies November 12, 2012
Syracuse University, Onondaga Lake course March 2013
Environmental Careers, Fabius Pompey High School February 2013
Donald J. Leopold
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, Great Swamp Conservancy, June 2012, about 25 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.
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
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
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, 24th 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, 24th 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
Karin E. Limburg

Gregory G. McGee
Spring Wildflower Walk – for general public at Skaneateles Conservation Area, April 27, 32 in attendance.

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

Lee Newman
Phytoremediation: Using plants to solve environmental problems. SUNY Buffalo University, Buffalo, NY, 8 March 2013
Plant uptake and interactions with nanoparticles. Binghamton University, Binghamton, NY, 30 November 2012.
Environmental Phytotechnologies: Using plants to solve environmental problems. Utica College, Utica, NY 22 October 2012.
Phytoremediation. FMP Remediation, Utica, NY, 21 August 2012.
Phytotechnology for addressing environmental problems, a two-day presentation as part of Contaminacion Ambiental y Bioenremediacion at the Instituto de Ecologia, Xalapa, Veracruz, Mexico, 16-17 August 2012.

Dylan Parry

William A. Powell
Alumni Tours of chestnut plantings at the Lafayette Road Experiment Station. 10/6/12
Invited speaker, Asa Gray Biological Seminar Series, Utica College, NY. 12/3/12. American Chestnut Research and Restoration Project at SUNY-ESF.
Leaf Assay Workshop. 3/28/13. We hosted a leaf assay workshop on the ESF campus where we trained members of The American Chestnut Foundation on how to perform a leaf assay, developed in our lab, that helps determine the level of blight resistance. Six people attended our workshop and now will be able train the members in their state chapters.

Neil H. Ringler

Rebecca J. Rundell
“Evolution and conservation of the rock- and leaf litter-dwelling land snails of Belau (Republic of Palau, Oceania),” Departmental of Ecology and Evolutionary Biology, Cornell University, Departmental Seminar, 11 March 2013, 30
Sadie J. Ryan

Invited Seminars
Ryan, S.J. Extreme Conservation: The Consequences of Non-Intervention for Infectious Disease in Great Apes. October 5th, 2012. Fall Environmental Sciences Seminar Series, University of New Hampshire. Sponsored by the NRESS Ph.D. Program, the Earth Systems Research Center (ESRC), the Department of Natural Resources and the Environment, and the Department of Earth Sciences.

Invited Workshop Lectures/Teaching

Teaching:
Ryan, S.J. Emerging Diseases, Climate change and how we (could) approach them together
  Session 1: EIDs, Epidemiology, Disease Ecology; contexts and complications
  Session 2: Climate Change and Ecology of EIDs; climate models, multiscalar anthropogenic impacts
  Session 3: Spatial methods for ID management; top down and bottom up modeling

Lectures:
  Ryan, S.J. Malaria and Climate Change
  Ryan, S.J. Too few primates, too many primates, and disease

UKZN Siyacabanga Workshop: Complexity and Biology: Tick-borne disease dynamics for wildlife, livestock and humans 12 - 14 March 2013: University of KwaZulu Natal, Pietermaritzburg, Republic of South Africa (Workshop co-coordinator)
Ryan, S.J. Coupled natural-human systems research and disease ecology on landscapes, March 12th
DIMACS/MBI Workshop in Quantitative Landscape Ecology and Environmental Sustainability 2 - 7 July 2012 University of KwaZulu Natal, Durban, Republic of South Africa. (Workshop co-coordinator)
Ryan, S.J. Didactic Talk: If we know what sustainability is (theory), how do we take the next step (applied)? Local Living in the Larger Landscape: Population, Environment, and Climate in the Albertine Rift, July 3rd
Ryan, S.J. Home range and habitat selection: ArcGIS Morning Hands-on Workshop, July 4th
Ryan, S.J. Thinking in Systems: Morning Hands-on Workshop, July 7th
Kimberly L. Schulz
Understanding stressors in aquatic food webs: The importance of quality and quantity at many levels. SUNY ESF exemplary researcher award talk. Adaptive Peaks Seminar, 24 January 2013.
Limnology Poster Session for the Cortland-Onondaga Federation of Kettle Lake Associations, Inc. (COFOKLA). ~80 attendees; April 22, 2013
Led breakout session on water on 22 May 2013 at Resiliency of the Great Lakes to Climate and Storm Events: A SUNY Conference in the Disciplines Program, SUNY ESF, and gave summary presentation on this on 23 May 2013.

William M. Shields
SUNY Council of Honors Deans and Directors, Asked to give a talk on how to get funding for Honors Internships, (30 attendees). May 3, 2013.
Appendix L. Miscellaneous Publications and Outreach Activities and Materials

**John M. Farrell**

**Jacqueline L. Frair**

**James P. Gibbs**

**Robin W. Kimmerer**
“Where the Land is the Teacher”. Adirondack Life Summer 2103
“Learning the Grammar of Animacy” The Leopold Outlook (republished).

**Donald J. Leopold**
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 or 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.

**Karin E. Limburg**

**Mark V. Lomolino**

**Stacy A. McNulty**
McNulty, S. Beech Nuts, Mice and Bears. Adirondack Almanack, 29 August 2012.

**Dylan Parry**
**William A. Powell**

Many “news” articles about the American chestnut including:
- New Scientist 6/25/12
- The Wall Street Journal 8/20/12
- Nature 10/3/12
- The Economist 5/4/13

And many local TV (YNN), newspapers, websites (like Northern Woodlands), and radio reports (like WRVO NPR news)

Note: I was just interviewed for The Atlantic (5/23/13) and Landscape Architecture Magazine (5/24/13)

**J. Scott Turner**

**Media**

<table>
<thead>
<tr>
<th>Title/Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversations with Scott Turner</td>
<td>Addy Pross is Professor of Chemistry at Ben Gurion University in Israel. He is a leading figure in Origin-of-Life research</td>
</tr>
<tr>
<td>Social insects 1. Introduction to the social insects</td>
<td>For Diversity of Life Social insects 2. Kin selection and the evolution of sociality in insects. For Diversity of Life Social insects 3. The superorganism For Diversity of Life</td>
</tr>
<tr>
<td>Optimum walking speed.</td>
<td>For Physics of Life. How fast should animals walk? Shot on location in Namibia.</td>
</tr>
<tr>
<td>Animal physiology online</td>
<td>Ongoing production of video material for the expected launch of Animal Physiology Online. 48 videos to date.</td>
</tr>
</tbody>
</table>

**Addy Pross.**

Addy Pross is Professor of Chemistry at Ben Gurion University in Israel. He is a leading figure in Origin-of-Life research

**Bruce Brewer.**

Bruce Brewer is Managing Director of the Cheetah Conservation Fund in Namibia. He talks here about their innovative work integrating biofuels and range management.

**Laurie Marker.**

Laurie Marker is the Founder and Director of the Cheetah Conservation Fund in Namibia. She talks here about cheetah conservation and the challenges of working in a developing country like Namibia.

**JS Turner. In production**

Animal physiology online Ongoing production of video material for the expected launch of Animal Physiology Online. 48 videos to date.
Appendix M. Foreign Travel

Martin Dovciak
Technical University in Zvolen, Slovakia (Aug. 4-18, 2012). Research on the mechanisms and consequences of woody colonization of grasslands in the Carpathian Mountains.

John M. Farrell
France, Lyon June 2012 Service on Scientific Committee for International Sustainable Development of Rivers Conference. Serve as Session Chair and present at conference.

Jacqueline L. Frair
San Cristobal, Mexico, 26 Oct – 1 Nov 2012, grant proposal workshop led by Stewart Diemont.

James P. Gibbs
Puerto Ayora, Galapagos Islands, Ecuador, June-July 2012, to co-lead workshops on citizen science and giant tortoise conservation.
Argut River Gorge trek, Altai Republic, Russia, Oct 2012, install cabin-based anti-poacher devices
Puerto Ayora, Galapagos Islands, Ecuador, Nov 2012, install trail-based anti-poacher devices
Puerto Ayora, Galapagos Islands, Ecuador, April-June 2013, continuing sabbatical leave as “Viejo Sabio / Wise Sage.”

Charles A.S. Hall
Sweden lecture tour

Karin E. Limburg
Travel for attendance at working group meetings (Halifax, Goa); for Science Advisory Board meeting and promotion review (Bordeaux), and conference presentations/organizing symposia (Bergen, Visby, Bordeaux, Goa).

Myron J. Mitchell
Potsdam, Germany, May 21-25, 2012, North Watch Workshop, Gave Invited Presentation

Lee Newman
Xalapa, Mexico; 15-18 August 2012, Present two days of courses on phytoremediation as part of the program of Contaminacion Ambiental y Biorremediacion at the Instituto de Ecologia
Hasselt, Belgium; 10-15 Sept 2012, Attend the 9th International Phytotechnology Conference and present a plenary talk
Benevento, Italy; 17-22 Sept 2012, Attend the 107th Congress of the Italian Botanical Society and present a plenary talk
Yantai, China; 23-26 Sept 2012, Attend the 4th International Conference on Soil Pollution and Remediation, SoilRem 2012 and give a plenary talk and a keynote talk
Hangzhou, China; 5-8 November 2012, Attend the 1st International Conference on Contaminated Land, Ecological Assessment and Remediation and give a plenary talk
Sadie Ryan  
_Uganda_  
June 8th - July 1st, 2012: Kampala, Kibale National Park, Queen Elizabeth National Park, Murchison Falls National Park - Fieldwork  

_South Africa_  
July 2-8th, 2012; DIMACS/MBI Workshop: Quantitative Landscape Ecology and Environmental Sustainability (QLEES), University of KwaZulu Natal, Durban Campus – lecturing and workshopping  
March 11-15th, Siyacabanga Workshop Complexity and Biology: Tick-borne disease dynamics for wildlife, livestock and humans 12 - 14 March 2013: University of KwaZulu Natal, Pietermaritzburg Campus – lecturing and workshopping  

_Mexico_  
April 27th – May 3rd, 2012; IV Curso Internacional de Primatología de Campo: Ecología, Comportamiento y Conservación en la Interfase humano – ambiente  

Stephen A. Teale  
Ecuador, February16 – March 26, 2013 – To conduct field research on _Philornis downsi_, an invasive insect parasite of birds in the Galapagos Islands.  

J. Scott Turner  
Vienna, Austria. November 2012. Keynote Speaker at Vienna Biocentre PhD Symposium  
Israel. March 2012. Featured speaker at SIDEER PhD Symposium.  
Namibia. May-June 2012. Field research  

Alex Weir  
June 2012 – Italy - collaboration with Professor Walter Rossi
Appendix N. Theses and Dissertations completed
(i.e., all requirements met and degree awarded)

M.S. Theses
Buckley, Shannon. Rusty blackbirds in northeastern U.S. industrial forests: A multi-scale study of nest habitat selection and nest survival (S. McNulty)
DeVilbiss, Katherine. Responses of Esocid fishes to warming temperatures: Laboratory experimentation on species metabolic rates. (J. Farrell)
Discenza, Jeremy J. Inter-simple sequence repeat analysis of genetic diversity within and between eight New York populations of Asplenium scolopendrium var. americanum. (D. Fernando)
Gillrich, Jennifer. Predictors of bryophyte diversity in calcareous fens in the Fall Creek watershed. (R. Kimmerer)
Hamidi, Jason. Hyporheic invertebrate response to stream restoration through bedform diversification in a north temperate stream. (K. McGrath)
Hansen, Sara. Estimating density of coyotes from call-response surveys using distance sampling and soundshed models. (J. Frair)
Johnson, Brent. Management and status of an endangered massasauga rattlesnake population in New York State. (J. Gibbs)
Killourhy, Christina. Predation on centrarchid nests in the St. Lawrence River following introduction of the round goby (Neogobius melanostomus). (J. Farrell)
Legard, Christopher. Embryonic survival of brown trout (Salmo trutta) in the Salmon River, NY. (N. Ringler)
Miller, Andrew. Predation on juvenile Chinook salmon during out-migration in a Lake Ontario tributary. (N. Ringler)
Nack, Christopher. Habitat use and diet of post yolk-sac larval American shad in the Hudson River estuary during the summer of 2010 and 2011. (K. Limburg)
Sucy, Anjoli. Environmental literacy and youth development outcomes of an environmental action research program with underachieving high school students. (E. Folta)
Tourtellot, Samuel. The impact of transgenic American chestnuts (Castanea dentata) on ectomycorrhizal fungi in open-field and mature forest sites. (T. Horton)
Whitman, Brigham. White-tailed deer movement and habitat interactions prior to death in central New York. (W. Porter)
Wilkinson, Sarah. Density dependence and stochastic variation in overabundant, un-managed white-tailed deer herds of eastern National Parks, May 2013 (S. McNulty and B. Underwood)

Ph.D. Dissertations
Crane, Derek. Reproductive ecology of native predatory fishes and body condition responses to invasive round goby in the lower Great Lakes and connecting channels. (J. Farrell)
Johnson, Stephanie. The effects of land use and habitat quality on fish and macroinvertebrate concordance, ecological community thresholds, and trophic structure: A case study of a perturbed watershed (Onondaga Lake Watershed, NY) (N. Ringler)
Kirchgesrner, Megan. Spatial epidemiology of bovine viral diarrhea virus and Coxiella burnetii seroprevalence in white-tailed deer (Odocoileus virginianus) in New York (C. Whipps)
Pan, Wenyang. Production and characterization of short-chain-length polyhydroxyalkanoates (SCL-PHAs) homopolymer and copolymers from renewable wood-based resources and cheese whey permeate. (J. Nakas)
Salazar, Arnold M. Isolation and characterization of secretory proteins involved in loblolly pine (Pinus taeda) pollen germination. (D. Fernando)
Stewart, Anna. A social-ecological analysis of vulnerability to dengue fever in southern Coastal Ecuador. (C. Hall)
Stoutenburg, Rosanna. The effects and mitigation of lignocellulosic hydrolysate inhibitors of ethanol production by 
Scheffersomyces (Pichia) stipitis.
Appendix O. MPS students who completed degree requirements

Cardinali, Keith. Enhancement and stabilization of a stormwater retention basin, Salina, New York. (M. Dovciak)
Joseph, Debra. (T. Nakatsugawa and J. Hassett)
Kolwaite, Kyle. (M. Lomolino)
O’Brien, Kevin. (S. Teale)
Russo, Gregory. Monitoring and management of emerald ash borer (*Agrilus planipennis*) in the Finger Lakes Region and Rochester, NY (M. Fierke)
Xiao, Wei. (S. Teale)
Appendix P. Faculty and Student Awards

FACULTY – DEPARTMENT, COLLEGE, AND SUNY RECOGNITION
Melissa K. Fierke  SUNY-ESF Undergraduate Student Association Best Teacher Award
Melissa K. Fierke  SUNY-ESF Quality of Work Life Presidential Award for Public Service/Outreach
Charles A.S. Hall  SUNY Chancellor’s Award for Excellence in Scholarship and Creative Activities
Gregory G. McGee  SUNY-ESF Undergraduate Student Association Best Advisor Award
Kimberly L. Schulz  SUNY-ESF Exemplary Researcher Award

FACULTY – REGIONAL, NATIONAL AND INTERNATIONAL RECOGNITION
Charles A.S. Hall  Association for the Study of Peak Oil and Gas Matthew R. Simmons/M. King Hubbert Award for Excellence in Energy Education

GRADUATE STUDENTS – DEPARTMENT AND COLLEGE RECOGNITION
Juan Carlos Alvarez-Yepiz  Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
James E. Arrigoni  Leroy C. Stegeman Award
Eric Bauer  ESF Graduate Student Travel Grant
Silvia Saldivar Bellassai  ESF Graduate Student Travel Grant
Jessica Bouchard  1st place (tie), SUNY ESF Spotlight on Research poster session
Andrew Brainard  ESF Graduate Student Travel Grant
Andrew S. Brainard  Dr. Samuel Grober ’38 Graduate Fellowship
Shannon Buckley  ESF Graduate Student Association Travel Grant
Elaina Burns  ESF Graduate Student Travel Grant
Anna Calderon  ESF Graduate Student Travel Grant
Kean Clifford  Alumni Association Memorial Scholarship (Honorable Mention)
Derek Crane  ESF Graduate Student Travel Grant
Derek P. Crane  Robert L. Burgess Graduate Scholarship in Ecology
Maureen Durkin  ESF Graduate Student Travel Grant
Chris Foelker  ESF Graduate Student Association Travel Grant
Lewis Grove  SUNY-ESF Graduate Student Association Excellence in Teaching Award
Daniel J. Gurdak  Wilfred Dence Scholarship
Jeremy A. Hayward  Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
William Helenbrook  ESF Graduate Student Travel Grant
Adam Hoffman  3rd place, SUNY ESF Spotlight on Research poster session
Anna Stewart Ibarra  EFB Outstanding Doctoral Student
Georgia R. Keene  Leroy C. Stegeman Award
Alison R. Kocek  Maurice and Annette Alexander Wetlands Research Award
Monica Bibiana Berdugo Moreno  Edwin H. Ketchledge Scholarship
Laurel J. Nowak-Boyde  Betty Moore Chamberlaine Memorial Award
Emily Ogburn  ESF Graduate Student Travel Grant
Michael S. Parisio  John and Etta Simeone Scholarship
Matthew J. Regan  Maurice and Annette Alexander Wetlands Research Award
Alexander J. Smith  EFB Outstanding Doctoral Student

GRADUATE STUDENTS – REGIONAL AND NATIONAL RECOGNITION
Juan Carlos Alvarez-Yepiz  Ecological Society of America Plant Population Ecology Section Travel Award
Michelle Avis  Garden Club of America 2012 Francis M. Peacock Scholarship
Michelle Avis  Northeast Bird Conservation Conference Travel Grant
Michelle Avis  The Goldenrod Foundation Equipment Grant
Ceili Bachman  Edna Bailey Sussman Foundation Fellowship
Silvia Saldivar Bellassai  Sequoia Park Zoo grant
Elaina Burns  The River Otter Alliance grant
Elaina Burns  SUNY Potsdam Walker Fellowship
Jonathan Cale  Northeastern States Research Cooperative Graduate Research Grants
Jenna Carlson  Edna Bailey Sussman Foundation Fellowship
Anand Chaudhary  Edna Bailey Sussman Foundation Fellowship
Joelle Chille  Edna Bailey Sussman Foundation Fellowship
Thomas Evans  Edna Bailey Sussman Foundation Fellowship
Daniel Gurdak  Society of Wetlands Scientists Student Research Grant
Danielle Marie Hurley  Edna Bailey Sussman Foundation Fellowship
Georgia R. Keene  Entomological Society of America Annual Meeting, 2nd place, poster presentation in the Plant-Insect Ecosystem section
Stewart LaPan  Edna Bailey Sussman Foundation Fellowship
Jill Mandel  Sigma Xi Grant-in-Aid of Research
Michael O’Brien  Northeastern States Research Cooperative Graduate Research Grants
Jay Ward Wason III  Edna Bailey Sussman Foundation Fellowship
Patrick Raney  The A.V. Stout Fund/The Norcross Wildlife Foundation, Inc. grant
Stephanie Smith  Rosen Fellowship

UNDERGRADUATE STUDENTS – DEPARTMENT, COLLEGE, AND SUNY RECOGNITION

Lauren V. Alteio  Savel B. Silverborg Memorial Award
Katy Austin  Alumni Association Memorial Scholarship (Honorable Mention)
Jaime R. Barrett  Graduate of SUNY ESF Undergraduate Honors Program
Kimberly Basil  Graduate of SUNY ESF Undergraduate Honors Program
Ernest J. Borcherdt  Distinguished Biology Scholar Award – Conservation Biology
David Bullis  3rd place, SUNY ESF Spotlight on Research poster session
Amy Chianucci  Graduate of SUNY ESF Undergraduate Honors Program
Matthew M. Cleere  Graduate of SUNY ESF Undergraduate Honors Program
Kialey M. Day  Izen Ratzlaff Award
Shelby A. Delgado  Graduate of SUNY ESF Undergraduate Honors Program
Tiffany L. Dellaventura  Graduate of SUNY ESF Undergraduate Honors Program
Megan Rae Devan  Patricia ’78 and Jeff ’77 Morrell Scholarship
Megan Rae Devan  Chun-Juan K. Wang Honor Award
Mary C. Downey  Phyllis Roskin Memorial Award
Mary C. Downey  Izen Ratzlaff Award
Martin C. Holdrege  Distinguished Biology Scholar Award – Environmental Biology
Martin C. Holdrege  Distinguished Biology Scholar Award – All Majors
Martin C. Holdrege  Graduate of SUNY ESF Undergraduate Honors Program
David A. Keiter  Ralph T. King Memorial Award
David A. Keiter  Alumni Association Memorial Scholarship (Senior class)
David A. Keiter  Distinguished Biology Scholar Award – Wildlife Science
David A. Keiter  Graduate of SUNY ESF Undergraduate Honors Program
Eugene Law  Graduate of SUNY ESF Undergraduate Honors Program
Vincent J.A. Mangino  Ralph T. King Memorial Award
Erin T. Moody  Graduate of SUNY ESF Undergraduate Honors Program
Madeline M. O’Connor  Graduate of SUNY ESF Undergraduate Honors Program
Christina M. Olivier  Joseph & Ruth Hasenstab Memorial Scholarship
Ronnie J. Ortiz  Distinguished Biology Scholar Award – Biotechnology
Kristin L. Pasquino  Distinguished Biology Scholar Award – Natural History & Interpretation
Kristin L. Pasquino  Graduate of SUNY ESF Undergraduate Honors Program
Louise Potter  Distinguished Biology Scholar Award – Forest Health
Teressa M. Pucyloowski  Graduate of SUNY ESF Undergraduate Honors Program
Daniel E. Symonds  Graduate of SUNY ESF Undergraduate Honors Program
Jennifer Szuchia Sun  Graduate of SUNY ESF Undergraduate Honors Program
Mariah S. Taylor 1st place, SUNY ESF Spotlight on Research poster session
Mariah S. Taylor Distinguished Biology Scholar Award – Aquatic & Fisheries Science
Aya Yamamoto Graduate of SUNY ESF Undergraduate Honors Program

UNDERGRADUATE STUDENTS – REGIONAL & NATIONAL RECOGNITION

Katy Austin EPA GRO Undergraduate Fellowship
ESF Chapter TWS NYS TWS Quiz Bowl (members: Dave Keiter, Peter Iacono, Vincent Mangino, E.J. Botchert) Champions
ESF Chapter TWS TWS Northeast Student Conclave Quiz Bowl Champions
ESF Chapter TWS TWS National Quiz Bowl, Second Place
David Keiter Roosevelt Wild Life Station at SUNY-ESF Best Poster Award, Northeast Association of Fish and Wildlife Agencies meeting in Saratoga Springs
David Keiter P.F. English Award (for outstanding wildlife undergraduate in the Northeast), Northeast Section of TWS (last awarded to ESF student in 1994)
Adrianne Traub Northeast SARE Farmer Grant
Appendix Q. New York Natural Heritage Program
2012-13 Publications, Presentations and Service

Publications


Papers Submitted, In Review, Pending Decision


Papers/Posters Presented at Science Meetings

Dean, J.M. 2012 (Poster). iMapInvasives. Natural Areas Association Annual Conference. Norfolk, VA.
Dean, J.M. 2012 (Presentation). Standardizing invasive species treatment and monitoring data across local and state scales. Natural Areas Association Annual Conference. Norfolk, VA.


Evans, D.J. April 2013. Protected Area Data: What’s in it for your Program? Oral presentation at NatureServe Annual Conference - Biodiversity Without Boundaries, Baltimore, MD.

Evans, D.J., G. Knight and J. Keith. Perspectives from Programs Incorporating Invasive Species. Joint oral presentation at NatureServe Annual Conference - Biodiversity Without Boundaries, Baltimore, MD.


Kinal, B.T. 2012 (Presentation). Development and Management of New York Protected Areas Database (NYPAD), New York State’s conservation lands and open space database. Organization of Fish and Wildlife Information Managers. Austin, TX.

Kinal, B.T. 2012 (Presentation). Multiple Approaches to Leveraging Mobile Technologies for Field Data Collection. Organization of Fish and Wildlife Information Managers. Austin, TX.

Kinal, B.T. 2012 (Presentation). Development and Management of New York Protected Areas Database (NYPAD), New York State’s conservation lands and open space database. Natural Areas Conference. Norfolk, VA.


Unfunded Service to Professional Societies and Organizations
Chaloux, A. Member and Co-Chair - Joint National Steering Committee, Partners in Amphibian and Reptile Conservation (July 2012 - present).
Ring, R. New York Flora Association, Board of Directors (since 2009), Awards Committee, Field Trip Committee, Conservation Committee. Re-elected to board for 3 year term, May 2013.
Young, S. 2013-present. Vice President of the Board, New York Flora Association.
Young, S. Organizer Capital District Friday Field Group.

Funded Service to Governmental Agencies, Public Interest Groups, etc
Dean, J.M. 2012 (Invited Presentation). Online tools for sharing invasive species management data. USGS Invasive Species Interest Group. Webinar.
Dean, J.M. 2012 (Invited Presentation). Update on the NYS Invasive Species Database. CCE Invasive Species In-service Conference. Ithaca, NY.
Evans, D.J. 2007 – present. Member, New York State Invasive Species Advisory Committee.
Evans, D.J. 2013. Member, NatureServe Board of Directors.
Evans, D.J. March 2013. Participated in Hart’s Tongue Fern meeting organized by NYS OPRHP, Syracuse, NY.
Howard, T. 2012-present. in Cornell's Climate Change Program Work Team.
Howard, T. 2012-present. Participant in a Work Group in support of research planning for NYSERDA's Environmental Research Program with a primary goal to provide collaborative review and direction for an update to the 2007 Plan.
Ring, R. March 2013. Participated in Hart’s Tongue Fern meeting organized by NYS OPRHP, Syracuse, NY.


White E. Member, Steering Committee Appalachian Landscape Conservation Cooperative Stream Classification System.

White, E. Member, Steering Committee Conservation Assessment of Odonata (Dragonflies and Damsselflies) in the Northeast Region and Project Manager.


Young, S. March 2013. Participated in Hart’s Tongue Fern meeting organized by NYS OPRHP, Syracuse, NY.

iMapInvasives Training Sessions presented by various NYNHP Staff:
- APIPP Lake Volunteers (July session). Online. 2012.
- NYS DEC Lands&Forest Interns. Albany, NY. 2013

**Presentations to the Public**


Howard, T. 2013. Alpine Zone Vegetation in the Adirondack Park. Presentation to the Adirondack Park Agency Board Members at the February 14, 2013 Board meeting.
Howard, T. 2013. New York State Freshwater Conservation Blueprint Project. Presentation to the NYSDEC Habitat Protection Staff at their annual statewide staff meeting, March 28, 2013.
Howard, T. April, 2013. Presentation to Kohler Environmental Center students and faculty on the New York Natural Heritage Program, with a focus on our research on alpine systems and climate change, wind turbine siting, and connectivity assessments. Choate Rosemary Hall, Wallingford, CT.
Ring, R. June 2013. Field Trip to Bonaparte Swamp and Fitzgerald Pond, Lewis County for NY Flora Association.
White, E. June 2013. Dragonfly and Damselfly Workshop for Rensselaer Land Trust Members and the Public. Dyken Pond Environmental Education Center, Grafton, NY.
Young, S. June 2013. Long Island Invasive Plant Species Talk to Town of Huntington Park Stewards.
Young, S. March 2103. Invasive Plant Species in NY. Presentation to Adirondack Mountain Club.
Young, S. October 2012. Invasive Plant Species in NY. Presentation to the Long Island Botanical Society.

Miscellaneous Publications and Outreach Activities and Materials
Hartwick College. 2012 (CD and online video). Promotional video for biology program at college featuring field collaboration and training led by Julie Lundgren NYNHP, Tom Hughes OPRHP, Project Watershed, and faculty.