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

Annual Report

Summer 2010
Academic Year 2010-2011

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Introduction

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.

EFB enrollments continue to be very strong with 39% of all undergraduates and 31% of all graduate students at ESF. The undergraduate majors of Environmental Biology, Conservation Biology, and Wildlife Sciences accounted for nearly 75% of the over 600 undergraduates in EFB (26%, 24%, and 23%, respectively). Among EFB’s 12 graduate areas of study, about 32% of the students are in Ecology, 23% in Fish and Wildlife Management, and 22% in Conservation Biology. Over 50% of EFB’s graduate students are working towards an M.S. degree with 41% in the Ph.D. program and the remainder in MPS programs.

Among the various types of recognition that EFB’s undergraduates received last year, the most prestigious recognition went to Wildlife Sciences major Jennifer Ma who received the SUNY Chancellor’s Award for Student Excellence. The ESF Chapter of The Wildlife Society held onto its title of the Northeastern TWS Quiz Bowl Champions. The ESF team consisted of EFB undergraduates Jonah Rothleder, Mickey Pardo, Dave Keiter, and Deanna Russell. The Chapter also organized the first annual “Beast Feast” to help support their participation in such events. Department, College, SUNY-wide, regional, and national recognition of EFB students this past year is listed in Appendix P.

Over $30,460 in awards were given out to students in May at EFB’s annual spring celebration and awards ceremony, held before the College’s Convocation activities. These funds are a result of gifts from alumni, and friends and past faculty of EFB. We were able to give out a new graduate student award this year, the Edwin H. Ketchledge Scholarship, because of generous support by alumni, in memory of Dr. Edwin Ketchledge (’49, ’50) who passed away last summer, twenty-five years after retiring from EFB. We are also now able to make a significant annual graduate award because of a generous donation from the late Dr. Samuel Grober (’38).

After many years of discussion and debate, the undergraduate curricula in EFB will now include a two semester Diversity of Life course, typically taken during sophomore year. Diversity of Life will be a broad overview to the groups of organisms covered separately in numerous EFB courses, with an emphasis on species of local, national, and international conservation significance. This course will be overseen by Dr. Alex Weir, with assistance from Instructional Support Specialist Kim Adams, and team taught by many EFB faculty. Additionally, EFB offered two courses during ESF’s first summer session (besides courses at the Cranberry Lake Biological Station): Flora of Central New York (taught by Visiting Instructor, Michael Hough) and Genetics lecture and lab (taught by Visiting Instructor, Will Helenbrook).

EFB submitted nearly 30% (totaling $15,779,818) of all grant proposals from all academic and non-academic units at ESF. The average amount per proposal was $209,300. Drs. Whipps, Gibbs, Newman, Fernando, Farrell, Kimmerer, and Mitchell accounted for over $10 million of these submitted proposals. As of end of April, about 45% of EFB proposals were funded (for $2,826,426), the highest percentage of all units. Proposals for over $7,700,000 are still pending decision. Of the nearly $13,000,000 of expenditures made this past year from
funded grants at ESF, EFB accounted for over $4,500,000 of these expenditures. Drs. Farrell, Gibbs, Teale, Powell, Leopold, and Mitchell spent about half of this total for EFB.

This past academic year, Dr. Larry Abrahamson (Director of Salix Consortium and Senior Research Associate in the Departments of Environmental and Forest Biology and Forest and Natural Resources Management), Dr. Bill Porter (Professor and Director of the Adirondack Ecological Center), and Professor Andy Saunders (Research Associate and Associate Director for Educational Outreach, Roosevelt Wildlife Station) retired. Larry and Andy maintain an active base in Illick while Bill accepted the Boone and Crockett Club Professorship in Wildlife Conservation at Michigan State University in Lansing.

Four new faculty joined EFB during this period: Drs. Lee Newman, Beth Folta, Jonathan Cohen, and Sadie Ryan. Lee earned her Ph.D. in microbiology and molecular genetics from Rutgers University and Robert Wood Johnson Medical School and came to us from Brookhaven National Laboratory. She is teaching Molecular Techniques and Cell Biology and specializes in phytoremediation. Just before coming to ESF last August Beth finished her Ph.D. in Science Education from North Carolina State University and is anchoring EFB’s Natural History and Environmental Interpretation programs. Among Beth’s research interests are using educational games and augmented reality to increase user interests in the outdoors. Jonathan earned his Ph.D. in wildlife ecology from Virginia Tech (where he also was a post doc) and will be teaching the undergraduate wildlife habitats and populations course and graduate offerings. Much of his research is focused on threatened and endangered species. Sadie will help to anchor ESF’s new undergraduate program in Environmental Health. She earned her Ph.D. from the University of California at Berkeley and was a post-doc at the National Center for Ecological Analysis and Synthesis. Sadie’s research examines disease transmission in populations of African primates and other species.

Five faculty members, Drs. John Farrell, Charlie Hall, Robin Kimmerer, Dylan Parry, and Bill Powell, took sabbatical leaves. John’s sabbatical included a trip to Lyon, France where he worked at the University of Lyon and Cemagref Institute which focuses on large river restoration. He also visited important ecological sites and gave seminars at the Institut national de la recherché agronomique, Ecologie et Santé des Ecosystèmes in Renne, France. Charlie spent his sabbatical in Argentina doing research and teaching on energy issues, and sampling the trout streams in this country. Robin was awarded three writing residencies (The Blue Mountain Center in the Adirondacks, the Shotpouch Residency in the Oregon Coast Range and the Sitka Center for Art and Ecology on the Oregon Coast) whose support and facilities enabled her to finish her book manuscript entitled Braiding Sweetgrass: Restoring Reciprocity with the Good Green Earth. Dylan worked on a number of manuscripts during his leave. During his sabbatical leave, Bill incorporated many small trips and presentations about his chestnut research, while seeking advice about techniques (both lab and field), regulatory issues, and feedback on public opinion. His activities should greatly advance his efforts to restore the American chestnut tree to the forests of eastern North America.

Two books were published by EFB faculty. Drs. John Castello and Steve Teale published Forest Health: An Integrated Perspective (Cambridge University Press), which is a compilation of chapters authored primarily by ESF faculty. Dr. Dietland Muller-Schwarze published The Beaver: Its Life and Impact (2nd ed., Cornell University Press).

Dr. Guy Baldassarre is revising Ducks, Geese and Swans of North America with a target date of this fall for manuscript submission to the publisher. Dr. Martin Dovciak, who recently replaced Dr. Dudley Raynal’s teaching responsibilities, has revised EFB 535 (formerly
Systematic Botany) to Flowering Plants: Diversity, Evolution, and Systematics and EFB 445/645 (formerly Plant Ecology) to Plant Ecology and Global Change. Dr. John Farrell is co-PI on a new $1.47 million NSF grant to renovate aquatic facilities on the main campus and at TIBS, which he continues to direct. John is responsible for overseeing construction activities for the new lab at TIBS. Dr. Danny Fernando was Director of EFB’s graduate program (for the fourth year) and is building a research program to examine the genetic diversity of rare ferns species, including the American hart’s-tongue fern.

Dr. Melissa Fierke again taught General Biology I (Organismal Biology and Ecology, EFB 101), last year to over 260 students. Melissa also works closely with the NY-DEC and collaborators at Cornell and the USDA-Ag and Research Station as well as cultivating other professionals to help with emerald ash borer research and management as new infestations throughout New York are discovered. Besides focusing on revamping the Natural History and Interpretation program and courses, Dr. Beth Folta was a coPI on three grant proposals totaling $950,762 and presented two papers at international conferences. Dr. Jacqui Frair took on the role of the Wildlife Science Curriculum Coordinator and received the Undergraduate Student Association’s Distinguished Teacher Award this spring. Jacqui is also engaging in issues regarding the effects of energy extraction activities on wildlife in the northeast, in particular in response to the emerging issue of rapid growth in hydraulic fracturing wells. Additionally, Jacqui is the new Associate Director of the Roosevelt Wildlife Station.

Dr. James Gibbs was named Director of the Roosevelt Wildlife Station at ESF; he continues a productive advising relationship with the Galapagos National Park to help orchestrate ecological surveys by park guards of poorly known islands to address park information needs for management decision-making and has assisted the Galapagos Conservancy (an NGO) to develop a program on information management for use by all management institutions in the Galapagos archipelago. James also works closely with collaborators on two Altai projects to generate financial support for Russian colleagues combating wildlife poachers in Siberian Altai. Dr. Charlie Hall was featured on the Discovery Channel and a national NPR program on climate, and has been working on numerous writing projects.

Besides getting five refereed papers accepted for publication, Dr. Tom Horton continues teaching General Ecology (EFB 320), last fall to the largest class ever (278 students). Dr. Don Leopold continued to chair the department, taught 160 students in Dendrology (EFB 336), the largest enrollment since he started teaching this course in 1985, and spent substantial time on for four different campus building projects and planning processes, especially the new Academic Research Building (ARB, the future home of EFB) and rehabilitation of Illick greenhouses, roof, and facade. Currently, Phase One of the ARB will be finished in 2015 when about 1/3 of the EFB faculty and graduate students will move into this new facility. The remaining faculty, graduate students, and staff will move when the second Phase is finished (currently, undetermined date).

Dr. Karin Limburg was promoted to Professor and continues to publish significant research papers and influence management of fisheries worldwide. Dr. Greg McGee was promoted to Assistant Professor and continues to improve aspects of the General Biology labs to better build student capabilities in scientific inquiry, communication and laboratory skills. Stacy McNulty was the lead instructor for Winter Mammalian Ecology and became Associate Director of the AEC. While Dr. Myron Mitchell continues to maintain a vigorous research program with more than $1.4 million in grants, he spends a substantial portion of his time on SUNY wide efforts, including being a member of SUNY Research Foundation Board (elected to Vice-Chair
in January) and as a member of the SUNY Distinguished Professors Committee. Dr. Jim Nakas continues his efforts to strengthen ESF’s relationships with local companies.

Dr. Tsutomu Nakatsugawa provided significant administrative support to the department and college by serving as chair of EFB’s Promotion and Tenure Committee and as chair of the IACUC (Institutional Animal Care and Use Committee). Besides her teaching and service duties, Dr. Lee Newman had two reviewed papers and one book chapter published, one peer reviewed paper in press and two submitted, was co-PI on a five year USDA grant ($1.49M), PI on a contract from NASA ($73K) and an equipment grant from Perkin Elmer ($68K), and transferred in an NSF grant ($278 K) on which she is the PI. Dr. Roy Norton published 10 journal papers and continued as EFB’s undergraduate curriculum director. Dr. Bill Powell incorporated the i-clicker into his large genetics course (EFB 307, 215 students) and maintains a significant research program on transgenic American chestnut and elm.

Dr. Neil Ringler served another year as Dean (now Vice Provost for Research) for the Office of Research Programs, taught Aquatic Entomology and Comparative Anatomy courses, and led a successful effort to acquire $1.47 million from NSF to rebuild aquatic labs in Illick Hall, as a new Center for Integrated Research and Teaching in Aquatic Sciences (CIRTAS). Dr. Kim Schulz is co-PI of the NSF CIRTAS grant and will be the first Director of CIRTAS. She continues to teach very popular courses in Limnology and Marine Ecology. Dr. Bill Shields again taught Principles of Animal Behavior (EFB 480) to about 100 students, and honors seminars to the freshman and sophomore honors students. Additionally, Bill recently was named Director of the Undergraduate Honors Program because of his ongoing commitment to this group of students.

Dr. Scott Turner is providing substantial campus leadership on producing online course content; he taught EFB 200 Physics of Life for the second time and in conjunction with the video production service of ITS, there is now a catalogue of roughly 60 videos available (on ESF’s YouTube channel and iTunesU outlet) which have grown in quality and scope. Dr. Alex Weir continued as Director of the Cranberry Lake Biological Station and with mycological research on his NSF PEET grant. Alex also organized and led international field experiences students with trips to Costa Rica and Ireland. Dr. Chris Whipps again taught General Biology II (Cell Biology and Genetics, EFB 103) which had 175 students. Chris also maintains an active research program which includes research projects for diagnostic development of mycobacteria in laboratory zebrafish and an examination of the diversity and genetics of myxozoan parasites. Professor Emerita, Dr. Chun Wang, finished her decades-long project, Wood-inhabiting Microfungi (Molds) of New York, a 238 page volume that is available on-line at: http://www.esf.edu/nymicrofungi/.

Appendix A lists EFB faculty during the 2010-2011 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.

Building(s)

Following the $1.47 million award from the National Science Foundation to Drs. Ringler, Schulz, Farrell, Whipps, and Leopold, much 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). Besides funding the construction of a new lab and enhanced remote data access at the Thousand
Islands Biological Station, most of the funding will be used to construct controlled environment rooms and other research spaces on the second floor of Illick (currently rooms 227, 228, 231 through 237 Illick).

Significant effort went into the planning for the new Academic Research Building which will be the new building for the Department. Because funding is in hand for only half of the project, the new ARB will be built in phases, with Phase 1 expected to be completed by 2015. The most lab-intensive EFB faculty (approximately 11) and their graduate students will move into the Phase 1 building upon completion. Currently, there is no schedule for Phase 2.

### Teaching

There were no significant changes in any of EFB’s seven undergraduate majors this past academic year. One of the most important changes in EFB course offerings in many academic years was the implementation of Dr. Scott Turner’s EFB 200, *Physics of Life* during the fall ’09 semester. The past two years nearly 250 students have already taken this alternative to physics courses taught at Syracuse University, freeing up a substantial number of accessory instruction credit hours for ESF and EFB undergraduates to use at Syracuse University for other courses. Part of this launch involved delivering electronic course materials through a variety of media. Dr. Turner produced, along with the staff at ESF’s Instructional Technology Service, dozens of short instructional videos, which are available to students on iTunesU and the ESF channel on YouTube.

Perhaps the most significant change in course offerings for all departments was the implementation of summer courses besides those already authorized for EFB’s and FNRM’s summer field programs. Although many scheduled courses were cancelled due to insufficient enrollment, EFB offered Flora of Central New York (taught by Visiting Instructor, Michael Hough) and Genetics lecture and lab (taught by Visiting Instructor, EFB Ph.D. student Will Helenbrook) during Maymester. It is likely that numerous additional courses will be offered next summer following the success of these two courses.

At the graduate level, Drs. Karin Limburg and Melissa Fierke convened a weekly seminar for new EFB graduate students during the spring semester. This seminar served as an orientation (what to find where, etc.), and introduced important elements of grad school (e.g., proposal writing; forming a committee; developing research ideas) and aspects of professional life (e.g., examples of research by faculty and advanced grad students; how to go through a job interview; how to be peer-reviewed). Additionally, participants in the course coalesced into a cohort, bridging across the diverse sub-disciplines within the EFB graduate program. By the end of the semester, students produced a wiki guide to EFB/ESF graduate student life, the EFB Graduate Student Handbook, which can be found at: [http://efb-grad-handbook.wikidot.com/](http://efb-grad-handbook.wikidot.com/)

### 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>
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<tbody>
<tr>
<td>Bongarten</td>
<td>311</td>
<td>Principles of Evolution</td>
<td>192</td>
</tr>
<tr>
<td>Castello</td>
<td>217 (0.5)</td>
<td>Peoples, Plagues, &amp; Pests</td>
<td>159</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>303 (0.5)</td>
<td>Intro Environmental Microbiology</td>
<td>59</td>
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<tr>
<td>340</td>
<td>Forest and Shade Tree Pathology</td>
<td>48</td>
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<tr>
<td>345 (0.5)</td>
<td>Forest Health</td>
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<tr>
<td>Cohen</td>
<td>Study Design and Analysis for Field Bio.</td>
<td>6</td>
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<tr>
<td>Dovciak</td>
<td>445/645 Plant Ecology &amp; Global Change</td>
<td>42</td>
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<td></td>
<td>535 Plant Ecology: Diversity, Evol., &amp; Syst.</td>
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<tr>
<td>Farrell</td>
<td>388 Ecology of Adirondack Fishes</td>
<td>14</td>
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<td>Fernando</td>
<td>132 Orientation Seminar in Biotechnology</td>
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<td></td>
<td>326 Diversity of Plants</td>
<td>75</td>
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<td>(BTC)</td>
<td>497 Research Design and Prof. Develop.</td>
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<td></td>
<td>427/627 Plant Developmental Biology</td>
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<td>Fierke</td>
<td>101 General Biology Lecture I</td>
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<td>796 (0.5) EFB Core Course</td>
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<td>Folta</td>
<td>405 Literature of Natural History</td>
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<td>416/616 Intro/Environ. Interpretation</td>
<td>46</td>
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<td>417/617 Adv. Perspectives of Interpretation</td>
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<td>Frair</td>
<td>491 Applied Wildlife Science</td>
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<td>496 Wildlife Field Techniques</td>
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<td>797 Landscape Ecology</td>
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<td>Gibbs</td>
<td>384 Field Herpetology</td>
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<td>413 Intro to Conservation Biology</td>
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<td>419 Problem Solving in Cons. Biology</td>
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<td>485 Herpetology</td>
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<td>Hall</td>
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<td>518 Systems Ecology</td>
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<td>Horton</td>
<td>320 General Ecology</td>
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<td>428/628 Mycorrhizal Ecology</td>
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<td>Kimmerer</td>
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<td>Leopold</td>
<td>327 (0.5) Adirondack Flora</td>
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<td>336 Dendrology I</td>
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<td>Limburg</td>
<td>487/687 Fisheries Science and Management</td>
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<td>488/798 Fisheries Science Practicum</td>
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<td>496/796 Wine Appreciation: From Grapes to Glass</td>
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<td>500 The Hudson River Watershed</td>
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<td>Lomolino</td>
<td>444 Biodiversity and Geog. Nature</td>
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<td>644 Biogeography</td>
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<td>797 Conservation Biogeography</td>
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<td>483</td>
<td>Mammal Diversity</td>
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<td>General Biology Lab I</td>
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<td>104</td>
<td>General Biology Lab II</td>
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<td>Orientation Seminar: EFB</td>
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<td>202</td>
<td>Ecological Monitor. Biodiversity Assess.</td>
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<td>484/684</td>
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<td>Ecological Biogeochemistry</td>
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<td>Hydrology/Biogeochemistry Seminar</td>
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<td>301</td>
<td>Latin for Scientists</td>
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<td>303 (0.5)</td>
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<td>400/600</td>
<td>Toxic Health Hazards</td>
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<td>Topics in Environmental Toxicology</td>
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<td>Molecular Techniques</td>
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<td>325</td>
<td>Cell Biology</td>
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<td>Senior Synthesis</td>
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<td>Invertebrate Zoology</td>
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<td>Ecology &amp; Mgt. Invasive Species</td>
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<td>Principles of Genetics</td>
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<td>Principles of Genetics Lab</td>
<td>212</td>
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<tr>
<td>385</td>
<td>Comparative Vertebrate Anatomy</td>
<td>47</td>
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<td>554</td>
<td>Aquatic Entomology</td>
<td>14</td>
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<tr>
<td>424/624</td>
<td>Limnology: Study of Inland Waters</td>
<td>57</td>
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<td>524</td>
<td>Limnology Practicum</td>
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<tr>
<td>796</td>
<td>Topics in Aquatic Ecology</td>
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<td>109</td>
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<td>Animal Behavior</td>
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<td>486</td>
<td>Ichthyology</td>
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<tr>
<td>523 (0.5)</td>
<td>Tropical Ecology</td>
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<td>Peoples, Plaques, and Pests</td>
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<td>345 (0.5)</td>
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<td>200</td>
<td>Physics of Life</td>
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<td>462/662</td>
<td>Animal Physiology: Environ. &amp; Ecol.</td>
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<td>------------------</td>
<td>-------------</td>
<td>--------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Weir</td>
<td>342</td>
<td>Fungal Diversity and Ecology</td>
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<tr>
<td></td>
<td>440/640</td>
<td>Mycology</td>
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<tr>
<td></td>
<td>500</td>
<td>Forest Biology Fieldtrip - Russia</td>
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<td>Whipps</td>
<td>103</td>
<td>General Biology Lecture II</td>
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<tr>
<td></td>
<td>496/796</td>
<td>Emerging Diseases of Fish &amp; Wildlife</td>
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<tr>
<td></td>
<td>797</td>
<td>Infectious Diseases</td>
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**Courses by Instructional Support Specialists, Adjuncts, & Visiting Instructors**

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<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
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<td>Plant Propagation</td>
<td>8</td>
</tr>
<tr>
<td>J. Folta</td>
<td>390</td>
<td>Principles of Wildlife Management</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>482</td>
<td>Ornithology</td>
<td>58</td>
</tr>
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<td>Giegerich</td>
<td>381</td>
<td>Vertebrate Museum Techniques</td>
<td>11</td>
</tr>
<tr>
<td>Hager</td>
<td>496</td>
<td>Ecology Adirondack Insects</td>
<td>8</td>
</tr>
<tr>
<td>Hocutt</td>
<td>496</td>
<td>Issues in Mgt. &amp; Conflict Resolut.</td>
<td>16</td>
</tr>
<tr>
<td>Holmes</td>
<td>296</td>
<td>Human Sexuality</td>
<td>56</td>
</tr>
<tr>
<td>Johnson (0.5)</td>
<td>796</td>
<td>Adaptive Peaks Seminar</td>
<td>14</td>
</tr>
<tr>
<td>Joy</td>
<td>215</td>
<td>Interpret. Science Through Art</td>
<td>75</td>
</tr>
<tr>
<td>Kirby (0.5)</td>
<td>797</td>
<td>Adaptive Peaks Seminar</td>
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</tr>
<tr>
<td>Marshall (0.5)</td>
<td>516</td>
<td>Ecosystems</td>
<td>24</td>
</tr>
<tr>
<td>Murphy (0.5)</td>
<td>516</td>
<td>Ecosystems</td>
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</tr>
<tr>
<td>Murphy</td>
<td>522</td>
<td>Ecology, Resources, and Development</td>
<td>5</td>
</tr>
<tr>
<td>Peach Lang</td>
<td>493</td>
<td>Wildlife Habitats and Populations</td>
<td>48</td>
</tr>
<tr>
<td>Raney</td>
<td>414</td>
<td>Senior Synthesis in Con. Biol.</td>
<td>42</td>
</tr>
</tbody>
</table>

**Course teaching load summary by faculty members**

The following data are from the Faculty “Workload” Report (5/24/11) 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 here.

Dr. Horton had the highest teaching workload (1274 total credit hours), followed by Drs. McGee (1021), Gibbs (921), Fierke (883), and Powell (736). EFB faculty were responsible for 13,489 credit hours (versus 15,269 last reporting period) of campus instruction. Another 1,579 credit hours were delivered by Visiting Instructors and others (versus 544 in last reporting period).

### 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>21/48</td>
<td>15/5</td>
<td>1151/34</td>
<td>1274 (1187/87)</td>
</tr>
<tr>
<td>McGee (2)</td>
<td>0/0</td>
<td>46/0</td>
<td>973/2</td>
<td>1021 (1019/2)</td>
</tr>
<tr>
<td>Gibbs (3)</td>
<td>29/57</td>
<td>128/0</td>
<td>699/8</td>
<td>921 (856/65)</td>
</tr>
<tr>
<td>Fierke (4)</td>
<td>1/31</td>
<td>47/0</td>
<td>792/12</td>
<td>883 (840/43)</td>
</tr>
<tr>
<td>Powell (5)</td>
<td>9/22</td>
<td>3/6</td>
<td>696/0</td>
<td>736 (708/28)</td>
</tr>
<tr>
<td>Turner (6)</td>
<td>0/1</td>
<td>4/0</td>
<td>633/12</td>
<td>650 (637/13)</td>
</tr>
<tr>
<td>Teale (7)</td>
<td>13/65</td>
<td>20/0</td>
<td>516/27</td>
<td>641 (549/92)</td>
</tr>
<tr>
<td>Whipps (8)</td>
<td>6/21</td>
<td>12/7</td>
<td>531/6</td>
<td>583 (549/34)</td>
</tr>
<tr>
<td>Bongarten (9)</td>
<td>0/0</td>
<td>0/0</td>
<td>576/0</td>
<td>576 (576/0)</td>
</tr>
<tr>
<td>Leopold (10)</td>
<td>10/49</td>
<td>31/0</td>
<td>465/13</td>
<td>568 (506/62)</td>
</tr>
<tr>
<td>Castello (11)</td>
<td>6/12</td>
<td>9/0</td>
<td>519/5</td>
<td>551 (534/17)</td>
</tr>
<tr>
<td>Shields (12)</td>
<td>21/11</td>
<td>24/6</td>
<td>425/4</td>
<td>491 (470/21)</td>
</tr>
<tr>
<td>Lomolino (13)</td>
<td>0/11</td>
<td>11/8</td>
<td>411/40</td>
<td>481 (422/59)</td>
</tr>
<tr>
<td>Newman (14)</td>
<td>32/15</td>
<td>5/0</td>
<td>350/25</td>
<td>427 (387/40)</td>
</tr>
<tr>
<td>Stewart (15)</td>
<td>5/54</td>
<td>17/10</td>
<td>268/6</td>
<td>360 (290/70)</td>
</tr>
<tr>
<td>Fernando (16)</td>
<td>24/19</td>
<td>24/0</td>
<td>273/3</td>
<td>343 (321/22)</td>
</tr>
<tr>
<td>Schulz (17)</td>
<td>34/30</td>
<td>16/14</td>
<td>181/38</td>
<td>313 (231/82)</td>
</tr>
<tr>
<td>Ringer (18)</td>
<td>15/57</td>
<td>10/0</td>
<td>211/17</td>
<td>310 (236/74)</td>
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<td>Frair (19)</td>
<td>17/59</td>
<td>31/3</td>
<td>144/41</td>
<td>295 (192/103)</td>
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<tr>
<td>Weir (20)</td>
<td>8/29</td>
<td>29/0</td>
<td>186/4</td>
<td>256 (223/33)</td>
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<td>Hall (21)</td>
<td>21/35</td>
<td>9/6</td>
<td>135/41</td>
<td>247 (165/82)</td>
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<tr>
<td>Nakas (22)</td>
<td>25/33</td>
<td>6/0</td>
<td>172/2</td>
<td>238 (203/35)</td>
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<td>Dovciak (23)</td>
<td>4/47</td>
<td>0/0</td>
<td>84/69</td>
<td>204 (88/116)</td>
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<tr>
<td>Nakatsugawa (24)</td>
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<td>5/0</td>
<td>138/47</td>
<td>195 (146/49)</td>
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<tr>
<td>Limburg (25)</td>
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<td>10/0</td>
<td>99/36</td>
<td>190 (119/71)</td>
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<td>Norton (26)</td>
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<td>175 (175/0)</td>
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<td>Parry (27)</td>
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<td>108/33</td>
<td>145 (108/37)</td>
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<td>Mitchell (28)</td>
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<td>3/18</td>
<td>66/24</td>
<td>111 (69/42)</td>
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<tr>
<td>Farrell (29)</td>
<td>14/57</td>
<td>0/0</td>
<td>33/0</td>
<td>104 (47/57)</td>
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<tr>
<td>Kimmerer (30)</td>
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<td>0/9</td>
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<td>81 (59/22)</td>
</tr>
<tr>
<td>McNulty (31)</td>
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<td>36/9</td>
<td>66 (39/27)</td>
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<td>3/3</td>
<td>47 (31/16)</td>
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<tr>
<td>Cohen (33)</td>
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*rank out of all faculty; 1 highest, 33 lowest
### Teaching Load Statistics by Adjunct Faculty, Emeriti, Instructional Support Specialists, AEC Staff, Visiting Instructors, etc.

<table>
<thead>
<tr>
<th>Name</th>
<th>Undergraduate Loads</th>
<th>Graduate Loads</th>
<th>Total Loads</th>
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<td>Arrigoni</td>
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<td>0/14</td>
<td>0/0</td>
</tr>
<tr>
<td>Brunner</td>
<td>0/11</td>
<td>0/0</td>
<td>0/11</td>
</tr>
<tr>
<td>Ettinger</td>
<td>9/0</td>
<td>5/0</td>
<td>24/15</td>
</tr>
<tr>
<td>J. Folta</td>
<td>0/0</td>
<td>0/0</td>
<td>556/0</td>
</tr>
<tr>
<td>Giegerich</td>
<td>0/0</td>
<td>0/0</td>
<td>22/0</td>
</tr>
<tr>
<td>Hager</td>
<td>0/0</td>
<td>0/0</td>
<td>0/24</td>
</tr>
<tr>
<td>Hocutt</td>
<td>0/0</td>
<td>0/0</td>
<td>48/0</td>
</tr>
<tr>
<td>Holmes</td>
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<td>0/0</td>
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</tr>
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<td>Johnson</td>
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<td>0/7</td>
<td>0/7</td>
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<td>Lucas</td>
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<td>Marshall</td>
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<td>3/0</td>
<td>36/12</td>
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<tr>
<td>Murphy</td>
<td>0/0</td>
<td>3/0</td>
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<tr>
<td>Peach Lang</td>
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<tr>
<td>Raney</td>
<td>0/0</td>
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</table>

### Undergraduate Student Advising Loads

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

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Undergraduate Advising Loads</th>
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<td>Dovciak</td>
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<td>Frair*</td>
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<td>Gibbs*</td>
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<td>Hall</td>
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<td>Kimmerer</td>
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<td>Limburg</td>
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<tr>
<td>Lomolino</td>
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<td>Mitchell</td>
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<td>Nakatsugawa</td>
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<td>Turner</td>
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<tr>
<td>Weir</td>
<td>28</td>
</tr>
<tr>
<td>Whipps</td>
<td>26</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 is that after many years of discussion, the department decided to require a two-semester Diversity of Life course (EFB 210
Diversity of Life I, EFB 211 Diversity of Life II) of students in all majors (except Biotechnology, requires only one semester) beginning Fall 2011. The EFB faculty generally felt that many undergraduates were not getting sufficiently broad education about all life forms. Without any significant new resources to offer this course which will have large enrollments, the Department will be challenged to make this course the quality experience that is desired. Dr. Alex Weir will oversee the course which involves about one dozen faculty. Instructional Support Specialist Kim Adams will coordinate the labs and be one of the lab instructors.

**Undergraduate students enrolled in each EFB major**

Enrollment numbers change throughout the year, especially after December and May graduations, e.g., there were 622 EFB undergraduate students enrolled in classes during the fall ’10 semester and 589 registered for the spring ’11 semester. The total number of undergraduates in EFB represented nearly 40% of all full-time undergraduates (1615) at ESF in the fall. Fall ’10 undergraduate enrollments (and percent of total) in each major were:

- Environmental Biology: 163 (26%)
- Conservation Biology: 150 (24%)
- Wildlife Science: 156 (23%)
- Aquatic and Fisheries Science: 57 (9%)
- Biotechnology: 49 (8%)
- Natural History and Interpretation: 37 (6%)
- Forest Health: 21 (3%)

**Total**

622 undergraduates in EFB

**Listing of awards and recognition**

Frair, Jacqueline: Undergraduate Student Association Distinguished Teacher Award
Kimmerer, R.: Appointed to rank of SUNY Distinguished Teaching Professor

**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.

EFB faculty published an average of 2.09 (vs. 2.15 and 2.25, previous two years) refereed journal papers per person this past year (range of 0 to 10), and have an additional 1.44 (vs. 1.36 and 1.31, previous two years) refereed publications in press.

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 largest abstract and citation database containing both peer-reviewed research literature and quality web sources. Scopus includes over 18,000 titles from more than 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.

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:

\[A \text{ scientist has index } h \text{ if } h \text{ of [his/her] } N_p \text{ papers have at least } h \text{ citations each, and the other } (N_p - h) \text{ papers have at most } h \text{ citations each.}\]

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 shows the science citation indices (analyses done by S. Weiter) for each faculty member, using Scopus for columns 1, 2, and 3, and 5; and, Web of Science for columns 5 and 6. Using the number of citations for 2001 to 2010 as determined by Scopus, Dr. Karin Limburg had the highest number of citations followed by Drs. Myron Mitchell, James Gibbs, Mark Lomolino, and Tom Horton. 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 Mark Lomolino. Applying the Web of Science citation index for EFB faculty last year yielded similar results although the ranked order is slightly different.
Dr. Myron Mitchell had the highest SCOPUS h-index, followed by Drs. James Gibbs, Mark Lomolino, Karin Limburg, and Tom Horton. H-index trends generally were similar for the Web of Science h-index over the period of 1985 to 2011.

<table>
<thead>
<tr>
<th>Name</th>
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<th>SCOPUS # Citations '06-'10</th>
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</table>
Summary of grant activity

From May 1, 2010 to April 30, 2011, EFB submitted 29.2% of all proposals (of 258 total) submitted by all units at ESF, versus 32.0% during the previous reporting period. These EFB proposals represent 20.4% of the $77,245,865 amount for all proposals submitted by all units to the ESF Office of Research Programs. The average amount per EFB proposal was $209,300 (versus $198,848 the previous reporting period). Nearly 45% of EFB proposals submitted during this period (for $2,826,426) have already been awarded, with another 39.4% still pending (for $7,730,611).

The proposal submission activity of each faculty member for the 12 month period ending April 30, 2011 follows. Dr. J. Gibbs had the highest credited number of proposals submitted, followed by M. Fierke, D. Leopold, C. Whipps, and L. Newman. Dr. C. Whipps had the highest credited dollar amount of proposals submitted, followed by J. Gibbs, L. Newman, D. Fernando, and J. Farrell.

Proposal Activity Summary by PI/CoPI
(12-Month Period ending 4/30/11)

<table>
<thead>
<tr>
<th>Name</th>
<th>Credited* Number</th>
<th>Credited Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrahamson, Lawrence</td>
<td>0.76</td>
<td>$771,151 (9**)</td>
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<td>Baldassarre, Guy</td>
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<tr>
<td>Castello, John</td>
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<tr>
<td>Cohen, Jonathan</td>
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<tr>
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<td>Ryan, Sadie</td>
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<td>$23,718 (25)</td>
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* 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 \( \frac{2}{4} = 50\% \) credit, and each CoPI and respective Faculty would receive \( \frac{1}{4} = 25\% \) 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, 36 lowest**

Appendix F lists all active grants of each EFB faculty. For the 12-month period ending 4/30/11, EFB accounted for 33.3% of all active sponsored research projects at ESF (of 380 total, all units) and 35.2% of the $12,841,064 of all sponsored program expenditures by all units at ESF. These numbers are similar to those of the last reporting period. The average amount of expenditure per project was $35,755 versus $39,139 in the last reporting period.

Sponsored program expenditure activity by PI/coPI among EFB faculty for the 12-month reporting period ending 6/30/10 follows. Dr. Gibbs had the highest credited number of program expenditures, followed by Drs. Limburg, Mitchell, Teale and Leopold. Dr. Farrell had the highest credited dollar amount of program expenditures, followed by Drs. Gibbs, Teale, Powell, and Leopold.

### Sponsored Program Expenditure Activity Summary by PI/CoPI
(12-Month Period ending 4/30/11)

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<th>Name</th>
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<th>Credited Amount</th>
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<td>$52,725 (21)</td>
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<tr>
<td>Kimmerer, Robin</td>
<td>6.00</td>
<td>$177,984 (11)</td>
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</table>
Leopold, Donald  7.10  $273,310 (5)
Limburg, Karin  8.07  $230,808 (8)
Lomolino, Mark  1.00  $811 (29)
McGee, Gregory  0.00  $0 (31)
McGrath, Kathy  2.17  85,602 (20)
McNulty, Stacy  3.67  $111,461 (14)
Mitchell, Myron  8.00  $271,475 (6)
Nakas, James  5.66  $150,716 (12)
Nakatsugawa, Tsutomu  0.00  $0 (31)
Norton, Roy  0.00  $0 (31)
Parry, Dylan  0.67  $23,756 (24)
Porter, William  5.95  $206,097 (9)
Powell, William  7.00  $296,538 (4)
Ringler, Neil  1.78  $250,459 (7)
Schulz, Kimberly  3.13  $130,357 (13)
Shields, William  0.00  $0 (31)
Stewart, Donald  0.00  $0 (31)
Teale, Stephen  7.25  $311,651 (3)
Turner, Scott  2.00  $96,645 (18)
Weir, Alexander  1.00  $108,724 (16)
Whipps, Christopher  1.33  $30,696 (23)

*rank by credited amount; 1 highest, 38 lowest

**Patents and Patent Applications**

**Listing of Awards and Recognition**

Kimmerer, Robin W. Distinguished Research Mentor Award, Traditional Knowledge section, Ecological Society of America

Limburg, Karin: Laura Randall Schweppe Lecturer in Marine Science, University of Texas Marine Science Institute, March 14-18, 2011.

Norton, Roy: Lifetime honorary member of Hungarian Academy of Sciences (elected May 2000)

Norton, Roy: Mite species named as patronym: *Zetorchella nortoni* (Caloppiidae) – named by Ermilov, Sidorchuk & Rybalov (2010), Russia.

**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 of EFB generates more print in the Syracuse Post-Standard than all other academic departments combined, and all other offices at ESF. Most of the dozens of local newspaper articles of this past year are posted in the main foyer of Illick. This media attention comes from beyond central New York.

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)
Horton, T.: NSF

Summary of journal editorial board service
Acarina (Moscow): R. Norton (Advisory Board)
Acarologia (Paris): R. Norton
Acta Zoologica Hungarica: R. Norton
Bio-Complexity: S. Turner
Ecological Economics: C. Hall
Ecological Economics Review: K. Limburg
Ecology and Society: K. Limburg
Ecology of Freshwater Fish: N. Ringler
Estuaries and Coasts: K. Limburg
Experimental & Applied Acarology: R. Norton
Folia Entomologica Mexicana: R. Norton
Folia Entomologica Hungarica: R. Norton
Frontiers in Ecology and the Environment: K. Limburg
International Journal of Acarology: R. Norton
International Journal of Phytoremediation: L. Newman (co-Editor-in-Chief)
International Journal of Plant Developmental Biology: D. Fernando
Marine and Coastal Fisheries: K. Limburg (Guest)
Mycorrhiza: T. Horton
Northeastern Naturalist: D. Leopold
Systematic & Applied Acarology (China): R. Norton
Number of journal manuscripts reviewed by faculty (#journals/total #manuscripts reviewed; excludes numerous reviews of NSF, EPA, USDA, McIntire-Stennis, etc. proposals)

- Castello, J.: 0
- Cohen, J.: 7/7
- Dovciak, M.: 3/5
- Farrell, J.: 4/5
- Fernando, D.: 7/12
- Fierke, M.: 3/5
- Folta, E.: 1/1
- Frair, J.: 3/4
- Gibbs, J.: ?
- Hall, C.: 3/5
- Horton, T.: 5/6
- Kimmerer, R.: 1/1
- Leopold, D.: 2/2
- Limburg, K.: 6/7
- Lomolino, M.: “approx. 15…”
- Nakas, J.: 0
- Nakatsugawa, T.: 1/1
- Newman, L.: 8/17
- Norton, R.: 15/27
- Parry, D.: 4/6
- Powell, W.: 4/4
- Ringler, N.: 2/2
- Ryan, S.: 7/10
- Schulz, K.: 3/3
- Shields, W.: 3/5
- Teale, S.: 5/5
- Turner, S.: 9/11
- Weir, A.: 1/3
- Whipps, C.: 7/17

Listing of Awards and Recognition
Frair, Jaqueline: 2011 Student Chapter Advisor of the Year – National Chapter of The Wildlife Society (to be received at annual meeting in fall 2011)

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) assisting Onondaga County with daily operations of the Carpenter Brook Fish Hatchery. Dr. Don Stewart, coordinator of the Aquatic and Fisheries Science major, supervised the majority of these students who gained outstanding professional experience while having key roles in operating this fish hatchery. Without this student assistance, the Hatchery was scheduled to close due to county budget shortfalls.

EFB faculty indicate that the following courses have specific service learning components:

**EFB 496, Wildlife Techniques**, 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 geese 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 524, Limnology Practicum**, had a significant service learning component for the first time this year. Students worked with a local lake association (Song Lake Association) 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 co-operation with homeowners, and culminating in a scientific poster session and reception in 12 Illick Hall during finals week that was open to the public and attended by approximately 18 members of the Song Lake Association and community. The projects resulted in a database of water quality and species presence data that will be useful to the homeowners in lake management decisions. The students also preliminarily identified two rare macrophyte (pond weed) plants in the lake as well as an endangered fish, the lake chubsucker, which has not been seen in NY for 60 years (my lab is following up on these discoveries). After the ESF poster presentation, the students were invited by a larger lake association, COFOKL, of which the Song Lake Association is a member, to present their posters at a meeting in January after the term ended, and 6 students brought the class posters to this kettle lake association's meeting and met with the regional lake association members. 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, 30 (31 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 145 (versus 149 previous year) graduate students officially enrolled in our department. Of these, about 52% (54% previous year) were in our M.S., 6% (8%) M.P.S., and 41% (38%) 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>Field</th>
<th>Percentage (Previous Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology</td>
<td>32% (33%)</td>
</tr>
<tr>
<td>Fish and Wildlife Biology and Management</td>
<td>23% (19%)</td>
</tr>
<tr>
<td>Conservation Biology</td>
<td>22% (23%)</td>
</tr>
<tr>
<td>Plant Science and Biotechnology</td>
<td>6% (7%)</td>
</tr>
<tr>
<td>Entomology</td>
<td>3% (5%)</td>
</tr>
<tr>
<td>Environmental Interpretation</td>
<td>3% (3%)</td>
</tr>
<tr>
<td>Forest Pathology and Mycology</td>
<td>3% (3%)</td>
</tr>
<tr>
<td>Chemical Ecology</td>
<td>3% (3%)</td>
</tr>
<tr>
<td>Environmental Physiology</td>
<td>1% (2%)</td>
</tr>
<tr>
<td>Applied Ecology</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Plant Biotechnology</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Undeclared</td>
<td>0% (&lt;1%)</td>
</tr>
</tbody>
</table>
Graduate student national fellowships/awards (new awards only; all graduate student awards listed in Appendix P)

Juan Carlos Alvarez-Yepiz  CONACyT Doctoral Fellowship
James Arrigoni  Garden Club of America Fellowship in Ecological Restoration
Meredith Atwood  National Science Foundation Graduate Research Fellowship
Meredith Atwood  Sigma Xi Grant-in-Aid of Research
Stephanie Figary  Sigma Xi Grant-in-Aid of Research
Jacob Gillette  National Science Foundation Doctoral Dissertation Improvement Grant
Daniel Gurdak  National Geographic Society Young Explorers Grant
Daniel Gurdak  Fulbright IIE Award
Joie Matillano  Rufford Small Grants Foundation award
Joie Matillano  Russell E. Train Education for Nature Fellowship
Joie Matillano  Conservation Leadership Programme grant
Patrick Raney  Society of Wetlands Scientists Student Research Grant
Yazmin Rivera  Honorable Mention, Ford Dissertation Fellowship
Cynthia Watson  Sigma Xi Grant-in-Aid of Research

Graduate recruitment efforts

There were 169 graduate applications to EFB for spring ’11 (23) and fall ’11 (146) matriculation, versus 155 in the last reporting period. This total number of applications is the largest in the history of the Department. In total, EFB has recruited at least 47 new (i.e., since August 2010) graduate students for this coming academic year (versus 27 last year). As of mid July 2011, at least 36 new graduate students (i.e., “accepted/coming” applicants) will matriculate this fall ’11 semester (versus about 20 for fall semester 2010). Ten additional students have been accepted but have not yet indicated whether they will matriculate this fall. Four applicants were accepted but have deferred their matriculation for one or two semesters. Another nine applicants are still being considered for matriculation this fall. Seven new graduate students matriculated in January 2011 and four in the summer ‘11. Last year we had a substantial decrease in number of new graduate students, despite a similar number of applications, which was likely due to the loss of four faculty (Drs. Brunner, Porter, Schlaepfer and Professor Saunders) for the fall 2010, who collectively would have likely recruited about another ten new graduate students. The addition of new faculty (Drs. Cohen, Folta, Newman, and Ryan) to replace those recently lost was likely the single most important reason for the significant number of applications and new graduate students entering EFB this fall.

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>Faculty Name</th>
<th>Number of Graduate Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baldassarre</td>
<td>3</td>
</tr>
<tr>
<td>Castello</td>
<td>2</td>
</tr>
<tr>
<td>Dovciak</td>
<td>6.5</td>
</tr>
<tr>
<td>Farrell</td>
<td>8.5</td>
</tr>
<tr>
<td>Fernando</td>
<td>3</td>
</tr>
<tr>
<td>Fierke</td>
<td>5</td>
</tr>
<tr>
<td>Frair</td>
<td>6</td>
</tr>
<tr>
<td>Gibbs</td>
<td>9</td>
</tr>
<tr>
<td>Hall</td>
<td>11.5</td>
</tr>
<tr>
<td>Horton</td>
<td>7</td>
</tr>
<tr>
<td>Kimmerer</td>
<td>6</td>
</tr>
<tr>
<td>Leopold</td>
<td>15.5</td>
</tr>
<tr>
<td>Limburg</td>
<td>5</td>
</tr>
<tr>
<td>Lomolino</td>
<td>2</td>
</tr>
<tr>
<td>McGee</td>
<td>0</td>
</tr>
<tr>
<td>McNulty</td>
<td>5</td>
</tr>
<tr>
<td>Mitchell</td>
<td>2.5</td>
</tr>
<tr>
<td>Nakas</td>
<td>5</td>
</tr>
<tr>
<td>Nakatsugawa</td>
<td>1.5</td>
</tr>
<tr>
<td>Norton</td>
<td>0</td>
</tr>
<tr>
<td>Parry</td>
<td>2.5</td>
</tr>
<tr>
<td>Powell</td>
<td>3.5</td>
</tr>
<tr>
<td>Ringler</td>
<td>7.5</td>
</tr>
<tr>
<td>Schulz</td>
<td>4.5</td>
</tr>
<tr>
<td>Shields</td>
<td>5.5</td>
</tr>
<tr>
<td>Stewart?</td>
<td></td>
</tr>
<tr>
<td>Teale</td>
<td>8</td>
</tr>
<tr>
<td>Turner</td>
<td>1</td>
</tr>
<tr>
<td>Weir</td>
<td>2.5</td>
</tr>
<tr>
<td>Whipps</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Courses having TA support and enrollment in each

<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>265</td>
<td>2</td>
</tr>
<tr>
<td>102</td>
<td>General Biology Lab I</td>
<td>252</td>
<td>7</td>
</tr>
<tr>
<td>103</td>
<td>General Biology Lecture II</td>
<td>175</td>
<td>3</td>
</tr>
<tr>
<td>104</td>
<td>General Biology Lab II</td>
<td>166</td>
<td>6</td>
</tr>
<tr>
<td>120</td>
<td>Global Environment (spring)</td>
<td>100+</td>
<td>3</td>
</tr>
<tr>
<td>132</td>
<td>Orientation Seminar</td>
<td>112</td>
<td>0.5</td>
</tr>
<tr>
<td>200</td>
<td>Physics of Life</td>
<td>118</td>
<td>0.5</td>
</tr>
<tr>
<td>215</td>
<td>Interpret. Science Through Art</td>
<td>75</td>
<td>1</td>
</tr>
<tr>
<td>217</td>
<td>Peoples, Plagues, &amp; Pests</td>
<td>159</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 (ESF)</td>
<td>Intro to Geospatial Information Systems</td>
<td>?</td>
<td>1</td>
</tr>
<tr>
<td>303</td>
<td>Intro Environ. Microbiology</td>
<td>59</td>
<td>2</td>
</tr>
<tr>
<td>307/308</td>
<td>Principles of Genetics</td>
<td>215</td>
<td>5</td>
</tr>
<tr>
<td>311</td>
<td>Principles of Evolution</td>
<td>192</td>
<td>1.5</td>
</tr>
<tr>
<td>320</td>
<td>General Ecology</td>
<td>278</td>
<td>5</td>
</tr>
<tr>
<td>325</td>
<td>Cell Biology</td>
<td>101</td>
<td>1</td>
</tr>
<tr>
<td>326</td>
<td>Diversity of Plants</td>
<td>75</td>
<td>2</td>
</tr>
<tr>
<td>336</td>
<td>Dendrology</td>
<td>160</td>
<td>2</td>
</tr>
<tr>
<td>340</td>
<td>Forest &amp; Shade Tree Pathology</td>
<td>48</td>
<td>0.5</td>
</tr>
</tbody>
</table>
352 Principles of Forest Entomology 76 2
355 Invertebrate Zoology 42 1
385 Comparative Vertebrate Anatomy 47 1.5
390 Principles of Wildlife Management 81 3

401/601 Molecular Biology Techniques 20 1
413 Introduction to Conservation Biology 96 1.5
415 Biogeochemistry 22 0.5
416/616 Intro. Environmental Interpretation 46 1
417/617 Advanced Perspectives of Interpretation 29 1
419 Problem Solving in Conserv. Biol. 45 0.5
424 Limnology 57 0.5
428/628 Mycorrhizal Ecology 22 1
445/645 Plant Ecology 42 1
462/662 Animal Physiol.: Environ. & Ecol. 93 0.5
480 Principles of Animal Behavior 99 3
482 Ornithology 58 1
483 Mammal Diversity 51 2
485 Herpetology 88 1
486 Ichthyology 71 2
487 Fisheries Science and Management 23 1
491 Wildlife Ecol. & Manage. Practicum 37 1
493/693 Wildlife Habitats/Populations 48 2

516 Ecosystems 24 2
518 Systems Ecology 20 1
525 Limnology Practicum 24 1
554 Aquatic Entomology 16 0.5

**Governance Structure**

**Components:**
Chair (D. Leopold)

- 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
- Supervisor for about 35 faculty, one administrative assistant, two Instructional Support Specialists and other staff
- Related: promoting faculty and staff within and outside of the department and facilitating the many good ideas that regularly emanate from faculty
- 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
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, A. Weir)
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, T. Horton; Danielle Baker and Yazmin Rivera, 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
- Keyboard Specialist 2 (Cariann Linehan)
- Keyboard Specialist 1 (Joanne Rappleyea)

Undergraduate Curriculum Director (R. Norton)

Undergraduate Curriculum Coordinators (by major)
- Environmental Biology (R. Norton)
- Aquatic and Fisheries Science (D. Stewart)
- Biotechnology (W. Powell)
- Conservation Biology (J. Gibbs)
- Forest Health (J. Castello)
- Natural History and Interpretation (E. Folta)
- Wildlife Science (J. Frair)

Graduate Program Director (D. Fernando)
Duties: assigns faculty reviewers to over 100 applications each year, makes recommendation to the Graduate Office on each application (Chair decides on allocation of GAs)
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; T. Nakatsugawa)
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 three main sources, i.e., (1) state allocations; (2) the SUNY Research Foundation (RF) research incentives funds; and, (3) development funds through the College Foundation. A summary of the allocations from each source and expenditures follows.

**State budget allocations:** $74,500 initial total allocation, reduced to $67,550 (10% reduction in OTPS in November; versus total allocation of $69,576 previous year); excludes search committee allocations from the Provost, CLBS, AEC, Biotechnology, Tree Pest Info Service, and Academic Equipment Replacement allocations – amounts of these shown below)

Initial Allocation (September 20, 2010): $74,500 ($69,500 OTPS; $5000 TS)

Planned Expenditures*:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices (main, faculty, staff, grads)</td>
<td>$15,000*</td>
</tr>
<tr>
<td>Computers:</td>
<td>$1,000</td>
</tr>
<tr>
<td>Photocopy:</td>
<td>$5,000</td>
</tr>
<tr>
<td>Mileage/Travel:</td>
<td>$3,000</td>
</tr>
<tr>
<td>Repairs:</td>
<td>$2,500</td>
</tr>
<tr>
<td>Building, facilities, exhibits:</td>
<td>$3,250</td>
</tr>
<tr>
<td>Seminars and receptions</td>
<td>$8,500</td>
</tr>
<tr>
<td>Chairman Operating (over expenditures, all categories)</td>
<td>$4,500* (0)</td>
</tr>
<tr>
<td>Greenhouse</td>
<td>$3,500*</td>
</tr>
<tr>
<td>Faculty subaccounts and additional requests:</td>
<td>$23,250</td>
</tr>
<tr>
<td>Temporary services</td>
<td>$5,000</td>
</tr>
</tbody>
</table>

*with 10% reduction in OTPS, these categories were reduced to amount shown

Biotechnology accounts: $10,500
Tree Pest Info Service account: $2,000
Academic Equipment Replacement: $34,000 (versus $42,500 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 reception for graduating students, their families and friends, and faculty and staff was $4,431, a substantial increase in what was spent in previous years because in past years breakfast-type foods were appropriate whereas with all department receptions held during the lunch period this year, food costs were much greater. Another unanticipated large expenditure was the $2000 spent to cover the shortfall of funding for new chairs in Illick’s main conference room (8 Illick).

**SUNY RF departmental Research Incentives funds** ($34,405 allocated 9/14/10; carryover of $7,569 balance from previous year; total available $41,974. An additional $4,826 was allocated to the EFB Department Chair Account).

Expenditures (by general categories):

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual faculty requests</td>
<td>$2,153</td>
</tr>
<tr>
<td>(equipment, supplies, travel, misc.)</td>
<td></td>
</tr>
<tr>
<td>Development activities</td>
<td>$2,000</td>
</tr>
<tr>
<td>Department licenses, registrations, memberships</td>
<td>$1,000</td>
</tr>
<tr>
<td>Department equipment, supplies</td>
<td>$1,500</td>
</tr>
<tr>
<td>Department repairs</td>
<td>$11,000</td>
</tr>
<tr>
<td>Adaptive Peaks Seminars</td>
<td>$7,328</td>
</tr>
<tr>
<td>Other Seminars</td>
<td>$2,000</td>
</tr>
<tr>
<td>Receptions, workshops</td>
<td>$3,000</td>
</tr>
<tr>
<td>Support of student initiatives</td>
<td>$1,500</td>
</tr>
<tr>
<td>One CLBS undergraduate research fellowships</td>
<td>$2,500</td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>$33,981</td>
</tr>
</tbody>
</table>

Balance (July 11, 2011) $7,993
(an additional $801 was spent from the $4,826 Chair allocation for similar purposes)

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. Nearly one-quarter (about $8,000) of our RI allocation was spent on unanticipated autoclave repairs, with no guarantee that any of these machines will continue to work for any length of time. But since a new autoclave is estimated to cost about $50,000 and there are no funds to purchase one, we will continue to hope that the remaining, barely working autoclaves can be repaired. The Department’s Millipore water filter required service and repair at a cost of $3,380. The lack of service contracts on essential equipment (historically, a decision made by the College) continues to make budget planning extremely difficult. Another, unanticipated, large department expenditure were fees ($1,424) related to immigration matters.

**Development funds** ($49,225 budgeted for ’10-’11)

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, Lanier Memorial, Silverborg Memorial, and Patricia D. and Jeff J. Morrell Scholarship, and Dr. Samuel Grober ’38 Graduate Fellowship. Beginning this past Academic Year, we have a new award, The Edwin H. Ketchledge Scholarship, in part from the generous donations made by many of Dr. Ketchledge’s former students. Because funds were absent in the Phyllis Roskin Memorial and Ralph T. King awards, the faculty contributed money so that these important awards could be made to highly deserving students. At the annual EFB Spring Celebration and Awards Ceremony prior to the ESF Convocation, $30,460 was given out to students. The list of all awardees is in Appendix P.

Because of recent endowment losses, departments were advised in early 2009 to use available college foundation funds decide whether to leave some of these funds for this year. Consequently, at the beginning of this past academic year EFB had $37,875 (versus $109,213 for ’07-'08 before these substantial endowment losses). Of this, $31,525 was available for student scholarships.

EFB had an additional $3,800 in the Dence Memorial account and $2,550 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.

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 to students and support for attending professional meetings and field trips offered in our program, e.g., to Russia, Ireland, Australia, and Africa).

**Student Learning Outcomes Assessment** (with assistance from Dr. R. Norton, EFB Undergraduate Curriculum Director and Dr. C. Whipps)

The current 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 smaller 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.

The 2009-2010 academic year was the first during which the assessment plans approved
by Middle States for each of our seven undergraduate majors were implemented. For each
major, data associated with assessment of individual learning outcomes are of two types: (1)
those generated within particular courses, through specific embedded questions or assessment
rubrics for particular assignments, and (2) final grades for selected courses.

Many curricular improvement of the past year were initiated this past year, at least in
part, by our ongoing program assessments. At this time, instructors have submitted type-1 data
for courses relevant to assessing all majors. For tools that factor in final course grades (type-2
data) we required restricted access to student records, in order to download the data. We are
pleased that we can now download final course grades for this purpose. We developed a general
structure for an “omnibus” spreadsheet that incorporates each assessment tool for each major,
along with various weighting factors. Most of these tools are organized around Leikert-scale
evaluations. Some of the important intra-course data are being collected, but the mechanisms for
automating this data collection were linked to the unfinished omnibus. The multiple turnovers in
the key secretarial position, i.e., the person who would have solicited and entered the data, were
a significant setback in finishing this spreadsheet. Once finished, which we anticipate to be done
by end of this fall semester, the spreadsheet will be easily populated with assessment data as they
are annually reported to a central location.

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

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The Department plans to create Standard Operating Procedures for each major, listing what courses are being assessed and exactly what needs to come out of every class. These SOPs would allow any instructor to know up front if anything special is required. These SOPs are now being prepared by the Curriculum and Course Assessment Committee working with the coordinator of each EFB major. In addition, an assessment manual is being written for each major, explicitly outlining what is required for each course from which assessment data are derived. For courses in which final grades are required, the instructors would need little advance warning, but where embedded questions or assignments are part of the assessment, this requirement needs to be clearly explained. These directions will be critical when instructors change or elements of the course shift, so that the assessment tools remain in place, are recorded and transmitted to the coordinators appropriately.
Objectives 2010-2011

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;
5. 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. working 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 primary foci of the ‘10-‘11 academic year were to: (1) seek approval of the Environmental Health undergraduate major (which will be in Environmental Science); (2) seek approval of a new sequence of courses, Diversity of Life; and (3) engage with ESF’s Physical Plant and Ellenzweig (and subcontractors) in the intensive planning process for the new Academic Research Building.

This past spring, the proposed Environmental Health major that Dr. John Castello and a college-wide group of faculty drafted was approved for implementation. We have hired the first (Dr. S. Ryan) of three anticipated faculty to develop and deliver these programs and the first course will be offered this fall. After much debate, the Department approved the course descriptions for Diversity of Life I and II, which will generally be required of all EFB undergraduate majors.

Objectives 2011-2012

Objectives and relations to strategic plan

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. We also will launch the Diversity of Life courses required of nearly
all undergraduates. Additionally, substantial time will be required to continue planning for the new Academic Research Building, which a portion of EFB will occupy when Phase 1 is completed in 2015. We also hope to take advantage of ESF’s Centennial and dedicate substantial time towards development activities.

Although we were very fortunate to 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.

### 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 spring, 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.

Three 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 11, 2011 we had received 1030 total applications for fall 2011 (freshman + transfer students; vs. 992 last June and 968 in June 2009). We have accepted 444 (vs. 433 and 403 the previous two years) applicants and have received 193 deposits (vs. 185 and 198). Of the total number of applications that we received, 71% were for freshman; about 57% of our deposits are from this group; about 43% of all applicants were accepted. The total number of deposits by EFB major and percent of total for the class entering fall 2011 (in parentheses) are: Aquatic and Fisheries Science, 14 (7% vs. 10% for class entering fall 2010); Biotechnology, 18 (9% vs. 6%); Conservation Biology, 50 (26% vs. 20%); Environmental Biology, 50 (26% vs. 32%); Forest Health, 0 (0% vs. <2%); Natural History and Interpretation, 1 (<1% vs. 1%); and, Wildlife Science, 60 (31% vs. 29%).

### Longer Term Visioning and Planning

The EFB Chair spent an extraordinary amount of time this past year serving on the Core Committee to plan for the new Academic Research Building. Significant planning time was also
devoted to the renovation of the Illick roof (including complete replacement of all greenhouses) and façade, the ESF Facilities Master Plan, and Illick’s Center for Integrated Research in Aquatic Sciences (CIRTAS). Besides these formal campus planning activities, the EFB Chair spends a substantial amount of time advising Physical Plant on campus plantings, which also are very important to EFB’s (and the Department of Landscape Architecture’s) teaching programs. Additionally, a variety of development efforts have been made in support of future, substantial gifts that are hoped to fund at least two endowed chair positions among other important needs.

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, and understaffed Development Office greatly limit the extent to which many significant ideas can be pursued and implemented. However, with the addition of faculty the past five 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 (during reporting period), Education, and Interests

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<th>Name and Title</th>
<th>Degrees</th>
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<td>PhD, Texas Tech University&lt;br&gt;MS, Univ. of Wisconsin&lt;br&gt;BS, Univ. of Maine</td>
<td>Waterfowl and wetland wildlife ecology; shorebird ecology; nongame birds; ornithology</td>
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<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>
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<td><strong>Cohen, Jonathan</strong></td>
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<td>Wildlife ecology and management, population and habitat ecology, threatened and endangered species.</td>
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<td><strong>Dovciak, Martin</strong></td>
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<td>Plant ecology; forest ecology; biodiversity; plant population &amp; community dynamics; spatial ecology; ecosystem management &amp; restoration</td>
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<td><strong>Farrell, John</strong></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>
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<td>PhD, Univ of Alberta, Canada&lt;br&gt;MS, Univ of Philippines&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>
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<td>Forest entomology and forest ecology; impacts of invasives in forested settings with a focus on woodboring insects.</td>
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<td>Conservation biology, ecological monitoring, wildlife management, population biology and conservation genetics</td>
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<td><strong>Hall, Charles A. S.</strong></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>
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<td>Professor</td>
<td>PhD, Ohio State University MS, Ohio State University AB, Rutgers University</td>
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<td>Associate Professor</td>
<td>PhD, SUNY ESF MS, University of Kansas BA, College of St. Rose</td>
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<td><strong>Turner, Scott</strong></td>
<td>Professor</td>
<td>PhD, Colorado State Univ. MS &amp; BA University of California-Santa-Cruz</td>
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<td><strong>Weir, Alexander</strong></td>
<td>Associate Professor</td>
<td>PhD, University of Newcastle upon Tyne BS, University of Bradford, UK</td>
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<tr>
<td><strong>Whipps, Christopher</strong></td>
<td>Assistant Professor</td>
<td>PhD, Oregon State University BS, University of Victoria at Malaspina University-College</td>
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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?”)

Guy A. Baldassarre
Students
A health issue, especially during spring of 2011, derailed my planned teaching that semester, so my student contact inside a classroom was nonexistent. I did advise students in the fall and continued contact through the spring, especially the writing of letters of recommendation. Hope to be back in the classroom this fall.

Department/college
Served on the search committee for Jonathan Cohen

Self
My revision of “Ducks, Geese and Swans of North America” is a landmark undertaking nearing submission to the publisher with a target date of September 2011. After that task, I will likely get back into raising money to support a few graduate students, most likely masters candidates.

John D. Castello
I continue to work hard to enhance the Forest Health major within EFB, of which I am the coordinator. This past year (2010-2011), four students graduated from the major. Despite the losses to graduation, the major appears healthy. We now have approximately 12 students in the major preregistered for the fall semester 2011. EFB 494, a senior synthesis course for forest health majors, is now being taught. Enrollment in EFB 340, Forest and Shade Tree Pathology, has remained at around 50 students. Enrollment in EFB 345-Forest Health, at CLBS has maintained an enrollment of 8-14 students during the past 3-4 years as well. I attribute this increase to enhanced interest in Forest Health at ESF. Enrollment in ‘Peoples, Plagues, and Pests’ (EFB 217) has remained constant with ~ 160 students this past semester.

My textbook on Forest Health, coedited with Dr. S.A. Teale, and published by Cambridge University Press, has now appeared in print. Five research manuscripts have been published, are in press, or in review in refereed journals this past year. A McIntire-Stennis proposal with M. Johnston and S.A. Teale was funded this year, which allows me to continue my research efforts with beech bark disease for the next two years. Two new graduate students and several undergrads will work with me on this project.

Jonathan B. Cohen
Students
I began my career at SUNY-ESF in January, 2011, so this was a very exciting time for me. One of my primary goals was to get to know the department and college, the faculty and of course the students. As I was not teaching an undergraduate course, I decided to interact with at least a small portion of the wildlife majors by getting involved with the student chapter of The Wildlife Society. I attended several meetings and enjoyed learning about the club’s activities and goals and about the students themselves. By the semester’s end I agreed to assume the role of the faculty advisor for the club. I also offered a graduate seminar entitled “If I only knew then: design and analysis considerations for field biology studies.” Although enrollment was light at 6 students, I was thus able to spend a good deal of time with individual
students, assisting them with the class exercises and discussing their graduate projects. One of the students was at the AEC, which gave me the opportunity to get familiar with distance learning technologies. Several graduate students who wished to enroll but had schedule conflicts visited me on the side to talk about their projects as well. I was also pleased to have been invited to serve on several committees. In two of those cases I replaced faculty who left EFB, and in that way obtained my first two experiences as an examiner at dissertation defenses. I also assumed a co-advisor role for Ph.D. candidate Michelle Peach, and began working with her and Dr. Frair to obtain GRA funding, starting in November 2010. Through a collaboration with Conservian, a private nonprofit based in Florida, I recruited my first M.S. student, Maureen Durkin, who was accepted with a teaching assistantship, and I received a $20,000 grant to support her on a GRA for one semester (Spring 2012).

Department/college
To meet my goal of becoming involved in the campus and department community as quickly as possible, I made it a point to attend department and faculty governance meetings and graduate seminars as often as possible. I put myself forth and was recruited to serve on the Research Committee, and my service will begin with a meeting in July. I also accepted requests to serve on two review panels. The first was for the Sussman Foundation internship which required reviewing ~30 proposals and meeting with the other reviewers to select the finalists. The other was for the Burgess Award.

Self
For my own professional development, I continued to wrap up some loose ends (manuscripts) left over from my post-doctoral career. Two were accepted and are in press, and I anticipate one more submitted possibly by the end of the month, but by mid-June at the latest. I also spent three days in the field helping to wrap up a final year of my post-doctoral field work. The aim was also to ensure a sixth year of results that would qualify the project for NSF long term research funding, and I plan on collaborating on a proposal to obtain such funding. I reviewed several manuscripts for various ecological and ornithological journals. I also continued my second year as Chair of the Conservation Committee for The Waterbird Society. I oversaw the preparation and submission of two advocacy letters and organized a symposium for the Society’s annual meeting related to the Gulf Oil Spill. The symposium had 8 speakers and was attended by 25-100 people depending on the particular session, and there was a call for a followup at the next meeting. I have been asked to run for elected Councilor of the Society and agreed. I was asked to join the advisory board for The Goldenrod Foundation, a private conservation nonprofit in southeastern Massachusetts and I attended the first meeting in February. I have also agreed to serve as an advisor to the U.S. Shorebird Conservation Plan by the U.S. Fish and Wildlife Service. Finally, I participated in a weekly discussion group with Dr. Frair and several graduate students in EFB in which we improved our skills at Bayesian statistics (in my case from near zero at the outset).

Martin Dovciak
Students
In the Fall I taught EFB 535—Flowering Plants: Diversity, Evolution, and Systematics (formerly Systematic Botany). Students seemed to enjoy this upper level course with laboratory as suggested by their many positive comments, relatively high rating of 4.6 in the end-of-course surveys, and the increasing enrolment (advanced registration for Fall 2011 is ~100% greater than in previous years). Course details are on a public website ([http://www.esf.edu/efb/dovciak/EFB535.htm](http://www.esf.edu/efb/dovciak/EFB535.htm)). In the Spring I taught EFB 445/645—Plant Ecology and Global Change (formerly Plant Ecology) for the first time under the new course name and description. The enrolment significantly increased in EFB 645 (by ~50% relative to previous years; EFB 445 enrolment did not change). Course details are available on a public website ([http://www.esf.edu/efb/dovciak/EFB445-645.htm](http://www.esf.edu/efb/dovciak/EFB445-645.htm)). In addition to these courses, I gave guest lectures in EFB 326—Diversity of Plants (twice) and in Bio 415/615—Conservation Biology at Syracuse University. I advised 17 undergraduate students (incl. two NSF-UMEB research students) and 7 graduate students (incl. one who graduated with an MPS degree and one who passed doctoral candidacy exams).
served on steering or examination committees for another 8 graduate students (incl. two at Syracuse University), was a faculty leader for the orientation of our incoming freshmen to ESF during the Learning Community Retreat, and co-organized ESF Spotlight on Research showcasing undergraduate and graduate work. My advisees were successful on many fronts this year as suggested by these accomplishments: lead author on a paper published in well-regarded Biological Conservation, lead author on a NSRC grant, two Sussman and one PLACA awards, two Pack Institute awards, a 3rd place among undergraduate posters in ESF Spotlight on Research, a former graduate student hired at the well-regarded Jones Ecological Research Center in Georgia as the lead plant ecology technician, and two former research undergraduates continuing graduate studies at other universities (PhD-University of Miami, MS-SUNY Brockport).

Department/college
My main contributions to the departmental/college national/regional profile were my involvement as a CoPI in a large multi-agency NPS-funded Appalachian Trail Mega-Transect Acid Deposition Effects Study (http://science.nature.nps.gov/im/units/appa/projects/aciddep/aciddeposition.cfm), my collaboration with state agencies such as the New York State Department of Environmental Conservation (in habitat management for the endangered eastern massasauga rattlesnake in Cicero Swamp Wildlife Management Area), and my continued service as a reviewer for major international peer-reviewed journals (5 manuscripts, 3 journals) and funding agencies (German Research Foundation). I contributed within the College by serving on the Committee on Research, Council for Geospatial Modeling and Analysis, and by participating as a founding member in the Beech Working Group and a core faculty member in the Center for Urban Environment. At the departmental level I continued to serve as the Chair for the Selection Committee for the Burgess Graduate Scholarship in Ecology, member of the Graduate Program Advisory Committee, by participating as one of the instructors in the preparation of the new co-taught EFB 210–Diversity of Life I, and by developing EFB greenhouse collections with Terry Ettinger and other faculty members.

Professional Development
Professionally, this was a good year. I published two papers in high-impact journals, one in Ecology Letters (Impact Factor 10.3) as a lead author and one in Biological Conservation (Impact Factor 3.2) as a senior co-author with one of my graduate students. I co-authored three additional manuscripts that were submitted for peer-review, all based on research started at ESF since 2007. I gave two invited research seminars stemming from my work in the Pacific Northwest—at the Utica College and at the USDA Forest Service Forest Sciences Laboratory and Alleghany National Forest, PA. I presented my research also at the Annual Meeting of the Ecological Society of America in Pittsburgh and the Global Change and the World's Mountains Conference in Perth, Scotland, and traveled to Slovakia where I continue collaborative studies of Norway spruce invasions into montane meadows. I continued building my research group which now includes seven graduate students. I have successfully graduated my second masters’ student, advanced to candidacy my first doctoral student, and recruited my second doctoral student. I continued as a CoPI on the NPS-funded Appalachian Trail MEGA-Transect Study, a NSRC grant on Calcium importance for biodiversity, two McIntire-Stennis grants, and as a lead PI on another McIntire-Stennis grant. In addition, I have submitted two new grant proposals to NSRC (one as lead PI, one as a CoPI; both pending). Details about my research group, projects, publications, and teaching are on my lab website (http://www.esf.edu/efb/dovciak).

John M. Farrell

Students
Students continue to receive intensive and diverse field research experiences through their involvement with the program at TIBS. Following a bottom up approach, my staff and I were swarmed by 4-10 year olds during several outreach events with their incredible curiosity during “hands on” displays including native and invasive fishes. I mentored a high school senior, Emily Churchill in an American Fisheries.
Hutton Scholarship – the previous summer she worked 12+ weeks as a TIBS volunteer and shows impressive dedication and ability. We have Emily back this summer as a technician following her first year at Boston University. A team of undergraduates, two of which are funded through EFB as Federal Work Study students, received strong field experiences in our long-term monitoring surveys and by working alongside myself, TIBS staff and our graduate students. Three undergraduates enrolled in EFB 498 and worked in my lab in Illick Hall preparing and processing samples from the summer and they developed papers on aquatic restoration and restoration indicators during the fall and spring term. They developed skills in field taxonomy, in the laboratory and with writing. For the graduate students, Kevin Kapuscinski successfully defended his dissertation and graduated this May, he has begun a Post-doctoral fellowship under my direction at ESF with research on invasive Rudd on the Niagara River. Geof Eckerlin completed his candidacy exam and continues research on the viral hemorrhagic septicemia virus in the St. Lawrence River. I took on three new MS students during this period and all are engaged in research at TIBS. Three of my students brought in significant grants to ESF including a 199K grant to Kapuscinski, Crane and myself and a 16K grant to support research of Brian Henning, a MS candidate. I encouraged graduate students to present at conferences and meetings and they responded with presentations given at the Great Lakes Research Consortium Student-Faculty Conference, the New York American Fisheries Society Conference, among others and several are going to present at Seattle this summer to a National AFS conference.

Department/college
A significant milestone was my service as Chair of the Wildlife Ecologist search committee. Working with the committee (Baldassarre, Frair, Limburg, Stella and grad rep. Williams), the faculty and its Chair was a rewarding experience that led to two hires for EFB. Another significant responsibility has been my work as a Co-PI associated with the successful $1.4M NSF ARRA CIRTAS-TIBS contract to renovate and improve our aquatics facilities. Kim Schulz has played a central role in this process and I have led the TIBS portion of the work. Activities included service on a committee to interview and select an A&E firm (with Physical Plant project manager Boothroyd) and I led a visit to TIBS with the NSF program director and PI Ringler. This has been a lot of work for many people with direct involvement to this project and we are nearly realization of some impressive improvements that will greatly enhance EFB’s capabilities in aquatic and disease research. The TIBS facility is expected to begin laboratory rehabilitation phase this fall. In addition to this process I have been working with the development office and the administration on improvements to TIBS to increase residential and faculty use capability.

Professional/self
My six month sabbatical was a tremendous highlight this period. In the fall semester I worked in Syracuse on grants, an aquatic invasives workshop (with Kim Schulz), and some significant work with NYS DEC, a northern pike spawning habitat rehabilitation project on Onondaga Lake (with Ringler and Leopold) for Honeywell, and in support of my graduate students. After Christmas I went to Lyon, France and worked at the University of Lyon at the lab of Herve Piegay and worked with the Cemagref Institute with Herve Capra with a focus on large river restoration. I also traveled extensively visiting important ecological sites and giving seminars including travel to Renne, France where I met twice with Martin Schlaeper and his colleagues at the Institut national de la recherché agronomique, Ecologie et Santé des Ecosystèmes. I sampled fishes on the Rhone River and met with numerous graduate students and colleagues. These experiences accomplished what I had intended for my sabbatical and the exchanges I had with other scientists and students were exceptionally invigorating. I was invited to return to France in June 2012 to serve as a co-organizer of a major international conference on large rivers and publish its proceedings.
Danilo D. Fernando
Students
This past academic year, I taught Plant Developmental Biology and Plant Diversity, convened the freshman orientation seminar for biotechnology majors, took over the course BTC 497 (Research Design and Professional development), trained several undergraduate students in my lab through independent research and internship, presented invited lectures to other courses, and worked with my three graduate students (1 M.S. and 2 Ph.D.) on various aspects of their research projects, grant/fellowship applications, and poster presentations. In total, at least 135 students have been served under various capacities. Kelly Jaenecke, an undergrad that I trained in the lab and encouraged to write a proposal as part of her independent research, received funding from the Rochester Academy of Sciences to pursue her research on in vitro production of genetically diverse American-hart’s tongue fern through in vitro fertilization. I also have corresponded, interviewed and accepted three new graduate students who will begin their M.S. program this coming fall semester.

Department/college
I served as the Director of our graduate program (for the fourth year) and my major activities included the following: 1) replied to all inquiries about our graduate program (through email, phone, and/or personal visits) on an almost daily basis from several potential applicants and current graduate students, 2) processed a total of 158 applications (23 for spring and 135 for fall) that involved reviewing each application for initial assessment and to designate 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, 3) provided orientation seminars to new graduate students about our graduate program and the new faculty about the graduate application process, 4) served as the department’s representative to the Graduate Council and raised issues regarding problems/suggestions on how to improve the graduate program; I have also shared the ideas and activities of the Graduate School to the department’s graduate committee and faculty, and 5) worked with the Graduate Secretary on the update and improvement of the various facets of the EFB’s Graduate Webpage, graduate application excel file system, and continued the survey on the most effective means of attracting/recruiting graduate students.

Professional
The following are what I consider as significant: 1) I was invited to serve as a panel member to review and deliberate on the proposals submitted to USDA/NIFA on Bioenergy Coordinated Agricultural Project, 2) Publication of the Special Issue on “Plant Development and Evolution” where I served as the Guest Editor, 3) Approval by Cambridge University Press to write a textbook on “Sexual Reproduction in Forest Trees” with Dr. John Owens as co-author. This is an 18-month project that officially started in January 1, 2011, 4) Wrote and submitted seven grant proposals - four as a PI and three as co-PI, and 5) Participation in the iPlant workshop where I learned how to analyze large-scale nucleic acid sequence data using various bioinformatics tools to investigate and annotate genomes, assemble gene models, associate phylogenetic trees, and analyze DNA barcodes.

Melissa K. Fierke
In the fall semester, I taught General Biology for the third year with >260 students. I supervised two graduate TAs, and an undergraduate TA along with their workshops and grading - all went smoothly. I continued to make use of blackboard, posting assignments, quizzes, grades, etc. and contacted students that were doing poorly. I was happy with the end of the course with a 74 class average and class evaluations were similar to last year with a 4.2 and 4.3 for the two lecture sections. I worked with two undergraduates in the spring semester, Liz Keyser and Candi Finger, on data gathered in the summer from our longhorned beetle traps. Liz wrote an excellent paper and presented her findings at the Spotlight on student research on NY longhorned beetle diversity. Candi went through all the specimens and wrote a paper on a little known mecopteran, the earwig scorpionfly. I facilitated two internships in 2010, one was
an urban forestry position with the City of Rochester preparing for emerald ash borer and the other was an alternative energy summary with a student in Environmental Science. I am supervising two internships this summer. One is an ESF student working with the NY-DEC finding and monitoring native digger wasp colonies and the other is a sophomore at SUNY Fredonia who is monitoring traps hung in girdled ash trees in and around Randolph in SW NY for EAB as well as traps in Allegany State Park for Cerambycids. I helped coordinate the Core Course Seminar series this past spring and stepped in to help facilitate Robin Kimmerer’s UMEB seminar in both the fall and the spring.

I am happy with the progress of my current cadre of graduate students. Two of my graduate students, Peter Rockermann and Warren Hellman, defended their thesis research in May and both are in the process of writing and submitting manuscripts. A manuscript that Warren contributed to was recently accepted and is in press and Pete is working on revisions for a manuscript he submitted earlier in the year. Kimberly Dean has written and will be submitting a manuscript shortly on her research during the summer of 2010 on evaluating susceptibility of emerald ash borer parasitoids to a fungus. She has presented this research both orally and in poster form at several venues and most recently got first place in the masters poster division at the North American Forest Insect Work Conference. Kim will be doing a summer internship with the NYDEC on hemlock woolly adelgid as well as pulling soil samples and doing molecular evaluations to identify and then test for virulence against emerald ash borer. Chris Standley’s work on the Sirex noctilio-parasitoid complex is impeccable and has yielded interesting new insights. He has recently submitted a manuscript on a unique cleptoparasitoid he found and was recognized as the Stegeman outstanding masters student in invertebrate studies at ESF. He has presented his findings at several conferences and was featured in the Syracuse Post Standard this past fall. Katie Gerenser received a Sussman fellowship for her work on ecosystem and biomass dynamics associated with the loss of ash in NY state parks. She is doing research in NY state parks in the Great Lakes basin and is sponsored by Melissa Plemmons with NY State Parks.

I’ve continued my outreach efforts giving presentations in and around Syracuse. I pass on outreach opportunities to my graduate students and they are doing an excellent job of taking these on, being enthusiastic and getting our science out there, e.g., Kim presented at a local middle school Career Day on Entomology, Chris, Pete and I manned the entomology display in the ESF booth at the 2010 New York State Fair. I’ve continued to serve as an active part of the ESF Learning Community committee as well as the EFB curriculum committee and the Graduate Program Advisory Committee and I also coordinate two EFB scholarships and reviewed applications for two others. I co-facilitated the EFB Core Course for graduate students with Karin Limburg this past semester. We had the students develop an EFB graduate handbook and implemented a research proposal component, both of which were well-received. Professional development has included attending conferences and presenting my lab’s research. This past spring I organized symposia at the NY Society of American Foresters annual meeting, the Eastern Branch Meeting of the Entomological Society and the North American Forest Insect Work Conference, the premiere forest entomology conference that occurs every five years. I have continued to work closely with the NY-DEC and collaborators with Cornell and the USDA-Ag and Research Station as well as cultivating other professionals (e.g., National Grid and Arborjet) and researchers (e.g., Therese Poland, USFS) to help with emerald ash bore research and management as new infestations are identified.

Elizabeth Folta
Students
My focus for the Natural History and Interpretation program is to give students the skills and experiences they need to find jobs and succeed in the interpretive and environmental education fields. I taught 95 students in interpretive courses this year and guided 7 more through an independent study. I started work on introducing students to nationally recognized curriculum guides by conducting a Project Learning Tree workshop and co-hosting a Growing Up WILD/Project Learning Tree Early Childhood Experiences facilitator workshop from DEC. I also revamped two of the core Natural History and Interpretation
courses, EFB 416/616 and EFB 417/617 with the assistance of other ESF faculty and staff. This included finding partner organizations for the students to work with in EFB 417/617 and coordinating ESF staff in the instruction of various topics. In addition, to working with Natural History and Interpretation students I have been mentoring Melissa Santos, a Chemistry student in the UMEB program. Melissa will be conducting the first research project at the Adirondack Interpretive Center.

Department/college
This year I focused on revamping the Natural History and Interpretation program and courses. I have formed an informal committee of EFB, FOR, and AIC faculty and staff to provide guidance and suggestions in the process. I served on the search committee for Senior Education Specialist and Education Specialist positions at the Adirondack Interpretive Center.

Self
As a new faculty member, I spent most of this year adapting to the new position and the new location. I have been making contacts with several local (e.g., Rosamond Gifford Zoo, Beaver Lake, Institute of Technology, Baltimore Woods), state (e.g., NY State Parks, NY Division Environmental Conservation, NYSERDA), and national groups/agencies (e.g., NAI, Leopold Education Project, Environmental Concerns) for the purpose of partnerships for both research projects and educational opportunities. I also was a part of three grant proposals totaling $950,762, presented two papers at international conferences, and have been invited to participate in two more workshops this coming fall.

Jacqueline L. Frair
Students
This year I very proudly supported students in The Wildlife Society as they successfully fought to hold onto their titles as the TWS Quiz Bowl champions for both the Northeast Region and NY State. My main contribution to their success was coercing a graduate student (Sara Hansen) to serve in an advisory role to the club. This was necessary as there were numerous new initiatives undertaken by the club this year that required a lot of coordination – primarily a Wildlife Professional Speaker Series (with video interviews intended for a soon-to-be revamped club website) and the first annual “Beast Feast” (which received many community donations and was well attended by students and faculty). The Beast Feast was the first official fund-raising effort by the students to support travel to Hawaii this fall to compete in the national Quiz Bowl. Despite feeling that I can’t give these students the time and focus they need, being involved with them has been tremendously rewarding as I’ve seen them accomplish really great things and helped them start to achieve their professional aspirations. They apparently appreciated my modest efforts having nominated me for the “2011 Student Chapter Advisor of the Year” award, which I will receive from TWS at the national conference this fall. Inside the classroom, I successfully delivered my graduate-level course in Landscape Ecology for the third time and it is now an officially listed (rather than experimental) course. I intend to rotate this course with my other graduate level offering, which is now called “Quantitative Methods and Models in R” and will be co-taught with John Stella this coming fall. I’m very pleased with the structure and content of my required undergraduate course “Applied Wildlife Science” (EFB 491), and its delivery is getting much smoother as my materials become increasingly refined and I continue to involve excellent undergraduate teaching assistants. I received insightful input from external reviewers of my teaching this year that I look forward to employing in the coming academic year – this should help smooth out some of the remaining kinks in the course, which center around writing exams that remain challenging while setting students up for success and taking more time to draw students into a conversation about the material, letting them struggle more to find the right answers amongst themselves. I do strive to become a better teacher, which the students apparently recognize and respond positively to given that the Undergraduate Student Association awarded me their “Distinguished Teacher Award” this spring. I feel humbled by this honor.
One of my main contributions to the department this year involved taking on the role of the Wildlife Science Curriculum Coordinator and working with faculty to make several changes to the curriculum to accommodate both the new Diversity of Life courses and students more interested in a vertebrate ecology track rather than the traditional professional wildlife track. We moved the introduction to wildlife ecology course (EFB 390) to the fall semester, which should greatly improve scheduling of the required upper division three-course sequence: EFB 390 (fall junior year) → EFB 491 (spring junior year) → EFB 493 (capstone, fall senior year), which has not functioned as a proper sequence yet. Following this scheduling change, I am coordinating course content with Jonathan Cohen to enable his capstone course to build on the material in 491 and other courses to provide the more synthetic, application-focused experience the capstone is intended for. In addition, both Jonathan and I are working to add new courses to the undergraduate and graduate curriculum. This fall I will be offering a course in “Hunter and Trapper Education for Wildlife Professionals” that will provide students with a solid grounding in the role of harvest and sportspersons in wildlife management, something that our increasingly urban student body has little personal experience with. The growing need for such courses has been recognized in recent national reports on Wildlife Education and I became a member of the TWS College and University Wildlife Education Working Group to stay current on these issues and the novel approaches being taken to fill educational gaps. My other main contribution to the department this year was to become formally involved in the Roosevelt Wild Life Station as its Associate Director (with James Gibbs as Director), and working with the Development Office to reach out to potential financial supporters of the Station. I was instrumental in engaging the Boone and Crockett Club in conversations about the Station – authoring an article on the Station in their “Fair Chase” members magazine and giving a presentation to the executive board members at their annual meeting in Kansas City. One of my primary duties is to oversee the Roosevelt Wildlife Collection – and this year Ron Giegerich and I involved a suite of undergraduate interns to initiate a full-scale inventory, cleanup, and taxonomic reorganization of the collection. We are working on a new website for the Station and intend to have a web-accessible database of the collection available in the near future. I am also working with the administration to secure funding for the collection and new exhibit spaces targeted for the Gateway building. At the college level, my primary contributions were serving as the chair of the Faculty Governance Committee on Research (COR) and member of the Executive Committee. This year we successfully undertook a major revision of the Governance bylaws designed to help increase faculty participation in as well as the effectiveness of campus governance. I also continue to serve as a Science Advisor to the NY State Fish and Wildlife Management Advisory Board, and as an ambassador for ESF (along with my graduate students) given the many and various public talks given on our research around the state. Collectively we gave more than 16 public talks this year, with several events attended by more than 400 people, and many resulting in press coverage.

For myself professionally, this past year I began engaging in issues regarding the effects of energy extraction activities on wildlife in the northeast, in particular in response to the emerging issue of rapid growth in hydraulic fracturing wells. This is an area I have some related expertise in given ongoing research collaborations in Alberta that involve a long-term and broad-scale assessment of the cumulative impacts of oil & gas development on elk and wolf populations. I was invited to give a presentation this past April in a special session on Biological Impact of Hydraulic Fracturing for Natural Gas” at the Northeast Natural History conference in Albany, and focused that talk on lessons learned in the west that could inform wildlife management and development in the east. Preparing for this talk helped me get up to speed on the hydrofracking industry, regulatory processes, and wildlife concerns, and I’ve recently agreed to chair an ad hoc committee of The Wildlife Society focused on these issues. I’m also coordinating with DEC personnel and seeking funding to initiate the kind of before-after-control-impact research, and long-term monitoring, needed to manage the growing tide of industrial footprint so as to ensure healthy ecosystems and wildlife populations in its wake. In addition to working on developing new avenues for local/regional research, I’m also working on developing international research
collaborations. First, Panthera has funded my Ph.D. student (Allison Devlin) to focus on population viability of jaguar in the Pantanal region of Brazil. Allison is currently there deploying GPS collars on jaguar. Second, I spent three weeks last summer in Mexico with Stewart Diemont to forge local research collaborations and develop research ideas that blend our two areas of expertise. We are working together on grant proposals that focus on indigenous land use practices and wild cat conservation in the region. In addition to direct research foci, I also acted this year to increase my personal research capacity by seeking additional training in Bayesian methodologies – with a one-day workshop focused on survival analysis and a full-week workshop on population modeling at the Patuxent Wildlife Center.

James P. Gibbs

Students
For our students I focus on creating tangible professional opportunities and bringing diverse perspectives from my research and outreach work into the classroom and into advising. Through collaborations I have secured funds to engage EFB students in two remarkable experiences this year…3 will spend 2 months on a remote island in Galapagos studying giant tortoises and 3 others will join on an expedition in Siberia later in the summer counting Marco Polo sheep in the Altai Republic. A program developed with NYSDEC has generated about 16 paid internship opportunities for EFB students this year. Five graduate advisees matriculated this year and all are headed off to excellent, next opportunities…post-docs at SUNY Stony Brook/Applied Mathematics (Shoemaker) and Cornell Lab of Ornithology (Townsend), PhD programs at Boston University (Winchell) and Yale University (Atwood, supported by 3-year NSF doctoral fellowship secured while at ESF), and employment in area of expertise (The Nature Conservancy - Siros). A productive and fulfilling collaboration with colleagues at the Upper Susquehanna Coalition generated a classroom experience for Senior Synthesis class focused on wetland restoration (taught by P. Raney) that seemed to be a successful cross-walking of professionals and students (with the actual teaching funded by an EPA grant). For example, the students in Herpetology classes were linked to professional biologists associated with Partners in Amphibian and Reptile Conservation group and generated many synopses of turtle research and conservation programs used in the group’s monthly newsletter celebrating Year of the Turtle. This same collaboration supports an exciting research program involving 80 recently created vernal pools at Heiberg Forest that PhD candidate Arrigoni is focusing on (with much undergraduate involvement). M.S. candidate Hunter continues her exciting work tracking the fates and ecological impacts of introduced “ecological analog” tortoises in Galapagos in collaboration with the Galapagos National Park Service and Galapagos Conservancy. We also received support from the Tanzanian government to develop a colony of an amphibian species now extinct in the wild (Kihansi spray toads); experimental work critical to the decision-making process on future steps in the species conservation is being undertaken now at ESF by Reeve (M.S. candidate) and Radell (undergraduate).

Department/college
I contribute by teaching two of the three core courses for the conservation biology major. Introduction to Conservation Biology has an annual enrollment of 90-100 of which only 1/3 of students are conservation biology majors. I also teach a general upper-division elective course (Herpetology) that is broadly subscribed across majors. Two activities that require a very substantial amount of student interaction and time are coordination of the major in Conservation Biology and overseeing student internships for the Department. I have enjoyed serving on the Curriculum Committee this year and helped make good progress in developing assessment tool for use by each major. We (with Frair, Leopold, and Quinn) expended significant effort to resurrect the Roosevelt Wild Life Station and developed several new contacts that may lead to development opportunities for the Station next year (current efforts focus on developing a website to give the program better visibility). I contribute modestly to operation of the Department as Associate Chair focusing primarily in the past year on issues of developing rubrics for faculty productivity and program assessment. Last, many of us invested significant effort in generation of an NSF IGERT proposal lead by Kimmerer and focused on linking traditional and western views of
ecological science – we were disappointed to see this proposal rejected yet a second time but believe in the proposal to such an extent that will likely work on a third submission.

Professional
For me personally many research and service opportunities have come to fruition after years of cultivation. I continue a productive advising relationship with the Galapagos National Park to help orchestrate ecological surveys by park guards of poorly known islands to address park information needs for management decision-making (Espanola Island in 2010, Santa Fe in 2011). I also work hard with collaborators The Altai Project (Castner) and the The hAltai Assistance Project (Foley) to generate financial support for Russian colleagues combating wildlife poachers in Siberian Altai. I have assisted the Galapagos Conservancy (an NGO) extensively in the last year to develop a program on information management for use by all management institutions in the Galapagos archipelago. We finally (and quietly) launched the squirrelmapper.org website for engaging citizen scientists in mapping gray squirrel morph variants as a vehicle for focusing public attention on evolution in urban environments…we are now seeking further funding to handle the volume of interaction this project will involve once fully launched. I continue to oversee the financial aspects of a large NSF biocomplexity grant operating in Guyana for the last 6 years that is finally terming in September; thereafter I hope to be able to focus on analysis of the data generated by this project. I enjoyed the challenges of serving as an external evaluator for the National Institute of Ecology in Mexico, a position I hope to retain several years hence. And I am looking forward to furthering collaboration in the next two years to develop university education in conservation biology at the National University of Kiev-Mohyla in Ukraine.

All of these experiences I bring back to my classes and for developing materials for teachers (mainly via the well-subscribed conservation biology exercise book and introductory text with M. Hunter) as well as securing ideas for applied research on timely topics and contacts for financial support.

Charles A.S. Hall
Students
In the fall I continued with my normal teaching: Systems Ecology and Energy, continuing with demanding, serious, thinking paper. As I think anyone knowledgeable will tell you, there is usually a line of students waiting for personal interaction with me essentially 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. She just received a best poster award for her workshop at Columbia University. Suzanna el Granado received a Fulbright grant for her research in Bolivia. My former graduate students continue to receive what I consider premium job offers. David Murphy accepted a joint faculty/research position between Northern Illinois University and Argonne National Laboratory focusing on energy and its relation to economics. He turned down a position to be a Congressional Fellow in Washington, D.C. Aileen Guzman has a great position with an NGO in New York. Jill MacMichael has an offer (pending funding) for U.S. Department of Energy. Ridhima Nayaar is working for a green building company in New York.

Research
(Accomplishments during sabbatical) I greatly needed some time off from my intense teaching and advising schedule, and a research opportunity in Argentina gave me an excellent opportunity to escape from the daily grind and to miss winter, my least favorite season now that I am too old for ice hockey.

1) We met with our older, long-standing colleagues while helping to train three younger students in a Systems Approach to agriculture in Cordoba. This region, including part of the Pampas, has a long reputation as one of the world’s premier agricultural areas. It has traditionally had a system of crop rotation from one or two years of row crops to several of fallow and several of pasturage. Now, under the influences of large global demand for soy in the world and neoclassical (University of Chicago)
economists (know by all Argentines, usually disparagingly as “the Chicago Boys”) the land has been put into continuous cultivation. One effect has been a great increase in soil erosion, so that in e.g. the undulating Pampas soil losses were as high as 3 cm per year out of a topsoil base of 30 cm. One response of this was to initiate a large program of using glyphosphate (roundup) to reduce the need for soil disturbance through plowing. But glyphosphae is energy-intensive, as are the increasing applications of fertilizers, so that the profitability of farming in Argentina appears increasingly uncertain. Meanwhile farmers have made huge investments in combines etc. and Argentina, a moderate oil producing countries, has experienced its own peak oil (10 years ago). It is increasingly difficult to understand how the nation’s agriculture, its principle economic factor, can continue in this direction. My work was to construct a biophysical economic model of all of these processes to assess quantitatively the major factors and to seek a different, sustainable future for Cordoba Agriculture. Preliminary results indicate that the current approach to agriculture in Cordoba is not sustainable for economic as well as environmental reasons.

2) My time in Argentina was much more eaten up by emails etc than I had wished. Retrospectively I can see that this was because I was undertaking three very large projects:

1) Organizing the Third International Conference on Biophysical Economics in Syracuse April
2) Editing a special issue of the Journal Sustainability on Energy Return on Investment, and administering the review process for some 20 papers
3) Polishing our new book “Energy and The wealth of Nations” while beginning the editing of a new Springer series of “100 page” books on energy

Outreach
I run an energy list serve with about 500 members where I distill and send out at weekly intervals what I believe to be the most important energy and energy/economic information. I have also been interviewed for local TV number of times was featured on the Discovery Channel and a national NPR program on climate. My research and teaching in Argentina constitute international outreach.

Self
I am 68 and am aware every day of the long shadow of aging. I have to think about how long I can or should play this game and at what level. It is very hard for me to contemplate retiring because I do not know who I am if I am not Professor Hall. I fish, read and travel all I wish and have few other things I wish to do. Nevertheless I believe that my abilities and productivity as a teacher and scientist show little if any indication of decline. I continue to publish something like 10-15 peer reviewed papers a year plus a book and other things. My main intellectual activities, EROI and Biophysical Economics, are gaining large momentum in various ways (as I am seeing at this moment at our ULTRA meeting in Puerto Rico). Many, many people who attended our conference on Biophysical Economics said “Best conference I ever attended” and “I have never seen so many very smart people in one room”. It is obvious to me that there is increasing awareness of the importance of energy in our economy and of the need for a different basis for economics. Many people, including myself, believe that Ecological Economics has not developed the alternatives we need. Hopefully we will be able to do that with Biophysical economics, which I am pursuing through all the teaching and research contained herein. This focus has many dimensions that influence biology and the natural world, including a better assessment of the pressures on biodiversity, natural areas and resources more generally.

Thomas R. Horton
Students
Mentoring students to help them achieve their goals is one of the great pleasures of the job. After graduation last spring, Anna Conrad and I headed to Honduras where she helped me set up a field-based DNA teaching lab (“Barcoding the Diversity of Cusuco Cloud Forest”) for Operation Wallacea. After I
taught the first cohort of students, she took over and independently taught another 5 groups with great success. She then headed off for her MS program in a colleague’s lab at Ohio State University. Mikey O’Brien (MS 2009) landed a PhD position in Switzerland with fieldwork in Borneo and published the first chapter of his thesis in Plant and Soil in early 2011. Tera Galante (MS 2009) also landed a PhD position, this time at the University of Wisconsin, Madison. She just had the first chapter of her thesis accepted for publication in Mycologia. Lorien Sopchak finished her MPS in spring 2010 and just got accepted to vet school, a fulfillment of a dream of hers that came to light during her MPS work. Joe Vineis successfully defended his MS this year, and immediately landed a very competitive job in a DNA sequencing lab at the Bay Paul Center, Marine Biological Laboratory in Woods Hole, MA. Chris Hazard (MS 2006) is now Dr. Hazard with a PhD degree from University College Dublin, Ireland and is headed for a 3-year postdoctoral position at the University of Aberdeen, Scotland. Andy Cortese (BS, Forest Health, Fall 2010) landed an MS position in WA working on a mycorrhizal project. Similarly, Angela Vitale (senior EFB) is spending her summer working in a lab in Moscow Idaho. Perhaps not so coincidentally, the technician in the Idaho lab is Sara Ashkannejhad, my first student (MS 2003). I enjoy giving students research experience in my lab, including this year’s cohort of undergrads: Ashley Campbell, Zhen Yu Lim (Amos), Alena Oliver, Erin Sweeney, Joelle Chille and Justin West. This year I also made many students students aware of the EcoLog list serve where they can keep up on internships and research experiences advertised across the country. My understanding is that quite a few students landed good positions for summer work through this list serve. All mentoring requires varying amounts of time to help the students along as they pursue their goals. Finally, I really enjoyed a couple of non-research, non-academic experiences this year. The first was accepting an invitation to be the faculty advisor for the Central New York Conservation Biology club. This is a club with a great mission and dedicated group of students. Also, I enjoyed going to the Fall Retreat at Orenda Springs, where a 2-hour commitment turned into a full day of fun with the students. The day ended with some time on the ropes course and there is a great picture of me and one of my unofficial undergraduate advisees (Mike Norman) reaching to clasp hands while dangling about 15 meters up in the air (I’m the little guy on the left!). The photo captured the spirit of the day where new students meet faculty and are welcomed to ESF.

Department/college
My primary commitment at the Department/College level is teaching General Ecology, EFB 320. The class was the largest ever this past fall at 278 students. Despite the large class size, it was a very interactive group and I was able to facilitate quite a bit of discussion/inquiry during lectures. I had a number of students tell me that this course was incredibly important to their development as ecologists and one recently suggested it is a flagship in the program, due in large part to my lectures and labs. In addition, I received positive feedback about EFB 320 during and after my guest lecture in Principles of Evolution. I also participate in the Graduate Program Advisory Committee and I am a member of the Academic Research Building Core team. The GPAC has made great progress this year with a solid program for incoming graduates in the Core course, a reworked TA evaluation form, and a wiki page to guide grad students on the road to their degrees. The number of meetings associated with the ARB was…impressive. Getting the proper design and functionality of a research building is critical. A lot was accomplished and it looks like we are well along the path of initiating the construction of a great research building. Finally, I strongly believe that through scholarship we make ESF a known entity as a research institution. I was honored with an invitation to serve on a spring NSF panel this year. These are largely volunteer efforts that require a tremendous amount of time reviewing proposals and preparing for the face time in Washington DC. I think this effort helps maintain our position as a quality research institute.

Self
My work continues to receive excellent recognition as recorded in the Web of Science citation index (Web of Science data based on 24 papers recovered, June 2011: 1447 citations, average citations per item = 60.29, H-index = 15). This year, I managed to get five refereed papers accepted for publication this year. Two of these were published in a special issue on Conservation of Fungi in Fungal Ecology. Other
than the editors of the journal, I am the only author with 2 papers in this special issue. Two others pubs were chapters from former students (O’Brien and Galante), and one was a chapter from a PhD student at Rutgers (Karpati). I also co-authored a chapter on soil and mycorrhizae with Russ Briggs in Castello and Teale (2011) Forest Health. I also co-authored and submitted a McIntire Stennis proposal with Ruth Yanai that was selected for funding. This project dovetails into a large NSF-funded manipulation study with nutrient additions in NE forests and we are adding a mycorrhizal component. I am excited about the results we will see from this small foray into the role of mycorrhizal fungi in nutrient cycling and the possibility of using these data for a larger proposal for NSF. I was invited to speak on Mycorrhizal Networks in this year’s Botanical Society meeting in St. Louis in a symposium titled ‘Incorporating microbes in plant community ecology’. As it happens, I was also contacted by a representative from Springer to brainstorm book ideas at about the same time as the symposium invitation. I decided the time was right for a book on Mycorrhizal Networks with strong encouragement from the Springer representative and submitted my proposal for a contributed author book with this title. If the book idea is accepted, I believe this will keep me strongly positioned as leader on the topic. All but two authors readily agreed to contribute chapters for the book on my request and the author list is a group of international leaders in the field.

Robin W. Kimmerer

Students

My primary contributions were made to students at the College of the Menominee Nation where I served as mentor to tribal students and supervised research interns on projects related to community response to climate change. But, I believe that my sabbatical activities will prove useful to my ESF students as they represent new connections, ideas and activities that will express themselves in my teaching, research and service. My courses, Indigenous Issues and the Environment and Plants and Culture are both directly enriched by my sabbatical experiences. In collaboration with my sabbatical hosts, we proposed a number of student exchanges and experiences that may enable ESF students to gain cross-cultural experience in exploring environmental issues in indigenous nations. While I was away on sabbatical I continued to mentor and support the progress of my graduate students.

Department/college

Since I was away for the academic year I did not contribute directly on a daily basis to the College or the Department but I trust that my sabbatical travel and activities contributed to the reputation of both, as I gave numerous professional presentations which highlighted the work of the Center for Native Peoples and the Environment. While at the College of the Menominee Nation I laid the foundation for ongoing collaboration and a possible articulation agreement between our institutions. While I was on sabbatical I continued to support my team of colleagues in revision of our significant IGERT proposal effort. I also continued work with the ESF Development Office pertinent to the Center for Native Peoples and the Environment. My leadership responsibilities for the Native Earth Environmental Youth Camp also continued. I am grateful to my colleagues Alex Weir, Stacy McNulty, Melissa Fierke, Valerie Luzadis who generously stewarded my advisees, USDA and UMEB responsibilities in my absence.

Professional

I was on sabbatical for the academic year which was extremely productive and rewarding. During the fall term I was awarded three writing residencies (The Blue Mountain Center in the Adirondacks, the Shotpouch Residency in the Oregon Coast Range and the Sitka Center for Art and Ecology on the Oregon Coast) whose exceptional support and facilities enabled me to finish my book manuscript entitled “Braiding Sweetgrass: restoring reciprocity with the good green earth”. This book of approximately 350 pages is under contract with the highly regarded Milkweed Editions and will be released this fall. The writing residencies also enabled me to significantly expand my community of writers, artists and activists which will continue to benefit my teaching, research and outreach. During the spring semester, I was invited to be a Visiting Scholar for one month in the Department of Fish and Wildlife at Michigan State
University in East Lansing in collaboration with environmental ethicist and philosopher Dr. Michael Nelson. During my time at MSU, I gave numerous presentations, consulted with graduate students and developed new collaborations for the Center for Native Peoples and the Environment. The highlight of my sabbatical was the months I spent as a Visiting Scholar at the College of the Menominee Nation in Keshena, Wisconsin as a guest of their Sustainable Development Institute. Immersion in the tribal college environment was an excellent opportunity to more fully engage with the educational and environmental challenges and experiences faced by indigenous students and the American Indian Higher Education community. While at the College, I gave numerous presentations, mentored students, guided interns and was engaged in two significant projects. In collaboration with traditional knowledge holders, I worked on a project for revitalization of indigenous plant knowledge through creation of a Menominee Ethnobotany resource and teaching materials. This ongoing project has elements of research, teaching and outreach to protect and disseminate Menominee plant knowledge. I also began working on a project related to strategies for tribal adaptation and resilience in the face of coming climate change. These collaborations and partnerships are continuing and are of direct benefit to the mission of the Center for Native Peoples and the Environment and to my teaching and research activities.

I have contributed four invited chapters to significant publications (as noted above) which have generated considerable attention. My chapter in the groundbreaking “Moral Ground” has been adopted by study groups and classes.

Donald J. Leopold
Students
This past AY I taught 160 students in Dendrology (EFB 336), the largest enrollment since I started teaching this course in 1985. Two of my Ph.D. students, Matt Distler and Tony Eallonardo, finished their doctoral programs in December, and one of my M.S. students, Jess Riddle, finished his M.S. thesis in May.

Department/college
I have been involved with a variety of development activities for the department including a sustained effort with Drs. Gibbs and Frair and Bob Quinn to revitalize the Roosevelt Wildlife Station. I am optimistic that by next year we should have important outcomes to report from these efforts. This past year has required substantial attention (up to 20 hours some weeks) for four different campus building projects and planning processes, i.e., the Academic Research Building; rehabilitation of Illick greenhouses, roof, and facade; the SUNY ESF Facilities Master Plan, and the construction of CIRTAS (Center for Integrated Research and Teaching in Aquatic Sciences) in Illick.

Self
During the past year I gave over a dozen invited presentations, typically on native plant conservation topics. The highlight was giving a lecture to and having discussions with graduate students and faculty in the Department of Landscape Architecture at Cornell University on natural communities as templates for garden, green, and restoration plantings. Additional funding for ongoing research on the Solvay wastebeds is moving my restoration research into some potentially very exciting opportunities and I am very pleased by the collaboration with engineers and scientists from Honeywell, Parsons, O’Brien & Gere, and others. The Syracuse Post-Standard published a number of articles this past year based on interviews with me on fall color, native plants, and the wet spring.

Karin E. Limburg
Students
I feel as though I could have done more, but at least I co-taught (with Melissa Fierke) an important introductory seminar (“graduate core course”) for new EFB graduate students. This is the seminar developed initially by Kim Schulz and John Farrell; it has been difficult to get faculty to volunteer to
teach it. Melissa took the lead this spring, and picked some highlights from the Schulz/Farrell syllabus. Within the EFB Graduate Program Advisory Committee (GPAC), we also accomplished some work, including: re-doing TA evaluation forms and putting them online; drafting additional criteria for ranking accepted students; evaluating the effectiveness of offering a “bonus” to highly ranked accepted students (not effective); and selecting a recipient for the EFB Outstanding Doctoral Award. A long-term goal of the GPAC has been to develop an online handbook for the EFB grad students. I eventually realized that the only way this was going to be accomplished was to build it into something else I was doing. Thus, I decided that the students in the graduate core course would create this using a wiki. After climbing a shallow learning curve, the students made a great start at this handbook. I anticipate that we can get other cohorts to continue to update it. Together with Dennis Swaney, I offered a wine appreciation course once again. A popular course, I can see the financial advantage to the college in terms of cost savings from not “leaking” students to the analogous course at SU, and in terms of gaining some course revenue, as well as the fact that Dennis has contributed his time and expertise gratis. Now, we will have to consider whether to make this an official course or not.

Department/college
There is naturally some overlap between accomplishments for the students and for the department and college. For example, the GPAC activity is to advise the EFB Chair and to make recommendations to the EFB faculty. I think we have discharged our duties well this year, although there is always room for improvement. As mentioned in last year’s annual report, Stacy McNulty and I applied for and received a SUNY “Conversations in the Disciplines” workshop grant to build bridges among research and education networks in the Hudson River watershed. ESF played a key role in this, hosting the workshop at the Adirondack Ecological Center in early September 2010. It was clearly an “eye-opener” for several of my research colleagues from the Hudson River estuary. Most had no idea, for example, of the important research that Myron Mitchell conducts at Huntington (at the top of the Hudson watershed). I believe this exercise built some bridges. As a direct follow-on, (1) we (ESF) are now a full member of the Environmental Consortium of Hudson Valley Colleges and Universities, (2) a journal is being started for Hudson watershed related research in the arts, humanities, and sciences, and (3) the next annual conference of the Environmental Consortium will carry on this theme of “source to sink” connectivity in research and education about the Hudson. I also served on two separate, extra-departmental, ad-hoc committees this year. One was a committee to search for two faculty positions in the Department of Environmental Studies (one in communications and the other in policy). It was a pleasant task: congenial committee, excellent candidates, and I learned quite a bit about Environmental Studies along the way. The other committee was to conduct peer review for promotion and tenure in the Department of Environmental and Resource Engineering. Again, I learned much during the process. The small size of these departments necessitated bringing on someone (me) from outside the department, and I was glad to be of service. The only other thing I do is try to publicize the college when I attend scientific meetings.

Self
I have finally published some papers that needed to come out (for my own sanity, at least), rounding out several projects. I was particularly happy to have an article in Fisheries magazine and in PNAS, as these both have wide readerships. I was also able to shepherd a large project, funded by the Syracuse Center of Excellence, into a manuscript submission to a reputable journal. We received very nice reviews, but with a long list of things to address (as one of the reviewers wrote, “Please forgive me. I am asking nasty questions. I would not do so if I thought the quality of the team was [not] equal to them. This is a really important topic….”). We are now awaiting a verdict on the extensive revision. I have been working quite a bit with my graduate students and with some undergraduates as well. It has been a pleasure to watch them mature intellectually. I also collaborate with a post-doc and a visiting scholar from China. Our lab meetings are interesting, to say the least, as the topics range from fish ear-bone chemistry to payment for ecosystem services in rural China. I have been asked to take on another editorial responsibility, this one at Estuaries and Coasts, where there is a need for a fisheries/ecosystems subject
editor. This brings my editorial duties up to four journals (see above), including one as co-editor-in-chief. Additionally, I am serving as a guest editor at Marine and Coastal Fisheries, shepherding reviews for a special issue (from a symposium that I co-convened last fall). I have been asked to join an international committee that deals with the human/nature nexus in coastal marine ecosystems. That committee will be ramping up its activity next year, and for that I will have to travel. Finally, my application for promotion to Professor was approved this spring.

Mark V. Lomolino

Course development

The course, Ecology and Conservation of Island Life, is one I am developing and hope to offer a graduate and upper level undergraduate course during the Fall semester of odd years. I offered a preliminary version of this as a 1 credit graduate course (EFB797) to 10 graduate students during Fall, 2009. Based on evaluations, the course was very well received and there would be much interest for a 2 or 3 credit course, hopefully initiated as an exploratory course in the Fall of 2011. The series of seminars I have developed – Conservation Biogeography, continues as a graduate level, 1 credit course. I hope to continue this course in alternate semesters.

Research and scholarship

Publication of the 4th Edition of Biogeography – Lomolino, Riddle, Whittaker and Brown, Sinauer Associates. This thoroughly revised and full-color edition should continue to be the leading text in the field of biogeography. Expanded research program on ecology, evolution and biogeography of body size to include effects of climate change (dissertation topic of Katherina Searing) and evolution of body size in extant native, introduced and extinct insular mammals is now funded and establishing international collaborations with colleagues in Italy, Greece and the Netherlands. Development of proposal on the broad-scale dispersal which should ultimately contribute to a continental-scale Atlas of Long-Distance Dispersal. This information, the abilities of animals to cross significant barriers, is essential to understanding and predicting abilities of populations of these species to adapt to environmental challenges including those associated with climate and landscape change. Proposal are being revised and prepared for various agencies including the SERDP, environmental research branch of DoD.

Gregory G. McGee

This year I continued to modify and improve aspects of the General Biology labs to better build student capabilities in scientific inquiry, communication and laboratory skills. With the help of a couple graduate student assistants, I continued modifying protocols and instruction on an introductory genetics lab, and a basic biochemistry lab. I continued to devote substantial effort to developing technical writing skills, and teaching laboratory techniques, including microscopy, sterile transfer methods, and molecular methods. As with past years, EFB102 students were examined on their laboratory proficiencies through a one-on-one exam with their instructors. This year 87% of students scored higher than 70 (compared to 95% last year), and 39% scored higher than 90 (compared to 55% last year). Even with the lower overall student performance (reflecting an increased level of difficulty in the exam) the exam demonstrates that the students are developing basic laboratory skills. This year I placed a greater emphasis on developing the instructional roles of undergraduate teaching assistants by increasing expectations for weekly participation in instruction, and having the undergraduates lead review sessions and facilitate writing and peer-review workshops. I believe these measures enriched the learning experience for the undergraduate assistants and the students clearly benefited from their good work.

Throughout the year, Neal Abrams and I continued to coordinate our general chemistry and biology laboratory instruction in an effort to reinforce common concepts and develop meaningful context for student inquiry. For instance, we integrated our first two autumn chemistry and biology labs to link instruction on field and laboratory techniques, and obtain common datasets that can be applied to both courses in an effort to build student capabilities to synthesize information and skills across disciplines. In
addition, Neal, Betsy Hogan and I recently resubmitted an NSF-TUES proposal to explore student learning gains of an integrated introductory chemistry/biology/writing experience.

This year I continued to develop continuity between the General Biology laboratories and EFB202 with regard to student command for the scientific method. General Biology students are instructed on aspects of hypothesis development, experimental design and data interpretation in manners that lay the groundwork for a more successful EFB202 experience. Through my involvement in EFB202 I continue to coordinate assessment of student learning outcomes for several departmental majors.

Last summer I worked to coordinate another iteration of the Adirondack Pre-Orientation Experience for the incoming freshman class. However I cancelled the program after only three students registered. I thought this program was successful in its first year (2009) and so I intend to continue developing it. I am working with the AEC staff to offer the experience this August and will try some different marketing approaches to develop more student interest.

My service to the college took a variety of forms this year. I continued to enjoy my participation on the ESF Learning Community Team. As a member of the COI Subcommittee on General Education, I reviewed numerous student petitions for General Education courses. I worked with a very productive departmental course and curriculum coordination committee to review course descriptions, establish the new two-semester course sequence in biodiversity and propose the new Environmental Biology Minor.

Stacy A. McNulty

Students
This year I became lead instructor for Winter Mammalian Ecology. I sought to retain core content and objectives while strengthening linkages with related courses such as Mammalogy, Biogeography and Wildlife Ecology and Management. I identified cross-cutting concepts via discussions with EFB faculty and updated modules to include cutting-edge research (e.g., bear physiological changes; bats and White Nose Syndrome). I created a rubric for evaluating student oral presentations and establishing clear expectations for grading. Student performance and feedback suggests the course engages critical reasoning, synthesis and presentation skills. It was a high compliment when two graduating seniors offered to volunteer next spring to help with the class. I continued to mentor undergraduates in the UMEB program and was gratified to see so many win awards at conferences, share their knowledge and experience with underserved students via stewardship projects, and enter graduate school for further study or begin their careers. Encouragement of my advisees/grad students to share research findings paid off with 16 student-led oral and poster presentations at professional conferences and a grad-student lead author publication.

Department/college
In July I became Associate Director of the AEC and have been pleased to serve the college in this capacity. Some key responsibilities I assumed included: implementing policies on data management, budgetary controls, and computer resources; managing housing and dining operations and accounting, assisted by Zoe Jeffery, AEC Business Manager; promoting collaboration among ESF faculty and facilitating research (including a presentation to EFB); and, increasing visibility of ESF in regional, national, and international circles via web, video, and print media.

My research contributions included $400,000 in external research funds this year; I served as PI on 6 grants and as Co-PI on 3 more grants, several of which support EFB graduate students. These include APR-GIS, a consortium designed to improve access to and analysis of geospatial information, now in its seventh year. The foundational ARIAS database engineered by Steve Signell and partners is poised to make College data available for use in courses and research. I also co-organized the Source
to Sink: Hudson Watershed Education and Research Meeting with Dr. Karin Limburg and co-hosted by the Environmental Consortium of Hudson Valley Colleges & Universities (EC). The SUNY Conversation in the Disciplines team selected our proposal as an exemplary Conversation. ESF’s field facilities in the upper Hudson headwaters and scientific expertise in watershed-scale ecological and social systems were highlighted by many ESF faculty. Future plans include a journal, meetings, and grant proposals, all of which will facilitate engagement in academic pursuits along the Hudson wildland-urban gradient.

Self
I continued to develop my doctoral interests by taking two ESF seminars in the past year for credit (Conservation Biogeography and Study Design & Analysis in Field Biology). I made progress in focusing on a set of questions; the conversations with colleagues were stimulating and I remain motivated to pursue a PhD. As a Committee on Research member, I reviewed McIntire-Stennis proposals and coordinated external review of Seed Grant proposals. The experience increased my familiarity with research in other departments beyond EFB and FNRM as well as the competitive grant process which should aid future proposal generation. Finally, I was pleased to help host a group of Italian park managers and university faculty who intend to establish a doctoral degree exchange program with ESF and I look forward to assisting with development.

Myron J. Mitchell
My contribution to students has focused on the support and development of our program related to water resources. We are currently working on a new updated web page on water programs at ESF. This past spring we had a successful seminar entitled "Cross-Disciplinary Seminar in Hydrological and Biogeochemical Processes" with 73 participants including faculty members, staff and students. I also have employed four undergraduate students in my laboratory. I currently have three graduate students (2 Ph.D.; 1 M.S.). I will take on two new graduate students this coming fall including Tamir Puntsag who is coming from Mongolia with support from the Fulbright Foundation.

Over the past year a substantial portion of my time and energy has been devoted to SUNY wide efforts. I am a member of SUNY Research Foundation Board and currently was elected to Vice-Chair in January 2011. Hence I now serve on the Executive Committee. The RF Board has been active in a number of areas including a revision of bylaws and various matters associated with research operation across the SUNY system. These activities necessitate regular trips to Albany and numerous conference calls. I also serve as a member of the SUNY Distinguished Professors Committee which includes reviewing nominations.

I have continued to maintain a vigorous research program with more than $1.4 million in grants. I am also the lead scientist in maintaining the funding and infrastructure for atmospheric deposition and watershed analyses at the Huntington Forest in the Adirondack Mountains. I have been able to arrange through the Syracuse CoE the hiring of a technical support position (Geoffrey Millard) who is being paid 50% by Syracuse University and 50% by ESF. This support position is critical since David Lyons who has worked with me for 12 years is moving to California this summer. During the period of this report I authored or coauthored fourteen peer-reviewed papers. I am currently engaged in an effort synthesizing data on nitrogen biogeochemistry for a broad range of sites across southeastern Canada and the northeastern United States. The results of this work will be linked to changes in atmospheric deposition and climate change. Another major research effort is associated with the measurements of carbon dioxide fluxes at two sites (Upper Onondaga Park and the Syracuse Center of Excellence Headquarters). I am on the organizing committee for the International Acid Rain meeting to be held in Beijing in June 2011. I helped formulate a cooperative agreement between Jinan University in China and SUNY-ESF.
James P. Nakas
Students
Although on medical leave for most of the spring semester, this academic year I continued to make room in my laboratory for undergraduate students for a total of 28 credit hours which included Internship in Biotechnology (BTC 420), Res. Prob. Biotechnology (BTC 498), and Res. Prob. EFB (EFB 498). In addition, one MS student (Mr. Christopher Addona) defended his thesis, and three PhD students (Mr. Chengjun Zhu, Mr. Andrew Henwood, and Mr. Wenyang Pan) passed their candidacy exams.

Department/college
During this reporting period, we published two papers, one on ethanol and one on polyhydroxyalkanoates (PHAs), produced from wood hydrolysates and biodiesel glycerol, respectively. Two additional manuscripts on PHAs will be submitted, probably within 1-2 weeks. These publications will further strengthen the position of the department and the college in the area of bioconversion of renewable resources to biofuels and biomaterials, an area the college has devoted considerable effort to maintain. In addition, a provisional patent application was filed with the USP&TO and a full patent application will follow this summer as the provisional filing offers protection for one year only.

Self
During the past year I have expended much effort in strengthening our corporate relationships with local companies with whom we have active collaborations and others with whom we would like to develop active collaborations. Having established active partnerships with Welch Allyn/Blue Highway and Tessy Plastics, we continue to work towards scaling up our laboratory processes to a pilot plant level and, ultimately, towards commercialization. Some equipment problems have impeded progress but we work to resolve these issues. Recently, we have initiated a collaboration with an upstate biodiesel company for the production of biodegradable polymers from biodiesel glycerol. The company has expressed an interest in paying for the patent application and licensing the technology after the patent is issued.

Tsutomu Nakatsugawa
The P/T activities in our department turned out to be busy this year, including two full reviews and three pre-reviews. The latter was made more official as the Provost made it as part of formal requirements. As Chair of PTC, I spent much time keeping track of individual document submissions, requests to internal and external reviewers, receipts and filing, sending acknowledgement of receipts, teaching reviews and reporting, soliciting faculty input, etc. Excellent secretarial help considerably eased the work load, but the active PTC membership dwindled from seven to three-and-a-half towards the final deadline due to illnesses, accidents and other commitments, forcing some of us working weekends and overtime particularly during March. I thank those who materially contributed to our efforts.

In the summer of 2010, I accepted what appeared to be a benign one-year assignment by Dean of Research, Dr. Neil Ringler to chair the college-wide IACUC (Institutional Animal Care and Use Committee) at the departure of the IACUC chair, Dr. Jesse Brunner. Updating the websites was straightforward thanks to Dr. Brunner’s work. Since there was no system in place to track on-going projects originally approved by the Committee, I undertook the task of organizing, checking and updating all the protocols on file (these are subject to unannounced inspection by authorities) in Room 241 Illick with secretarial help. Main findings: 1) Eleven projects running from 2004 through 2010 have been completed; 2) Fourteen projects that began between November, 2006 and March, 2010 are still active; 3) IACUC reviewed eleven protocols between summer of 2010 and 2011, with eight approved and three pending; 4) We have currently no systematic way of discharging institutional responsibility of training, inspecting and updating (it is all ad hoc). Clearly research activities involving vertebrate animals have been on the rise, and demand a better-defined system. While the supervising authority has been USDA-APHIS, IACUC also needs to meet NYS Department of Health requirements, and with the faculty’s research seeks funding from NIH, must meet the protocols and requirements of NIH, which are distinct
from others. Most urgent at the moment is to clarify the NIH requirements and obtaining their protocol number, which the College currently lacks, and correct deficiencies/violations found in the APHIS inspection this spring. I intend to attain these goals before I resign as Chair at the end of summer, 2011.

Lee Newman

Students
As a new faculty member in the department, a significant amount of time/resources were devoted to setting up the laboratory and recruiting new students. I brought one graduate student and one undergraduate student with me. Since August, I have recruited an additional graduate student (who has been working in my lab since January as she was not able to officially start until June due to delays in funding) and eight additional undergraduate students. The students have been instrumental in the set up of the lab, including a new ion chromatograph, gas chromatograph, gas chromatograph with purge and trap linkage and an electroporation system. In addition to the students working in my lab, I am the academic mentor for 10 addition students. Two of the students in my lab were struggling academically, and since joining the lab and having more direct mentoring have significantly raised their semester GPA. As an additional learning experience for the students, both within my lab and the department, I have started a ‘Question of the Day’ competition, where students compete for points by answer questions about science, current events, ecology, natural history, and ESF history. Students with the highest points at the end of the month win $25 dollar gift certificates.

I have increased the credits for the BTC401/EFB601 course that I teach in the fall to be able to have more lecture time to include the latest technologies in molecular biology in a more comprehensive manner. I have been leading the effort to develop a Biotechnology minor for the program, as well as proposing and helping to define the EFB/BTC 298 courses that would allow students with limited research experience to learn about research without the higher expectations of a 498 course.

Department/college
In the spring, I taught a Phytoremediation course for both graduates and undergraduates. For the course, I brought in four speakers from University of Washington, EPA, Connecticut Agricultural Research Center and Brookhaven National Laboratory. The speaker sessions were open to the public, and attracted people from the city of Syracuse, O’Brien and Gere, Cornell, several local environmental groups as well as faculty from multiple departments. Additionally, the course was linked to a phytoremediation course at Missouri Science and Technology in Rolla MO. Speaker talks were video linked to their campus, and students were able interact and ask questions of the speakers. This was accomplished at a cost of $2800, with $2000 of support from the department.

I have been working with Doug Daley, and discussing with Tim Toland, plans for developing a new Phytotechnology program that would both educate and train students to do research and do work in the any of the areas that utilize plants to address environmental problems. I have been in discussions with Dr. Bongarten to put together a team of researchers that would enable ESF to apply for an NIEHS Superfund Research Program center grant. These grants generally fund 3-7 research programs, as well as support graduate students, do community outreach and tech transfer, with an annual budget of $1.5-2M. I have been in contact with Dr. William Suk, director of the program, and he has agreed to visit ESF in the fall to outline what ESF would need to do to be competitive for this grant program.

During Dr. William Powell’s sabbatical, I have covered many of his duties for the management of the Biotech program, including meeting with students and advising them as needed, as well as others outlined above. I have been actively involved in the design meetings for the Academic Research building, including attending meetings with outside consultants and the University Board, as well as attending meetings on laboratory and building design, landscaping and building environment and safety. I also contributed hand-made afghan and scarf to assist in the Colleges United Way fund raising efforts.
Self
I have continued to be active in the International Phytotechnology Society (President and Chair of two committees, as well as member of the conference committee), the Northeast Phytotechnology Society (Founder) and the Association of Environmental Health Science (Scientific Advisory Board Member and Session Organizer for annual conference). I am also continuing as co-Editor-in-Chief for the International Journal of Phytoremediation. And I am continuing to attend and be invited to present at several national and international conferences, and to bring as many students as possible to the meetings with me. I have two reviewed papers and one book chapter published, one peer reviewed paper in press and two submitted. I was co-PI on a five year USDA grant ($1.49M), and PI on a contract from NASA ($73K) and an equipment grant from Perkin Elmer ($68K). I also transferred in an NSF grant on which I am PI ($278K).

Roy A. Norton
Students
I taught 42 undergraduates in Invertebrate Zoology, a time-demanding course that seems highly regarded by most students. I also served students directly as ENB Curriculum Coordinator (CC) and EFB Curriculum Director (CD), dealing with myriad academic and personal matters. Beyond guiding my own 43 advisees, and serving as planned or ad-hoc stand-in when other advisors are not available, I dealt almost daily with referrals from other faculty members on the more difficult of issues.

Department/college
These, in large part, also relate to CC and CD positions and to affiliated activities. During the reporting period significant time was invested in a curricular revisions and course-proposals, and associated modifications to Curriculum Plan Sheets and the departmental student handbook. As EFB’s representative, I interacted throughout the year with other college offices (Registrar, Admissions) and Faculty Governance (Committee on Instruction) to conduct routine business and to solve (or prevent) problems.

Self
This has been a productive year for research, with 10 papers published, and 2 others accepted during the reporting period; 3 others are within days of submission. Collectively, these are on diverse subjects (systematics, evolutionary biology, molecular biology, paleobiology, ecology, reproductive biology, functional anatomy and embryology) and involve 26 coauthors from 13 other institutions in the US, Canada, Poland, Germany, Austria, Russia, and the Czech Republic. Of these, one (#3) is a molecular paper that controversially infers the existence of terrestrial (soil) organisms into pre-Cambrian times; another (#7) gives by far the most detailed analysis of an amber fossil mite published to date; another (#9) was an invited paper that extends our highly cited previous work (a “Citation Classic” in Soil Biology & Biochemistry) on stable isotope use in soil biology; and a fourth (#12) is a large work on ultrastructure of mite feeding organs that will have the cover of the next Journal of Morphology (top journal in this field). I continue to serve on editorial or advisory boards of 8 scientific journals, and during the reporting period refereed 27 papers submitted to 15 journals, mostly international in scope. I was an invited external examiner on PhD theses from South Africa and Poland, and a referee for a national award in Poland.

Dylan Parry
Students
My teaching load and interactions with students was diminished this year as I was on sabbatical leave through the fall. To accommodate demand for my Ecology and Management of Invasive Species course (usually offered in fall), I moved it to the spring this year (and for the foreseeable future). My enrollment continues to grow in this class (nearly 50 enrolled). I continued to add new components to this course to
keep it fresh and current in this rapidly developing field. Once again, it received high scores on student evaluations. To minimize disruptions, I took sabbatical while most of my current graduate students were finished or finishing. Phillip Barber defended in December and completed his revisions and graduated in May. Keith Post (grad 2009) and Brian Hoven (2010) have started PhD programs (University of Tennessee and University of Miami, respectively). I was able to recruit a very promising new MS student, Georgia Keene, who officially starts in the Fall but will be working with me this summer.

Department and College
I stepped down as Chair of CCAC after 3 years in preparation for my sabbatical leave. In the spring, I joined the Sussman fellowship Panel (for the next 3 years) and each member evaluated and ranked 36 research proposals. I also will be joining the College Committee on Research this coming year.

Self
Sabbatical leave allowed me to finish up several manuscripts from completed projects as well as start to develop some new research directions. In collaboration with Melissa Fierke, we have been trying to scale up our ongoing Sirex research and have submitted a USDA AFRI grant to fund some of our planned research. We have started a new collaboration with researchers at the Pineville, Louisiana USDA facility to try and understand potential impacts of Sirex when it reaches the economically valuable southern pine plantations. Another new collaboration (with Patrick Tobin at the USDA Forest Service in Morgantown, WV) is taking some of my older gypsy moth material and putting it into a climate change context. I am very enthusiastic about this relationship and we (as well as Brian Aukema at University of Minnesota) are already working on an invited book chapter (Cambridge University Press) on insect outbreak dynamics in a warmer world. Over the summer, I will develop the inaugural ESF version of Forensic Entomology, a very well received course that I have been teaching as part of the core curriculum in Syracuse University’s Forensic Science program.

William A. Powell
Students
This year I implemented a new technology, the i-clicker, into my large genetics course. This has worked very well and has increased overall student participation during the lectures by giving all the students the opportunity to answer questions at the same time. The student evaluations were very positive. I highly recommend it for all our large classes. In addition, I continue to provide research opportunities and support for my four graduate students and the many undergraduate students who complete projects in my lab.

Department/college
For our department, I continued serving as one of the faculty representatives for the new ARB building even during my sabbatical leave. With respect to the lab design, I have tried to be as flexible as possible with the architects without jeopardizing our ability to perform “wet lab” types of research. I have also agreed to produce chestnut trees and elms for the landscape around the building. Our research to develop a resistant American chestnut tree puts ESF in the forefront of tree restoration. This is unique because restoration of a tree species has never done before. We have had our first preliminary lab tests that show enhancement in blight resistance in our transgenic American chestnut. This will be confirmed this summer when we inoculate our field grown trees and it will let us know the level of resistance achieved. If confirmed, we can begin the process for deregulation with the USDA, EPA, and FDA. If these first trees are not up to par, we have many more coming through the development pipeline.

Self
I am completing a sabbatical that incorporated many small trips and presentations. The trips were very valuable for getting the word out about our chestnut research as well as for getting advice about
techniques (both lab and field), regulatory issues, and feedback on public opinion. All this will help advance the restoration of the American chestnut tree.

**Neil H. Ringler**

**Students**

I taught EFB courses in Aquatic Entomology and Comparative Anatomy this year and the students were among the strongest that I have worked with for many years, including the undergraduate TA’s. Of the seven graduate students in my group, three completed their doctoral candidacy exams, and one is preparing for early fall. Karin Limburg and I brought in a doctoral student this spring, and another master’s student will matriculate in the fall to work on apparent failure of brown trout reproduction in the Salmon River. Our Onondaga Lake and Salmon River studies included five undergraduate interns. We submitted four manuscripts, with one accepted and two in revision.

**Department/college**

With team Schulz, Boothroyd, Farrell, Leopold, Whipps, and ORP, we landed and began to execute the NSF $1.47 M project to rebuild aquatic labs in Illick Hall, and to provide the facilities for a new Center for Integrated Research and Teaching in Aquatic Sciences (Schulz, Director). We plan to bring this Center to Academic Council for formal approval in the next few months. Policies on Data Ownership and Data Management were completed, in cooperation with the very active Committee on Research (J. Frair, Chair). That College-wide committee also provided recommendations with regard to McIntire Stennis awards, Seed Grants, Exemplary Researcher Award and (fall only this year!) Travel Awards. I coordinated the Mentoring Symposium in which EFB played a prominent role side-by-side with other Departments, and presented many EFB programs to the NY Academy of Sciences in March in NYC, to representatives of Anaturk University (Turkey), and to Honorary Doctorate recipient Dr. Roger Sedjo. I contributed to the planning of the Biotechnology Symposium scheduled for June 2-3, and helped initiate a new NIH-based research theme with the Vice Provosts/Presidents at UMU, SU, ESF and the VA Hospital. A long-term commitment to the Biofuels “foot print” in the Center of Excellence building will hopefully provide new venues for several EFB research endeavors, and has already given us new opportunities for collaboration among Departments. The final report on the $1.49M Coolwater Project was completed, which supported several graduate students and created new potential solutions to energy savings for the CNY region. A new Technology Transfer initiative at ESF that links with Binghamton University should ultimately provide swifter, cost-effective pathways to patents and commercial licensing opportunities.

**Sadie J. Ryan**

My appointment with SUNY-ESF’s EFB department began January 1st, 2011, at 25% time appointment. During this period, my significant achievements were primarily to publish two co-authored papers (plus one in press) and an invited book review, and submit another 5 papers for review. I also co-developed an entirely new undergraduate curriculum and major in Environmental Health, with a committee at ESF. This has been approved by the faculty and is in review at the SUNY level. In addition, I taught two NSF-funded advanced study institutes, the first in South Africa and the second in Kenya, for graduate students and postdoctoral students, in quantitative approaches to conservation biology. These institutes yielded several successful student lead projects, four of which are to be presented at a mini-symposium as part of the Annual Meeting for the Society for Mathematical Biology, which I will co-host in June 2011 in Krakow, Poland. I also participated in two multi-institutional major grant proposals, one of which is still in review at NSF.
Kimberly L. Schulz

Students
I spent a lot of time this year teaching, advising and mentoring undergraduate and graduate students on their research projects. The three aspects of all of this work that I believe are most significant are: (1) The incorporation of a student learning project into Limnology Practicum, where students worked with a local lake association to develop their independent projects and presented professional poster presentations to them. In this process they learned a lot and provided the homeowners with some valuable information, including finding of several rare species. I will be refining this portion of the Limnology Practicum and continuing similar service learning aspects next year. (2) I continued to mentor a moderately-large graduate student laboratory group (6 students), and am pleased that Madeline Turnquist, who arrived at ESF to work with Martin Schlaepfer and has been working in coalition with my lab group since his departure, successfully defended her M.S. dissertations and published one of her two chapters; Jacob Gillette, a Ph.D. student, won a prestigious NSF Dissertation Improvement Grant to support enhanced Ph.D. work here at SUNY-ESF. (3) I have been mentoring a number of very promising undergraduates and am working with three of them to finalize manuscripts for submission to professional journals during this coming year; all have working drafts. These students have already presented posters and talks on their work, and I am excited that so many undergraduates have been able to do research at a high level.

Department/college
My primary service to the department has been as an Associate Professor Representative to the Promotion and Tenure Committee in EFB, and as chair of the Course and Curriculum Assessment Committee for the first time. This was my first time chairing this committee, and I know I can improve my performance; we did accomplish a number of outstanding tasks including numerous (>20) course and curricular proposals passing through the department and college, and the adoption of a new sophomore year Diversity of Life sequence for the EFB majors. We also have made some headway on the development of minors and assessment issues, although these will require additional effort over the summer and next year. In terms of service to the college, I continue to spend a huge 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, and I am looking forward to helping lead these efforts over the next few years. In addition I serve on the college-wide Middle States Steering Committee and am the EFB representative to the Water Resources Minor. I also continued to co-facilitate the college-wide AquaBreak seminar and mentor three early-career faculty members.

Self
This year I focused on improving my Limnology Practicum class, mentoring undergraduates and graduate students, grant writing and research. I continue to run a very active research laboratory that successfully pursues a number of ongoing funded research efforts. My NSF research grant for work at the Heiberg Forest has brought an exciting new direction to my research program and is resulting in a lot of intriguing data that has me quite busy analyzing data and drafting manuscripts. I also am participating in a working group at the National Institute for Mathematical and Biological Synthesis, "Food web dynamics and stoichiometric constraints in meta-ecosystems." Next year I hope to be able to sequester more time for my own research efforts (especially manuscript production).

William M. Shields
This may look familiar as it follows much of last year's report. I continue in the same vein. The honors seminars were offered again this year with excellent reviews. I would note that our sue of web reviews has come with a decline in the Percentage of students evaluating the courses. I taught Behavior again this spring with a return to normal enrollment (99 students). I cannot view the reviews until tomorrow but I
suspect they will be as good as usual. Barb and I continue working on our book. We really only get anything done summers so I do not expect it to be finished until the end of summer 2012. work on this gets done in the summer when we both have more time and live in the same house. I published 1 paper related to forensic DNA in the Intl J. of Legal Medicine (listed in press last year). I continue to act as official and unofficial advisor for a number of undergraduates and enroll lots of students in EFB 420 and 498. As I have noted I have accepted fewer graduate students in order to free time to write the 2 books that are underway or planned and as I approach "retirement". Lastly I have agreed to assume the role of Director of the Honors Program. When I examined the web pages I realized belatedly that I had my work cut out for me with respect to updating the information and paperwork, which I will reduce, presented to the world at large. That will keep me busy over the summer.

Stephen A. Teale

Students/department

Our course, EFB 217 Peoples, Plagues and Pests continues to very successful. The enrollment seems to have plateaued at 160-170. The introductory entomology courses (EFB 351 Forest Entomology and EFB 352 Entomology) continue to grow and have received very favorable evaluations. EFB 352 had 47 students in 2007, pre-enrollment for 2011 is 90 likely making it the largest entomology course in the country. The restructuring of these introductory entomology course offerings so that both Entomology (EFB 352) and Forest Entomology (EFB351) have graduate counterparts (EFB 552 & EFB 551, respectively) and the alternate-year scheduling so they don’t compete against each other has been successful.

Self

John Castello and I completed our Forest Health textbook. Since it is not yet available for sale in North America, it is too early to know if it will be well received, however, we are very pleased with it.

Donald J. Stewart

J. Scott Turner

EFB 200 Physics of Life was offered for the second time. Its enrollment exceeded the first year’s enrollment, and to generally positive reviews. The model of online content has proven to be very popular, and in conjunction with the video production service of ITS, there is now a catalogue of roughly 60 videos available, which have continued to grow in quality and scope. These are outlined in the “Non-refereed publications” section of this annual report, with clickable links to the videos on ESF’s YouTube channel and iTunesU outlet. EFB 462 was offered again, with continued healthy enrollment. I continued to make progress on my third book, begun when I was on sabbatical last year at Cambridge University. I have completed six chapters. I had a very heavy writing schedule this year, with numerous invited manuscripts for edited book. My work on termite architecture and biological design continues and continues to attract media attention. Some of these are outlined in the body of the report above. I organized a “Creative Media Working Group” consisting of several faculty and staff on campus that are interested in developing ESF’s presence as a major creator of online media.

Alexander Weir

Students

This year I have again spent much time on the coordination and execution of international field experiences for our students with trips to Costa Rica (3 students) and Ireland (8 students) completed. I also spent time organizing the annual exchange program with Moscow State University but had to formally cancel this trip in April 2011 as a couple of our students had to withdraw. My regular Mycology (EFB 440/640) class also attracted a beginning enrollment of 54 students during Fall 10, again a significant enrollment for this class, making it the highest enrollment introductory mycology class in the country. In addition to these regular teaching assignments, I have also had an increase in advising load,
with more students enrolled in internships, study abroad opportunities, college teaching experiences, and independent research activities, than ever before. In addition, 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 have one MS and one PhD student both making good progress toward obtaining their respective degrees.

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 2010, with similar enrollments expected for the summer 2011 program. Both the teaching and research programs were successful with almost 200 undergraduate students present at the Station during the summer of 10, and research groups from Indiana State University, as well as our own Grober Research Fellow (graduate) three Cranberry Lake Fellowship awardees (all undergraduate), and four UMEB participants (all undergraduate). The summer 2011 season shows an increase in research usage with the Indiana State University group (7 students), Cornell University Research Group (2 students), along with one Cranberry Lake Fellowship awardee, UMEB participants, and another graduate “Grober Research Fellowship”. Another important assignment this past year has been my membership of the EFB Promotion and Tenure Committee. In addition to regular meeting activities, I have also monitored the teaching of two of our beginning faculty and provided feedback to the candidates and to the committee. I have also continued to serve the Department as Curator of the Herbaria, and as the contact point for international opportunities for our students. A major undertaking this year has been the development of a new class entitled Diversity of Life that will be a required two-semester class for all biology majors. I have agreed to coordinate this team-taught course and will begin teaching in August 2011.

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). 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 9 new genera collected during our expedition to Costa Rica in April 2011. We now have more than enough results for publication of at least 3 manuscripts and will begin these in Fall 2011. My other graduate student, Jessica Gibson, has also made much headway with her TEM investigation of these fungi and we are hopeful that this fine-structure work will complement the results from our molecular investigations.

Christopher M. Whipps

Students
From a teaching perspective, I continue to teach General Biology II which had 175 enrolled this year. I have designed the class to incorporate multiple modes of instruction and evaluation, integrating the lecture content of the course with exams, readings from the primary literature, writings, self-assessments, and compilation of a portfolio at the end of the year. The ability to provide such a diversity of activities is in large part due to the support of departmental teaching assistants, who I have run weekly review sessions and develop their teaching skills. My Fish and Wildlife Disease class (EFB496/796) which I had co-taught in the previous year, was redesigned and I taught it in its entirety for the first time. The class is designed as more of a problem-based learning experience, supplementing lectures with 3 different group projects throughout the semester where students act as stakeholders in consideration of an emerging disease of wildlife. The labs are designed to include necropsy of wildlife across a broad spectrum (snail, fish, bird, mammal), training students to recognize abnormal conditions and be able to scientifically describe what they see. The lab sessions bring in experts, particularly Ron Giegerich who assists with the bird and mammal anatomy labs, as well as Kevin Hynes from the DEC Wildlife Pathology Unit who does
a necropsy demonstration. This year I was also able to integrate the course with my grad student Megan Kirchgessner’s research. Students went in teams to collect field samples from deer for use in laboratory assays. This past Fall, I also led a graduate seminar (EFB797) on infectious diseases which tied together popular scientific articles with those from the primary literature. Students led discussions on these topics. Beyond teaching, I formally advise 26 undergraduate students from 3 majors, with several students in the pre-health professions track. I continue to involve undergraduates in research and have adopted the philosophy of taking on promising students very early in their studies and planning for reasonable research projects that can be carried out over several years. I believe the benefit to the student is greater when they are required to take their research to the point of publication and ultimately more satisfying when they get to see everything from the general working of a lab to the finer details of writing when a project is truly complete. I supervise 2.5 graduate students, have 1 starting in the fall, and also have served on committees of 14 grad students at ESF and SU.

Department
Starting this coming year I will be teaching EFB453/653 Parasitology for the first time. I described this course, and it will be offered every other year in the Spring semester. Not only do I anticipate this will be an exciting and informative course for our students, but it will be able to satisfy the ‘Invertebrate Diversity’ directive elective category of some of our majors. I also officially described EFB457/657 Fish and Wildlife Disease, which is described in the above paragraph. I am currently serving on EFB’s CCAC which has made several contributions to the department in general this year, but most notably, the addition of the Diversity of Life sophomore courses. Development of minors in Biology and Biotechnology are planned for next Fall, but the majority of the groundwork here is already completed. As a member of the college’s Committee on Instruction (COI), I have been pleased to act as liaison between these 2 committees and the department, coordinating the activities of the CCAC with the COI. I acted as the departmental representative on the College-wide Promotion and Tenure Policies review committee, upon which I was able to advocate for the comments and suggestions made by EFB faculty, particularly the incorporation of a college level review first suggested by Dr. Turner. I have been heavily involved as an EFB representative on the planning phases of the new Academic Research Building, assisting with laboratory design and layout. I also served on a committee to develop a new major and curriculum for an Environmental Health program at ESF. Although this program will be housed in another department, the new classes associated with the program will likely draw the interest of EFB students as interesting electives.

Professional
Within my 2 main lines of research, projects are currently supported on an NIH subcontract for diagnostic development of mycobacteria in laboratory zebrafish, and an ESF Seed grant for diversity and genetics of myxozoan parasites. I was honored to be asked to submit a review paper on mycobacteriosis of laboratory zebrafish this past spring and look forward to establishing my name with this important research in the lab animal literature. In the diversity word on myxozoans, I have described several new species and have solidified a collaboration with researchers in China which has resulted in 2 publications in this reporting period. In addition to these main lines of research, I continue to collaborate with colleagues in Alaska on diseases of returning Chinook salmon, and took on an undergraduate researcher to help carry out some of this work. I have also initiated a collaboration with a colleague at the University of Lethbridge on an important parasite of deer, elk, and cattle which is found in NY. Investigation into this interesting parasite has fostered some collaboration with the wildlife health program at Cornell, which I am encouraged about for future coordination and collaboration. I serve on the American Fisheries Society Fish Health Section’s Technical Standards Committee, which is responsible for the production of the AFS-FHS BlueBook, the definitive guideline for diagnostic testing in the fish health community. We have made several updates and additions to the book, including a suggested reorganization of the content by me, which will facilitate the expansion of the book as chapters are continually added. Also this year, I contributed heavily to a myxozoan chapter in a new Parasite Ecology textbook and look forward to seeing that in print this fall.
Appendix C. Faculty Publications (published or in press; papers in review not included)

Books

Refereed Publications

John D. Castello

Jonathan B. Cohen
Cohen JB, Gerber BD, Karpanty SM, Fraser JD, and Truitt BR. Day and night foraging of Red Knots (Calidris canutus) during spring stopover in Virginia, USA. Waterbirds (in press).

Martin Dovčiak

John M. Farrell

Melissa K. Fierke

Jacqueline L. Frair


**, Listed among the top 10 most cited articles from the PTRSB from the year 2010 ([http://rstb.royalsocietypublishing.org/site/misc/top_ten_2010.xhtml](http://rstb.royalsocietypublishing.org/site/misc/top_ten_2010.xhtml)).


James P. Gibbs


Charles A.S. Hall


Marshall, Whitney, C. A. S. Hall and Wei Wu. From four forest types to gradients: the evolution of how we think about the structure and function of Luquillo experimental forest. Chapter 1 in González,


Hall, Charles. Introduction to special issue Chapter 1 in Charles Hall. Issue Editor. Sustainability Journal Special issue on EROI (in press)


Hall, Charles, Bruce Dale and David Pimentel: Seeking to understand the reasons for different EROI assessments of biofuels. Chapter 15 in Charles Hall. Issue Editor. Sustainability Special issue on EROI (in press)


Thomas R. Horton


Galante TE, Horton TR, Swaney D 95% of basidiospores fall within one meter of the cap- a field and modeling based study. Mycologia (in press).


Donald J. Leopold

Karin E. Limburg

Mark V. Lomolino
Gregory G. McGee

Stacy A. McNulty

Myron J. Mitchell
James P. Nakas

Lee A. Newman


Roy A. Norton


**Dylan Parry**

**William A. Powell**

**Neil H. Ringler**

**Sadie J. Ryan**

**Kimberly L. Schulz**

**William M. Shields**

**Stephen A. Teale**


**J. Scott Turner**

**Alexander Weir**

**Christopher M. Whipps**
Appendix D. Papers Submitted, In Review, Pending Decision

John D. Castello

Jonathan B. Cohen

Martin Dovciak

John M. Farrell

Melissa K. Fierke

Donald J. Leopold
Yorks, T.E., A.S. Eallonardo, Jr., D.J. Leopold, D.J. Raynal, D.A. Burns, and P.S. Murdoch. Effects of timber harvesting intensity and white-tailed deer herbivory on vegetation and nitrogen
accumulation in northern hardwoods: Catskill Mountains, New York (U.S.A.). Forest Ecology and Management (submitted)

Karin E. Limburg

Gregory G. McGee

Stacy McNulty

James P. Nakas

Lee A. Newman
Dylan Parry
Parry, D. 201x. Forest tent caterpillar hatch is independent of bud break phenology despite large fitness costs. Oecologia (in review).
Parry, D., D. A. Herms and K.R. Kosola. 201x. Large increases in tree defenses to insect outbreak have only modest direct effects on a lepidopteran defoliator and its competitors. Ecological Monographs (in review).

Sadie J. Ryan
Wolf, A., Anderegg, W., Ryan, S.J., Christensen, J. in review. Robust detection of plant species range shifts under biased sampling regimes. PLoS ONE
Ryan, S.J., Dobson, A.P. and Jones, J.H. in review. The effects of contact structure, demography and movement on disease transmission within a structured primate metapopulation. Nature

Kimberly L. Schulz
Brown, B.L., K.L. Schulz and N.H. Ringler. Testing Survival of a potential mayfly colonist (Stenonema femoratum) to an urban lake undergoing remediation (Onondaga Lake, NY); in revision.

Alex Weir
Thompson, L. and A. Weir. Laboulbeniales on Elateridae (Coleoptera); a review. Mycologia (in review)

Christopher M. Whipps
Whipps, C.M. (Accepted with minor revisions) Interrenal myxozoanosis in bluegills (Lepomis macrochirus) caused by the myxosporean parasite Acauda hoffmani n. gen, n. sp. Journal of Parasitology.
Appendix E. Papers/Posters Presented at Science Meetings

Jonathan B. Cohen
Deepwater Horizon Oil Spill-Lessons Learned. 3/15/2011, 34th Annual meeting of the Waterbird Society, Grand Island Nebraska. This was a Symposium that I organized and moderated.

Martin Dovciak
Ecological Society of America, annual meeting, Pittsburgh, PA (Aug. 1-6, 2010; 4 presentations):
“Forest management changes microclimate and bryophyte communities in the Cascade Mts”.
“Persistence of a rare ancient cycad: effects of environment and demography” (co-author; presented by A. Búrquez).
“Plant community and microclimate changes across forest edges” (co-author; presented by J. Brown).
“Variability in land snail, salamander and plant communities along gradients in soil calcium and acidic deposition in the Adirondack Mountains, New York” (co-author; presented by C. Beier).

John M. Farrell
J. M. Farrell 2011 (invited seminar) Cascading effects of water level regulation on habitat and faunal linkages in the upper St. Lawrence River. Institut national de la recherché agronomique, Ecologie et Santé des Ecosystèmes Renne, France.
J. M. Farrell 2011 (invited seminar) Cascading effects of interruption of natural flow regimes: a case study from the International St. Lawrence River National Center for Scientific Research (CNRS) Site ENS de Lyon, Lyon, France.


**Danilo D. Fernando**


K Jaenecke, J Discenza and DD Fernando. Restoration of a federally threatened fern through production of genetically diverse individuals by means of DNA marker assisted in vitro fertilization. SUNY-ESF’s Spotlight on Student Research. April; 12, 2011.


**Melissa K. Fierke**


5/2011, Sirex noctilio Research Updates Meeting, Riverdale, MD.


1/2011, USDA Annual Interagency Research Forum on Invasive Species, Annapolis, MD.


K. Dean, Vandenberg, M. Griggs, L. Beaur, M. Fierke. Assessing susceptibility of hymenopteran parasitoids of the emerald ash borer to the entomopathogenic fungus Beauveria bassiana. Presented at multiple venues:


K. Dean, Vandenberg, M. Griggs, L. Beaur, M. Fierke. Assessing susceptibility of hymenopteran parasitoids of the emerald ash borer to the entomopathogenic fungus *Beauveria bassiana*. Poster. Presented at multiple venues:
1st Place Masters Division Competition.
1/2011, USDA Annual Interagency Research Forum on Invasive Species, Annapolis, MD.


Eastern Branch Meeting of the Entomol. Soc. of America. 3/2011, Harrisburg, PA.


1/2011, USDA Annual Interagency Research Forum on Invasive Species, Annapolis, MD.


**Elizabeth Folta**
Designing mSEGs for Environmental Literacy, January 19-22, ASTE 2011 International Conference, Minneapolis, MN.
Investigating the impact on student learning and outdoor science interest through modular serious educational games, April 3-6, NARST Annual International Conference, Orlando, FL.
Student Perceptions of Learning and Engagement with Scientific Concepts through Serious Educational Game (SEG) Development, April 3-6, NARST Annual International Conference, Orlando, FL.

**Jacqueline L. Fraise**
Papers presented by co-authors:

James P. Gibbs
“Biodiversity dynamics and land-use changes in the Amazon: Multi-scale interactions between ecological systems and resource-use decisions by indigenous peoples,” Invited special presentation, annual AAAS meeting, J. M. V. Fragoso, J. Luzar, K. Silvius, J. P. Gibbs, and J. Read. 2/19. Washington, D.C.
“Climate change impacts on species and ecosystem distributions in the Altai Mountain region of Russia”, IUCN-sponsored workshop on Transboundary Issues, Climate Change & Conservation in the Altai Mountain Region, Ust Koxa, Altai, Siberia, Russia. 7/24/10.

Charles A.S. Hall
“Energy return on investment, peak oil, and the end of economic growth.” Invited Plenary speaker, Seventh International Meeting on Advances in Energy Research. Barcelona, Spain (October 2010)
“Energy return on investment, peak oil, and the end of economic growth.” Special Address, University of Cordoba, Cordoba Argentina.
“Welcome and Introduction”. Third International meeting on Biophysical Economics, Syracuse N.Y. (April 2011)
“New estimates for EROI for US Oil and Gas”. (With Megan Guilford) Third International meeting on Biophysical Economics, Syracuse N.Y. (April 2011)
“Energy and the future cost of food” SUNY conference on food. Onondaga Community College (April 2011)
“Welcome and overview” Special conference on developing an approach for teaching Biophysical Economics in High Schools and Community Colleges. June 11, SUNY ESF. Syracuse NY

Invited University presentations:
“Peak oil, EROI and your financial future” Tompkins County Community College, Dryden NY (April 2011) “Peak oil, EROI and your financial future” Colgate University (April 2011)

Thomas R. Horton
Robin W. Kimmerer

Donald J. Leopold
Jones, J.B., D.J. Leopold, and J.C. Stella. The influence of environmental factors on vascular plant assemblages in created and natural vernal pools in southwestern New York (USA), poserter presentation, Ecological Society of America Annual Meeting, Pittsburgh, PA, August 2010
Landis, C.L., R.W. Kimmerer, and D.J. Leopold. Lost and found in Onondaga: Historical ecology of a polluted lake, oral presentation, Cornell University Natural Resources Graduate Student Association Annual Research Symposium, Cornell University, Ithaca, NY January 2011.

Karin E. Limburg
(I) Limburg, K.E. Ecosystem services: is it a good paradigm for aquatic scientists to adopt? Keynote presentation for Gravel-Bed Rivers 7, September 8, 2010 (Tadoussac, Quebec, Canada).
Limburg, K.E. Why should we care about shad and river herring enough to restore them? American Fisheries Society Annual Meeting, September 13-16, 2010, Pittsburgh, PA.
(I) Limburg, K.E., Y. Walther, C. Olson*, B. Hong*, D. Dale, J. Storå, and C. Slomp. Neolithic vs. modern Baltic Sea fisheries: shifting baselines and environmental change. Marine Science Institute,
Stacy A. McNulty


* Undergraduate lead presenter
* Undergraduate lead presenter

Myron J. Mitchell
Temperate Forest Watersheds: Responses to Atmospheric Pollutants and Climate Change at Jinang University (Jinang, China) on October 12, 2010
Nitrogen Biogeochemistry of Forested Catchments: Importance of Winter Processes at Chinese Academy of Sciences (Beijing, China) on October 20, 2010
Hydrobiogeochemical Research at the Huntington Forest: Effects of Atmospheric Deposition and Climate Change at meeting in Newcomb, NY on Source to Sink: Hudson River Watershed Research and Education Meeting on Oct. 1-2, 2010

James P. Nakas

Lee A. Newman
Phytoremediation and Bioavailability. Croucher Advanced Study Institute, Remediation of Contaminated Land-Bioavailability and Health Risk, Hong Kong, 9-13 December 2010
Environmental bioavailability; where do we go from here? Croucher Advanced Study Institute, Remediation of Contaminated Land-Bioavailability and Health Risk, Hong Kong, 9-13 December 2010

**Poster**


**Talks by colleagues or students**


**Posters by colleagues or students**


**Dylan Parry**


5/2011, Sirex noctilio Research Updates Meeting, Riverdale, MD.
1/2011, USDA Annual Interagency Research Forum on Invasive Species, Annapolis, MD.
4/2011, SUNY-ESF Spotlight on Student Research. Syracuse, NY.
1/2011, USDA Annual Interagency Research Forum on Invasive Species, Annapolis, MD.
12/2010, Annual Meeting of the Entomological Society of America. San Diego, CA

William A. Powell
Restoration of the American chestnut. 5/18/11. Cary Institute of Ecosystem Studies, Millbrook, NY
Update on American chestnut research. The American Chestnut Science Cabinet planning meeting. 5/4/11. Penn State, State College, PA
American Chestnut Research and Restoration Project. 4/29/11. Monsanto, St Louis, MO
American Chestnut Research and Restoration Project. 4/29/11. Danforth Plant Science Center, St Louis, MO
American Chestnut Research and Restoration Project. 4/28/11. Invited speaker. Missouri University of Science and Technology, MO
Update on American chestnut research. 4/15-4/16/11. The American Chestnut Foundation’s annual Board and Cabinet meetings, Abingdon, VA
Update on American chestnut research. 4/7 – 4/8/11. Forest Health Initiative, Science Advisory Committee’s reverse site visit, Raleigh, NC
American Chestnut Research and Restoration Project. 1/28/11. Invited speaker: Clemson University Seminar, Clemson, SC
Update on American chestnut research. 10/29/10, Annual meeting of the New York chapter of The American Chestnut Foundation, Syracuse, NY
Progress on transgenic chestnut research. 9/16 – 9/18/10, Annual NE1033 chestnut researchers meeting, Cataloochee Ranch in Maggie Valley, NC

Neil H. Ringler
Sadie J. Ryan


Kimberly L. Schulz


Joint Meeting of American Society of Limnology and Oceanography and North American Benthological Society, June 2010, Santa Fe, New Mexico.


Stephen A. Teale


Teale, S.A. Female-Produced Pheromones in the Asian Longhorned Beetle, 11 Jan 2011, USDA Interagency research Forum on Invasive Species (side meeting), Annapolis, MD


Teale, S.A. “Fungal attractants for Sirex noctilio and its parasitoids” Sirex noctilio Research Updates Conference, Sponsored by the USDA APHIS and USDA Forest Service, 24 May, 2011, Riverdale, MD (Invited)

J. Scott Turner


Alex Weir

Position specificity of Laboulbeniales: a molecular approach to resolution of a century-old debate. Accepted poster, 9th INTERNATIONAL MYCOLOGICAL CONGRESS, Edinburgh, Scotland August 2010. This poster was one of 18 selected for an award (out of 1092 posters submitted).

Christopher M. Whipps

Co-authored:
April 17-19, 2011. 67th Annual Northeast Fish and Wildlife Conference, Manchester, NH.

*Seroprevalence and distribution of bovine viral diarrhea virus and Coxiella burnetii in white-tailed deer in New York and Pennsylvania.* Kirchgessner, M.S., Dubovi, E.J., Zylich, N.C., Porter, W.F., Whipps, C.M.

April 12, 2011. SUNY-ESF Spotlight on Student Research, Syracuse, NY. *Comparative Analysis of Fish Parasite Communities from Adirondack Lakes With and Without Introduced Fish Species.* Bauer, E.F., Whipps, C.M. [Poster & Undergraduate Research]

April 12, 2011. SUNY-ESF Spotlight on Student Research, Syracuse, NY. *Ranavirus-exposed Wood Frog Tadpoles (Lithobates sylvaticus) are Robust to Three Natural Environmental Challenges.* Reeve, B.C., Crespi, E.J., and Whipps, C.M., Brunner, J.L. [Poster]


April 12, 2011. SUNY-ESF Spotlight on Student Research, Syracuse, NY. *Expanded Morphological Characterization of Endoparasites in Mantled Howler Monkeys.* Helenbrook, W.D., Whipps, C.M. [Poster]

April 7-8, 2011. Northeast Natural History Conference, Albany, NY. *Ranavirus-exposed Wood Frog Tadpoles (Lithobates sylvaticus) are Robust to Three Natural Environmental Challenges.* Reeve, B.C., Crespi, E.J., and Whipps, C.M., Brunner, J.L. [Poster]


Appendix F. Faculty Grants  
(active during reporting period)

Guy A. Baldassarre
Common Merganser research supported by NYSDEC. About $40,000

John D. Castello

Jonathan B. Cohen
Effect of salt marsh changes on breeding birds, with emphasis on the Saltmarsh Sparrow. Gateway Learning Center Fellowship, National Park Service, A. Koczk and J. Cohen, $7,200.

Martin Dovciak
USDA CSREES/McIntire-Stennis. Characterization of montane forests using remote sensing. $79,453; 2010-12, (CoPI).
USDA CSREES/McIntire-Stennis. Coupling local-scale climate change and forest ecosystems. $81,271; 2010-12, (Co-PI).

John M. Farrell

Danilo D. Fernando
Melissa Fierke
Claire Rutledge, Philip Careless, Colleen Teerling, Melissa Fierke. Degree day modeling and captive colony research for *Cerceris fumipennis*. $48,000. ($11,990 to ESF). USDA Forest Service. 2/11-2/12. Undergrad – Funmi Afelumo.
Colin Beier, J. Gibbs, M. Fierke, M. Mitchell, M. Dovciak. Impacts of acidic deposition and soil calcium depletion on terrestrial biodiversity and food webs in Northern hardwood forest ecosystems. Northern States Research Cooperative. $150,000. 08/10-10/12. Cheryl Bondi.

Jacqueline L. Frair

Grant/fellowships procured by my graduate students:

James P. Gibbs


New York State Energy Research and Development Authority (NYSERDA), “Assessing the Viability of Radar and Acoustic Data as a Predictor of Collision Risk to Night Migrating Birds and Bats: A Test Using Data from the Maple Ridge Wind Power Project, Lewis County, New York.” $49,000. J. P. Gibbs, 9/1/10-12/31/11 (Kevin Shoemaker supported)


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." James P. Gibbs, Eleanor Sterling, Kate Huyvaert, Washington Tapia, and Felipe Cruz, $21,500, 1/10-12/31/11.


National Science Foundation, “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, K. Silvius, L. Martins, J. Read. $1,650,001. 9/05-8-09. Extended to Sept 2011.


National Fish and Wildlife Foundation, “Golf Course Wetlands as Refuges for Turtles,” J. P. Gibbs, $60,000, 12/08-12/11

U.S. National Park Service: “Vital Signs Monitoring of the Northeast Temperate Parks,” J. P. Gibbs and G. Tierney (since 2001); current projects as follows:


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
Positioning Rust-Belt Cities for a Sustainable Future: A Systems Approach to Enhancing Urban Quality of Life.” National Science Foundation Urban Long-Term Research Area Exploratory Award (ULTRA-EX), ($300,000, my research $37,596), David Nowak (PI), Myrna Hall, Charlie Hall, Rick Smardon, and E. Carter (co-PIs). September 2009 – December 2011.

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.

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, and potentially tuition for an Argentine student to study some semesters at ESF), Oscar Giayetto and Juan-Jose Cantero (PIs).

US Forest Service Energy and economic analysis for the Caribbean. $20,000
Institute for Integrated Economic Research $10,000

Thomas R. Horton

Robin W. Kimmerer
National Science Foundation, Undergraduate Mentoring in Environmental Biology, $600,000 June 2006-August 2011
National Science Foundation, Summer Science Camp for Native Youth, $147,000, August 2009-August 2012
United States Forest Service, Traditional Knowledge of Black Ash Ecology, $47,000.
Tribal College Research Grant, “Re-establishing Ojibwe traditional subsistence landscapes” with Dawn White, Lac Courts D’Oreille Tribal College.

Donald 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; $648,274; January 2008 to December 2011; D.J. Leopold.
Honeywell, Inc., Review of Honeywell Onondaga Lake shoreline restoration projects, $6,550; July 2010 to June 2011, D.J. Leopold.
National Geographic Society, Climate buffering in temperate zone fens: implications for climate change; $5000; May 2010 to December 2011; D. Leopold and P. Raney.
National Science Foundation, Environmental science to promote sustainable urban, rural and indigenous communities; $1,605,000; March 2007 to February 2011; D.J. Leopold, R. Beal, C.M. Spuches, and D.J. Raynal.

National Science Foundation, Environmental scholars: A scholarship program in Environmental Chemistry, Biology, and Engineering; $600,000; March 2009 to February 2013; K. Donaghy, D.J. Leopold, J.P. Hasset, J.M. Hasset, and J.E. Turbeville.

National Science Foundation, ARRA Renovation to wet labs and cyber infrastructure to enhance integrated research and teaching in aquatic sciences; $1,470,000; October 2010 to September 2013; N. Ringler, K. Schulz, J. Farrell, C. Whipp, and D. Leopold.

NYS-DEC, Student internship program; $24,297; March 2008 to February 2013; J.P. Gibbs and D.J. Leopold.

NYS-DEC, Invasive plants program coordinator; $54,703; January 2010 to June 2011; D.J. Leopold.

The Nature Conservancy, Genetic diversity of American hart’s-tongue fern: The population in Clark Reservation State Park, Onondaga County, NY; $8,127; January 2010 to December 2010, D. Fernando and D. Leopold.

The Wetland Foundation, Research travel grant to Jaime Jones, $800, April 2010 to March 2011, D.J. Leopold.


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.

US EPA, Onondaga Creek Habitat Restoration Demonstration Initiative; $347,900; August 2004 to July 2010; T.A. Endreny and D.J. Leopold.

Karin E. Limburg
In-kind grant awards, Cornell High Energy Synchrotron Source (CHESS): Beam time at the synchrotron for X-ray fluorescence analyses: June 2010, October 2010, and May 2011. Note that these are NSF sponsored awards.


Grant award, NOAA: “Habitat Use by American Shad Larvae in the Hudson River Estuary, New York,” $40,000, 5/01/10 – 5/31/12. (C. Nack co-wrote the proposal).


Grant award, National Science Foundation: “Positioning Rust Belt Cities for a Sustainable Future: A Systems Approach to Enhancing Urban Quality of Life,” (D. Nowak and M. Hall, PIs), $300,000, 1/1/10 – 12/31/11.
Grant award, USGS (via U. Florida): “Near Shore Fish Ecology in the Grand Canyon,” 4 years, $1,178,711 total, $272,976 to ESF. Role: co-PI, but PI at ESF.

Grant award, USGS Grand Canyon Monitoring and Research Center: “Validating of δ13C and δ18O otolith chemistry signatures of resident Little Colorado River fish using secondary ion mass spectrometry.” 1.25 years, $64,000.


Grant award (combined), 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.

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

Fellowship award to Master’s student Jill Mandel: “Wastewater Pollution and Predatory Birds in the Hudson River Estuary.” T.T. Polgar Fellowship, $4,000, summer 2011. (KL is advisor)

Mark V. Lomolino
NSF – Of Mice and Mammoths: Toward a General Theory of Body Size Across Space and Time; $100,000 for 1.5 years.

Stacy A. McNulty


McNulty, S.A. and K.E. Limburg. SUNY Conversation in the Disciplines. Source to Sink: Hudson River Watershed Education and Research Meeting. $4,935. 9/1-10/31/10 (completed).


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
Principal Investigator. Collaborative Research: Evolution of Dissolved Organic Nitrogen (DON) from the Headwaters to the Catchment Outlet: Sources, Variation with Scale, and Differences with DOC. NSF-Hydrology. $70,256.00. 2008-2011

James P. Nakas

Lee A. Newman
USDA, Nanoparticle contamination of agricultural crop species; $1,498,080; Mar 11-Mar 16, Wenjun Cai (PI)
NASA, Development of Hyperspectral Imaging of Plants to Detect Contamination; $182,829
Mar 11-Mar12
NSF, Plant Uptake and Interaction with Nanoparticles, $277,907, Sept 08– Sept 11
Perkin Elmer Equipment Grant for Research – HPLC/MS/TOF, $68,200, May 11- July 11

Dylan Parry
2009-2012. Fierke, M., D. Parry and D. Allen. Evaluating Impacts of Native Parasitoids on Sirex noctilio in New York (provides support for Chris Standley) $75,000
William A. Powell
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.
ArborGen LLC. Transformation of American chestnut with genes encoding transcription factors. $20,000 (1/1/11-12/31/12) PI with Dr. Maynard as Co-PI. Another year of 10 years of support beginning in 2002 totaling $500,000.
The American Chestnut Foundation. Travel grant to China to collect DNA and RNA samples from Asian chestnut species. $16,600. PI with graduate student Amelia Bo Zhang as co-PI.
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. Opportunity to renew an additional three years if progress is sufficient.
Forest Health Initiative. Supplemental funding to examine early flowering genes in transgenic American chestnut. $83,000 (6/1/10 – 5/31/12). PI with Dr. Maynard as Co-PI.
Consortium on Plant Biotechnology Research (CPBR). Collaborative research: Developing blight resistance in transgenic American chestnut for agroforestry and restoration. $67,000 (5/1/10-4/30/11) PI with Dr. Maynard as co-PI.
The New York Chapter of The American Chestnut Foundation. Supplemental grant for technician support for Chestnut research. $20,000 (1/1/10-12/31/11). PI with Dr. Maynard as co-PI.
Vetlesen Foundation. Equipment grant for woody tissue grinder. $14,000 (6/1/10-12/31/10). PI with Kathleen Baier as co-PI.
USDA-Biotechnology Risk Assessment Grant program (BRAG), Evaluating Environmental Impacts Of Transgenic American Chestnut Trees To Chestnut Trees Produced By Conventional Breeding. $380,000 (10/1/08-9/30/11). PI with co-PIs, Dr. Maynard, Dr. Horton, Dr. Parry, and Dr. Leopold.
The New York Chapter of The American Chestnut Foundation. Testing Transgenic Events for Gene Copy Number, Gene Expression, and BlightResistance. $100,000 (5/08-6/11). 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 (5/08-6/11). Co-PI with Dr. Maynard, PI.

Neil H. Ringler
ARRA Renovation of Wet Labs and Cyber-Infrastructure to Enhance Integrated Research and Teaching in Aquatic Science at SUNY ESF; $1,470,000; NSF, 10/10 – 9/13, PI
McIntire Stennis FY 10-11 Supporting ESF Graduate Students in several Departments; $584,532; USDA McIntire-Stennis, 10/10-9/11, PI
Collaborative Research: Impacts of In-Stream Restoration on Hydrological, Chemical, and Biological Heterogeneity in the Hyporheic Zone; $125,897; NSF, 1/08-6/11, co-PI
Onondaga Lake Biological Assessment and Monitoring; $528,194; Honeywell, Inc., 1/08 – 6/11; PI
Central New York District Cooling Project; $1,488,000; US EPA, 1/06 – 6/11; co-PI
Enhanced Effectiveness of Planning and Managing Urban Forest Ecosystems; $78,000; USDA Forest Service, 8/06 – 8/11; PI

Kimberly L. Schulz
NSF, REU Collaborative research: Eco-evolutionary feedback on community assembly, PI: K.L. Schulz; $8,000; 1 May 2009-30 June 2012
NSF, REU Collaborative research: Eco-evolutionary feedback on community assembly, PI: K.L. Schulz; $8,000; 1 July 2009-30 June 2011
Sustainable Enterprise Partnership; Effectiveness of post-consumer food waste as a means for nutrient recovery and waste reduction when used as fish feed in an aquaponic system”, co-PIs: D. Daley, K.L. Schulz; $6,220; May 2011-June 2012

NSF, Renovation of wet labs and cyber-infra-structure to enhance integrated research and teaching in aquatic science at SUNY-ESF, PI: Neil Ringler; co-PIs: J.M. Farrell, D.J. Leopold, K.L. Schulz (point of contact), C.M. Whipps; $1,470,000; October 2010-September 2013


Additional funded projects as collaborator

Collaborator on Hatch Proposal 2006-07-097. Title: Ecological Indicators and Sustainability of the Lake Ontario Ecosystem: Melding Science and Stakeholder Involvement. Total of $23,500 a year (~$2,500 annually to KLS) for a period of 3 years from CUAES (Hatch research support) and CCE (federal extension). Oct 1, 2006 – Oct 1, 2010. P.I. E. Mills (Cornell); Collaborators: L. Rudstam (Cornell), R. O’Gorman (USGS), D.B. MacNeill and D.G. White (NY Sea Grant).

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” PI: James Gibbs; coPIs: John Stella, D.J. Leopold, K. Schulz Amount: $80,000; Dates: May 2009-December 2012.

Project Participant in successful proposal to form a NIMBioS working group, "Food web dynamics and stoichiometric constraints in meta-ecosystems," with PIs M. Leibold (UT Austin), R.W. Sterner (UMinnnesota), F. Massol (CEMAGREF, France) and C. Klausmeier (Michigan State) to run in three four-day workshops from 2010-2011 (http://nimbios.org/).

Graduate Student Led Grants:

NSF, Dissertation Research: Quantifying the role of mixotrophic feeding in aquatic food webs
PI: K.L. Schulz; co-PIs: Jacob Gillette; $15,000; June 2011-May 2013


Edna Bailey Sussman Fellowship to Stephanie Figary, summer 2010
Sigma Xi award to Stephanie Figary, spring 2011
Edna Bailey Sussman Fellowship to Andrew Brainard, summer 2011

Stephen A. Teale


J. Scott Turner
Collective structural defense of the mound-building termites of the genus Macrotermes, US Army Research Office; $300,000; June 2008 – June 2012
Biology’s Second Law: Evolution, Purpose and Desire; $50,000; John C. Templeton Foundation, 2 years

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; $750,000, Starting Date 1st January 2006 Ending Date 31st December 2011. One year no-cost extension approved by NSF
National Science Foundation – Undergraduate Mentoring in Environmental Biology (UMEB) Program – Integrating Science and Stewardship in the Adirondacks; $600,000; PIs Robin Kimmerer and Stacy McNulty. My dual role will be as Mentor and Facilitator during use of the Cranberry Lake Biological Station by students in this program

Christopher M. Whipps
SUNY-ESF Seed Grant Program (04/01/11-06/30/12) - $8,000. Molecular Prospecting: Genomic DNA Sequence Data for Myxozoa.
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.
NIH Subaward P0274A-A (3/1/10 - 2/28/12) $60,000. Characterizing Mycobacterium species from zebrafish and diagnostic development.
SUNY-ESF Seed Grant Program (3/1/09 - 12/31/2010) - $8,000. Systematics and Biodiversity of the Myxozoa.
USDA-CREES/McIntire-Stennis Program (8/15/09 – 9/30/11) - $50,500 Monitoring populations of elusive forest wildlife: a modern approach using noninvasive genetic techniques, Co-investigator with Jacqueline Frair.
Appendix G. Service to Department, College, and University

**John D. Castello**  
Associate Chair  
Chairman of the departmental Promotion and Tenure Committee  
Coordinator of the Forest Health major  
Faculty coordinator of the 2011 departmental spring awards ceremony  
Unofficial EFB faculty point person for departmental autoclave repair  
Chaired an ad hoc college-wide committee appointed by the Provost to develop a new undergraduate curriculum in Environmental Health, which was subsequently approved by ESF Faculty Governance and submitted to SUNY-Central for approval.

**Jonathan B. Cohen**  
Faculty advisor for student chapter of The Wildlife Society (service to begin Fall 2011)  
Research Committee (service to begin July 2011)  
Reviewer for Sussman Internship Applications  
Reviewer for Burgess Award Applications

**Martin Dovciak**  
Chair, Committee for Robert Burgess Graduate Scholarship in Ecology  
Graduate Program Advisory Committee (member)  
Participating instructor in the preparation of the new co-taught EFB 210–*Diversity of Life I*  
EFB greenhouse collections development with Terry Ettinger and others (ongoing)  
Committee on Research (member)  
Council for Geospatial Modeling and Analysis (member)  
Center for Urban Environment (core faculty member)  
Spotlight on Research Student Conference (co-organizer)  
Learning Community Retreat for Incoming Freshmen (faculty leader)

**John M. Farrell**  
Served as Chair of the Wildlife Ecologist Search Committee (with Baldassarre, Frair, Limburg, Stella) within EFB that led to hire of Jonathan Cohen and Sadie Ryan.  
Mentored an Assistant Professor in EFB  
Supervised two EFB funded Federal Work-study assistants at TIBS  
Served with team lead by Kim Schulz, Neil Ringler and Brian Boothroyd in execution of $1.4M NSF award to enhance EFB’s aquatics program via improvements at CIRTAS and TIBS laboratory facilities and cyberinfrastructure. Participated in numerous meetings. Led tour to TIBS with NSF program chair.  
Served as Director of the Thousand Islands Biological Station (TIBS). Including oversight and supervision and participation in activities at TIBS including research, community outreach, facilities and development.  
Continued work on development initiative for new TIBS multipurpose building with Bob Quinn.  
Work on NSF ARRA contract.  
Assisted with college Master Plan including meetings and site visit at TIBS.

**Danilo D. Fernando**  
Director, EFB Graduate Program  
Member, Graduate Program Advisory Committee  
Coordinator, Committee on Optical Instruments and Equipment  
Member, Graduate Council
Melissa K. Fierke  
EFB Curriculum and Course Assessment Committee  
Graduate Program Advisory Committee  
Scholarship committees: Roskin undergraduate award to outstanding female senior  
Outstanding undergraduate teaching assistant award  
Burgess outstanding PhD student award in ecology  
Stegeman invertebrate ecology graduate award  
Preorientation for Underrepresented Students 8/2010  
Committee on Public Service and Outreach  
Faculty sponsor for the ESF Women’s Basketball team  
Member of the ESF Learning Community  
Participated at the Freshmen Learning Community Retreat at Orenda Springs  
Blackboard training at the Graduate Assistant Colloquium on Teaching and Learning  
Served on the Dean of Student Services search committee  
Judged GSA Spotlight on Student Research posters  
May Student Award dinner  

Elizabeth Folta  
Open Houses: Fall & Spring  
Program coordinator for Natural History and Interpretation major  
Currently, updating the Natural History and Interpretation curriculum with EFB faculty.  
Member of the search committee for the Senior Education Specialist, Adirondacks Interpretive Center  
Member of the search committee for the Education Specialist, Adirondacks Interpretive Center  

Jacqueline L. Frair  
Wildlife Science, Curriculum Coordinator.  
Roosevelt Wild Life Station, Associate Director (November 2010 – present).  
Wrote article highlighting station for Boone & Crockett Clubs “Fair Chase” magazine.  
Gave presentation on the Station to Boone & Crockett Club annual meeting at the North American Wildlife and Natural Resources Conference (Kansas City, 16 Mar 2011).  
The Wildlife Society, Faculty Advisor to the Student Chapter.  
Wildlife Faculty Search Committee, member (search concluded summer 2010).  
Mentor to two UMEB students – Nory Alexander and Erin Moody.  
Coordinator of Betty Moore Chamberlaine and Ralph T. King department awards.  
Routinely participated in student receptions and personal meetings with prospective and accepted students.  
NY State Fish and Wildlife Management Advisory Board, Science Advisor for SUNY ESF (legislatively-mandated position).  
Faculty Governance Committee on Research (chair) and Executive Committee (member).  
The Council for Geospatial Modeling and Analysis, member.  
Attended spring Banquet and Commencement (gave up my seat for family members)  

James P. Gibbs  
Coordinator, Conservation Biology Major  
Coordinator, EFB Internships  
Member, Course and Curriculum Assessment Committee  
Member, Promotion and Tenure Committee  
Associate Chair  
Director, Roosevelt Wild Life Station
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  
GPAC  
Mentor for Martin Dovciak and Melissa Fierke  
Reviewed teaching: Greg McGee, Lee Newman  
Maintenance/operation of the two new growth chambers (5 and 6)  
Chair: Josiah L. Lowe  
Hugh E. Wilcox Graduate Scholarship Endowment committee  
ARB Core team (spotty participation but many meetings were attended in part or in whole)  
Faculty representative for ESF’s Student club, “Central New York Society for Conservation Biology”.

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 2010  
Co-leader, exercise for Pre-orientation students, August 2010  
Host, campus remembrance for Dr. Edwin H. Ketchledge, October 2010  
Presenter (twice, on campus trees and shrubs) for annual Alumni, Family, and Friends BBQ, October 2010  
Presenter on GSA panel on Graduate School, Fall 2010  
Reviewer, McStennis proposal  
Member, Core Team for Academic Research Building  
Member, Core Team for Illick Hall rehabilitation project  
Member, SUNY-ESF Facilities Master Plan Committee  
Chair, Faculty Committee on ESF Promotion and Tenure Standards (through completion in mid February)  
Member, Advisory/Steering Committee for ESF Campus Master Plan Study (now Gateway Building)  
Director, Undergraduate Honors Program (through mid-May)

Karin E. Limburg  
Chair, Graduate Program Advisory Committee  
Member, Building and Space Committee  
Member, Wildlife Biologist Search Committee  
Member, Environmental Studies Faculty Search Committee (2 positions, spring 2011)
Member, Peer Review Committee, Environmental and Resource Engineering

**Mark V. Lomolino**
Participated in accepted student receptions and overviews of departmental programs in wildlife and conservation for visiting parents and students.
Volunteer, ESF at the NYS Fair

**Gregory McGee**
EFB CCAC
ENB assessment team
Coordinator, Freshmen Pre-Orientation Adirondack Experience
CLBS Fellows Selection Committee, w/ C. Whipps
Burgess Award Selection Committee, w/ M. Dovciak
Participated in Transfer Student Orientation/Registration in January
Accepted Student Reception (3/5/11; 3/26/11)
Learning Community Management Team
Freshman/Transfer Orientation Team
Faculty Governance Committee on Instruction – Subcommittee on General Education.
ESF Graduate Assistant Colloquium – facilitated workshops on Teaching Strategies for Laboratory and Field Experiences (w/ A. Stipanovich, 8/25); and Evaluating Written Work (8/26).
Search Committee – Director of Student Activities
Search Committee – General Chemistry Laboratory Coordinator
Faculty Governance Committee on Student Affairs, Chair
Middle States Commission on Higher Education, Self Study Draft Campus Review Focus Group
Participant for Study Group 2 (Governance and Administration)
McIntire-Stennis Proposal Review
ESF/SU Commencement Marshall, May 15.

**Stacy McNulty**
Associate Director, Adirondack Ecological Center
Organizer, Huntington Lecture Series
Editor, Spruce Moose newsletter
Committee for Research (COR)
Council for Geospatial Modeling and Analysis (CGMA)

**Myron J. Mitchell**
Director of Council of Hydrologic Systems Science
Consortium of Universities for the Advancement of Hydrologic Sciences, Incorporated (CUAHS), alternate representative for ESF (2001-present).
NYSTAR Team Leader for Urban Ecosystems.
Member of Board of Directors of New York Research Foundation
Vice-Chair of Board of Directors of New York Research Foundation (January 2011-present)
Chair and Member of Committee on Research for New York Research Foundation (Jan.- Dec. 2010)
Chair and Member of Committee on Human Resources for the New York Research Foundation (January 2010 - present).
Member of SUNY Higher Education Advisory Committee
Reviewer Committee for SUNY Distinguished Professors

**James P. Nakas**
Chairperson, Institutional Biosafety Committee
Tsutomu Nakatsugawa
Chair, Promotion and Tenure Committee (completed March, 2011); continuing as a member.
Chair, IACUC (Institutional Animal Care and Use Committee), summer 2010 – summer 2011.
Member, Academic Integrity Hearing panel (Kenneth Tiss, Chair) May, 2011

Lee A. Newman
Course and Curriculum Assessment Committee
Acting Coordinator for Biotechnology Major
Core Team Member for the design and planning of the Academic Research Building.
Participated in design review for greenhouse renovation.
Participated in two open house receptions for new students, in the fall and in the spring.
Meetings with students and faculty at the receptions held for new freshman and transfer students
Participated in the group academic advising of the new transfer students starting at ESF
Participated in the Biotechnology Research Center planning meetings

Roy A. Norton
EFB Undergraduate Curriculum Director
ENB Curriculum Coordinator
EFB Curriculum, Course and Assessment Committee (member)
Responsible for maintenance of departmental Invertebrate Collection
Member, mentoring committees for Christopher Whipps, Gregory McGee, Elizabeth Folta
Member, ESF Retention Committee
Service on CoI Subcommittee on Academic Standards

Dylan Parry
Administrate the LeRoy C. Stegeman Award in Invertebrate Ecology
Member, Sussman Fellowship Committee (3 year term). Evaluate and rank 36 research proposals.

William A. Powell
Faculty representative on ARB building Committee
Coordinator for the undergraduate Biotechnology major
Director of the Council on Biotechnology in Forestry
IBC (Institutional Biosafety Committee) member

Neil H. Ringler
Ex-officio IACUC
Ex-Officio Committee on Research
Mentoring Conference January 2011 Drumllins
Research Committee SUNY Research Foundation
Budget Committee SUNY

Sadie J. Ryan
EH Curriculum Committee – committee to design and implement new Environmental Health (EH) major

Kimberly L. Schulz
EFB Course and Curriculum Assessment Committee Chair
Associate Professor member of EFB Promotion and Tenure Committee
Faculty mentor for Jacqui Frair, Greg McGee, Beth Folta
Member of Phyllis Roskin Award Committee
Substituted for Don Stewart meeting with 2 prospective AFS majors fall 2010; met with accepted students
April 25, 2011
Aquatic/Wildlife/Conservation Biology accepted student forum 5 March 2011
Volunteer to assist with transfer student registration Aug 2010
Member of the Middles States steering committee
ESF member on the Slepecky Award Committee for Undergraduate Research Prize at Syracuse University and SUNY ESF
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
Co-ordinate college-wide AquaBreak seminar (formerly AquaLunch) and run seminar with graduate students Jacob Gillette and Cheryl Whritenour
ESF 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

William M. Shields
Member GPAC: part of the year
EFB representative to Honors Council
Field Programs Coordinator: Until mid-year
Acting Director at CLBS Session D (2 Weeks)

Stephen A. Teale
Secretary, Faculty Governance, beginning 18 May, 2011

Alex Weir
Director, Cranberry Lake Biological Station
Curator of the EFB Herbaria appointed
Member, EFB Promotion and Tenure Committee
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
Chair, Zabel Award Committee
Chair, Morrell Award Committee
Participant, Middle States Accreditation Review

Christopher M. Whipps
EFB Curriculum Committee (Jan-Feb 2008, Aug 2008-present).
EFB Cranberry Lake Biological Research Station Undergraduate Research Fellowship Program (Chair; Dec 2009-present).
ESF Committee on Instruction (Aug 2010 – present).
ESF Committee on Promotion and Tenure Policies and Procedures (Feb 2008 – Feb 2011)
ESF Environmental Health Curriculum Planning Committee (Nov 2010-present).
ESF Academic Research Building Core Team (Apr 2010 – present).
Appendix H. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

Jonathan B. Cohen
Appointed to the advisory board for the Goldenrod Foundation, a private conservation nonprofit based in Plymouth Massachusetts. Attended board meeting 4/22/2011.
Appointed as an advisor to the U.S. Shorebird Conservation Plan (US Fish and Wildlife Service)

Martin Dovciak
Worked with the National Park Service (incl. Great Smokey Mts. NP, Shenandoah NP, and Delaware Water Gap) to document how acid deposition may have affected ecosystems along the Appalachian Trail.
Worked with the New York State Department of Environmental Conservation to adapt prescribed fire as a management tool for restoring summer habitat of endangered eastern massasauga rattlesnake in Cicero Swamp Wildlife Management Area, New York.
Worked with Shingle Shanty Preserve and Research Station in the Adirondacks, New York, to develop their ecological research, monitoring, and outreach program.
Responded to various inquiries from the public (e.g., Pheasants Forever Inc., Syracuse Botanical Club).

John M. Farrell
Central Michigan University – CMU Biological Station Great Lakes Research Advisory Board members – travelled to Beaver Island for 2-day meeting, developed advisory report with board.
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– invited expert to one-day workshop to IJC Technical Group regarding development of water levels regulation plans – Burlington Ontario (March 2011)
Thousand Islands Land Trust Zenda Farms Picnic, Provided live fish and poster displays as part of community event (June 2010)
Save The River, Clayton, NY, 2011 Board of Directors, advisory roles on environmental issues, development of teacher training initiative for North Country districts.
LimnoTech Inc. Assisted Todd Redder with update of the upper St. Lawrence River muskrat model and presented outcome in presentation to IJC Technical Group.
Ontario Ministry of Natural Resources – assisted with development of northern pike monitoring program.
Environment Canada, Montreal – performed aging and interpretation of muskellunge cleithra bones

Melissa K. Fierke
Answered questions from the public on insects/arthropods through the reporting period.
Participated in several meetings as part of the NYDEC scientific advisory response team for emerald ash borer (Ithaca, NY, October, 2010; Bath, NY, March, 2011
I’m also working with Steve Harris, the Syracuse City Arborist, and Jesse Lyons, Cornell Cooperative Extension, on developing and implementing an emerald ash borer preparedness plan for the City of Syracuse and Onondaga County. I’ve presented to the Syracuse city council on the importance of this.

Elizabeth Folta
Rosamond Gifford Zoo, Education Committee 12/2010 – current
Friends of Beaver Lake, Board Member 1/2011 - current

Jacqueline L. Frair
NY State Fish and Wildlife Management Advisory Board, SUNY ESF Science Advisor
29 Oct 2010 (day-long meeting)
29 Apr 2011 (day-long meeting)
NY State Biodiversity Conservation Advisory Committee, member
25 Feb 2011 (10-3:30 pm conference call)

**James P. Gibbs**

“Equipo Asesor en Herpetología/Advisory Team in herpetology” to Galapagos National Park Service,
Member, appointed 1 year term, 10/10.
Instituto Ecología, Xalapa, Mexico, Member of Comité Externo de Evaluación del INECOL, 4 year term,
appointed 12/10 (performed first site visit 14-18 Feb. 2011).
Vice Chair, Altai Assistance Project (Wadhams, NY, USA/Gorno-Altaisk, Altai Republic, Russia),
(elected 3/09, 2-year term)
Member, Chittenango Ovate Amber Snail recovery team (2002-present)
Nine Mile Creek Conservation Council, Council Member, Camillus, New York (2001-present).
Board member, The Wetlands Trust (2009-present)

**Robin W. Kimmerer**

Sitka Center for Art and Ecology: plan for scientific engagement
Blue Mountain Center: Adirondack Natural History walk
Orion Society Board of Directors
Oregon Museum of Science and Industry, advisor to Generations of Knowledge Project

**Donald J. Leopold**

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 wetlands grant from EPA to the USC
Review of faculty member for reappointment, Department of Natural Resources, Cornell University,
Ithaca
Frequent contributor, upon request, to the Syracuse Post-Standard, including feature stories this
past year on fall color, native plants, lush spring
Member, round-table to answer questions about landscape plantings, CNY Blooms, Syracuse, March
2011, about 50 people in attendance.
Book signing for Syracuse University Bookstore, Syracuse Downtown Arts and Crafts Festival, July 2010

**Karin E. Limburg**

Panelist, NSF Coupled Natural-Human Systems (CNH), March 1-2, 2011
Participated in NSF review of Cornell High Energy Synchrotron Source, November 2011
Member, Fisheries Subcommittee, Hudson River Estuary Management Advisory Committee.
Marine Stewardship Council: Certification of Maryland striped bass fishery (2006-). One of these days, I
am supposed to be paid…
External reviewer for tenure/promotion decision, SUNY Downstate Medical University, June 2010
External reviewer for professor promotion decision, Cornell University, Fall 2010
IMBER-LOICZ Continental Task Team (IMBER = Integrated Marine Biogeochemistry and
Ecosystem Research; LOICZ = Land-Ocean Interactions in the Coastal Zone) – member, 2011-2014
Reviewer for Monterey Aquarium’s Sea Food Watch program (reviewed American shad)

**Gregory G. McGee**

Skaneateles Conservation Area Advisory Committee (member)
Finger Lakes Land Trust Preserve Management Committee (member)
**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; edit documents such as regional comparison of vernal pool regulations on NEPARC website  

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

**James P. Nakas**  
Member, Advisory Committee, CNY Biotechnology Research Center  

**Lee A. Newman**  
Reviewed the National Institute of Environmental Health Sciences (NIEHS) (a research institute of the National Institutes of Health (NIH) within the Department of Health and Human Services (DHHS)) draft National Institute of Environmental Health Sciences Superfund Hazardous Substance Research and Training Program (SRP) Strategic Plan.  
Judge for 10th ESF Environmental Challenge Science Fair, 17 March 2011  

**Roy A. Norton**  
24-hr consulting specialist on venomous arthropods for Syracuse Poison Information Center.  
Extension: regular fielding of calls and inquiries from general public and businesses regarding mites, spiders, ticks, and other pest arthropods.  
Collaborating specialist, USDA Insect Identification Service: mite identifications and dispensing of biological information.  
Collaborating specialist, USDA-APHIS: identification of mite specimens taken during routine quarantine inspections of plants.  
Complementary mite identifications and/or extended consultations relating to the following ecological/evolutionary/taxonomic studies of mites: (researcher, institution, project):  
M. Heethoff – University of Tuebingen, Germany: defensive gland chemistry in *Archegozetes*.  
S. Seniczak and A. Seniczak - Univ. of Techn. & Life Sciences, Poznan, Poland: European species of the genus *Umbellozetes*.  
Z. Lindo – McGill University: Systematic and ecological studies of arboreal oribatid mites  
S. Ermilov – Nizhniy Novgorod Medical Academy, Russia: the mite family Carabodidae in Vietnam.  
S. Shimano – Myagi University, Japan: techniques for DNA extraction from mites.  
G. Weigmann – Frei University, Berlin: Setal homologies in the oribatid mite genus *Lucoppia*.  
M. Maraun – University of Geottingen, German: stable-isotope investigation of feeding niche of moss-dwelling mites in Australia.  

**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 occasional housing for graduate students. Brian Hoven, in particular, was availed a significant amount of Pine Bush resources during the implementation of his project. My new MS student, Georgia Keene, will likely work in the Preserve as well.
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
Held the Annual meeting of the NT chapter of The American chestnut Foundation on the ESF campus. Gave talks, and lab, greenhouse, and field tours.
Advisor to the NY chapter of The American Chestnut Foundation
Science advisory board member of the national American Chestnut Foundation
ESF Alumni Reunion Weekend tours of labs and greenhouse

Neil H. Ringler
Assistance to Onondaga Lake Habitat committees as part of graduate mentoring program

Kimberly L. Schulz
Assisted with phytoplankton identification for Skaneateles Lake twice during the year
Assisted COFOKLA (Cortland Onondaga Federation of Kettle Lake Associations) with water quality evaluations

William M. Shields
Board of Directors (1996- ) and Treasurer (1996-2001), Melinda Gray Ardia Environmental Education Foundation, P.O. Box 621, Skaneateles, New York 13152.

Alexander Weir
Poison Control Center, consultation with local physicians re: identification and treatment of mushroom poisonings (1 case Fall 10)
National Science Foundation Grant Application Reviewer (2 applications fall spring 2011)
Continued Liaison with Central New York Mycological Society
Participant NSF funded Assembling the Fungal Tree of Life (AFTOL) Program
Appendix I. Unfunded Service to Professional Societies and Organizations

Jonathan B. Cohen
The Waterbird Society, Chair of Conservation Committee

Martin Dovciak
Mountain Research Initiative Expert Database (member)
SUNY-ESF Beech Working Group (member)

John M. Farrell
American Fisheries Society, Hutton Scholar Mentor for 2010 - applied to serve as mentor, sought applicants and an individual (Emily Churchill) was awarded an 8 week scholarship to assist with research at TIBS a 2011 mentor application was also awarded for Erica Mincerella (co-mentor with Chris Barry).
Board of Directors, Save The River Inc. – 1200 member Environmental Advocacy organization on the St. Lawrence River.
Thousand Islands Land Trust – service as conservation partner for TIBS.

Jacqueline L. Frair
Chair of an ad hoc committee of The Wildlife Society focused on the impacts of oil & gas development on wildlife in the eastern US (initiated May 2011).

Thomas R. Horton
Chair - Program Committee, Mycological Society of America (2009-2010), This is a major responsibility as I organized the program for the July 2010 meeting in Kentucky and wrote the program. We had about 350 attendees.
Counselor – Ecology and Pathology (elected position, August 2009 – July 2011)

Robin W. Kimmerer
John Burroughs Association, Judge, Selection Committee, John Burroughs Medal Competition
SACNAS, Society for Advancement of Chicanos and Native Americans in Science, Editorial Advisory Board
Orion Book award judge and reviewer
Central New York Native Educators Association, Member
Indigenous Women’s Science Network, founding member
Ecological Society of America, SEEDS workshop at AEC

Karin E. Limburg
Awards Committee, Kenneth Boulding Award for Ecological Economics, International Society for Ecological Economics
Co-convener, symposium on American shad and river herring restoration, 2010 Annual Meeting of the American Fisheries Society, Pittsburgh, September 14-16
Co-organizer, workshop on nutrients, hypoxia, and fisheries, Smithsonian Research Center, June 28-30, 2010

Mark V. Lomolino
Advisory Board, International Biogeography Society; Frontiers of Biogeography, magazine

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

**Myron J. Mitchell**  
Member of International Scientific Steering Committee of the 8th International Conference on Acid Deposition to be held in Beijing, China, June 2011  
Chair of Hubbard Brook Experimental Forest Archive Committee

**Lee A. Newman**  
Association of Environmental Health Sciences – Scientific Advisory Board, organizer for Phytoremediation session at Annual Conference in Amherst, MA  
International Phytotechnology Society – President; Chair of Gordon Award Committee, Chair of Educational Award Committee, Member of Organizing Committee for Annual Conference

**Sadie J. Ryan**  
Society for Conservation Biology:  
- Chapters Committee, member  
- Student Affairs Committee, member  
- “Liaison”, Chapters Committee and Student Affairs  
- SCB2012 http://www.scbnacongress.org/: N. American Conference Committee, member

**Kimberly L. Schulz**  
Co-Chair of Trophic Linkages Session at ASLO June 2010  
Member of a subcommittee of the Education Committee of the American Society of Limnology and Oceanography. Participating in developing the ASLO Education website – particularly the image library and helping organize the first ASLO photo contest and calendar

**Alex Weir**  
Member, Mycological Society of America Distinctions Committee

**Christopher M. Whipps**  
American Fisheries Society Fish Health Section Technical Standards Committee (appointment June 2010-Jun 2014)
Appendix J. Funded Service to Governmental Agencies, Industrial and Commercial Groups, Public Interest Groups, etc.

Jonathan B. Cohen
Effect of human disturbance on Snowy Plover behavior and reproductive success. Conservian, Inc. (private nonprofit). Provided statistical advice and analysis for a behavioral study, produced final report.

John M. Farrell
Review for Honeywell, Onondaga Lake Shoreline Restoration Projects – development of restoration plan with group to restore habitat function for northern pike spawning (with D. Leopold and N. Ringler).

Melissa K. Fierke
Entomology presentation to local teachers coordinated through ESF Outreach.

Robin W. Kimmerer
Presented two workshops on bryophyte ecology for Moss Acres, Inc.

Donald J. Leopold
Nelson, Byrd, Woltz Landscape Architects for consulting at Monticello, Charlottesville, Virginia
EDR Companies for consulting at Sacred Grove and Hill Cumorah, Palmyra, NY

Karin E. Limburg
Expert reviewer for Lectureship/Professorship in Resilience Science, Stockholm University, June-August 2010

Myron J. Mitchell
Member of the EPA’s Clean Air Scientific Advisory Committee (CASAC)

Tsutomu Nakatsugawa
Reviewed and critiqued a document, emamectin benzoate critical review, by Syracuse Environmental Research Associates for Forest Service. (consulting service)

Kimberly L. Schulz
Identified algae in bottled drinking water for Syracuse University

William M. Shields
Consultant and Expert Witness in Forensic DNA and dog tracking behavior.

J. Scott Turner
Judge. Syracuse Academy of Science Science Fair.
National Geographic Magazine, for forthcoming article on termites
Scholastic Magazine, for a forthcoming article on ant rafts
ScienceNOW, for a forthcoming article on ant rafts
BBC Natural History Unit, for an upcoming documentary on termites
Appendix K. Presentations to the Public

Martin Dovciak
Invited Seminar, USDA Forest Service, Forest Sciences Laboratory and Alleghany National Forest, March 14, 2011.
Invited Seminar, Utica College, Biology department, April 11, 2011.

John M. Farrell
J. M. Farrell 2010 (invited seminar) Research and Education at the Thousand Islands Biological Station: Long Term Studies of The St. Lawrence River. Rotary Club of Watertown NY.
J. M. Farrell 2010 (invited seminar) Research and Education at the Thousand Islands Biological Station: Long Term Studies of The St. Lawrence River: or What are they doing out there on Governors Island? Clayton Yacht Club.

Melissa K. Fierke
ESF Going Green segment: Emerald ash borer insecticide http://centralny.ynn.com/content/features/going_green/543433/going-green--emerald-ash-borer-insecticide/

Jacqueline L. Frair
Junior Café Scientifique at the Museum of Science and Techology, Syracuse, Sep 2010
GIS Day at SUNY ESF, Oct 2010
Erie County Federation of Sportmen’s Clubs, Feb 2011
Research talks delivered by graduate students with J. Frair as co-author:
Steuben County Fair, Aug 2010 (poster on coyote foraging ecology)
McGill University Wildlife Biology Class, Adirondack Ecological Center, Sep 2010
NY State Trappers Convention, Herkimer, Sep 2010 (poster on coyote foraging ecology)
Fur Takers of America Trapper’s College, Milford, Indiana, Sep 2010
Steuben County Rotary Sportsmen Dinner, Canisteo, Oct 2010
Adirondack Park Visitor’s Interpretive Center Volunteer Luncheon, Nov 2010
Montezuma Wildlife Refuge, Jan 2011
Victory Sportsmen Expo, Painted Post, Mar 2011
New York Houndsmen Annual Meeting, Camden, Mar 2011
Tioga County and surrounding Sportsmen Federations, Owego, Apr 2011
New York State Trappers Association Annual Meeting, Delmar, Apr 2011
Affiliated Conservation Clubs of Madison County, Madison, May 2011
Camillus Middle School, Camillus, May 2011
James P. Gibbs
“Ecology, evolution and conservation of Galapagos tortoises,” Invited lecture, Department of Evolution, Ecology, and Organismal Biology, Ohio State University, 10/21/10 (70 attendees)
“Wildlife conservation in the Russian Altai: Starting from scratch,” Invited lecture, Department of Evolution, Ecology, and Organismal Biology, Ohio State University, 10/21/10 (40 attendees)
“Citizen science for monitoring wildlife populations,” presentation to NYSEDEC wildlife section annual meeting, White Eagle, Clinton, NY, 2/2/11 (30 attendees).

Thomas R. Horton
Birds Nest Fungi Garden Journeys Segment with Terry Ettinger, Plays on YNN Channel 9. Recorded Fall 2010.
Edible fungi. Center of Excellence Skillshare event, Saturday, April.
Numerous mushroom forays and meetings with the Central New York Mycological Society, ave 10/event.
Mushroom fair, Beaver Lake Nature Center, September

Robin W. Kimmerer
9/8/10 Lessons from the Small and Green. Green Mountain College, Poultney VT. Attendance 250
9/9/10 Finding Common Ground between TEK and western science. Green Mountain College
9/24 Indigenous Knowledge and Conservation. Ecological Society of America SEEDS Program at Adirondack Ecological Center
10/18/10 Restoration and Reciprocity Ithaca College Sustainability Café.
11/8/10 Biocultural restoration for Onondaga Lake. Onondaga Land Rights and Our Common Future
12/6/10 Burning Cascade Head, Sitka Center for Art and Ecology
1/19/11 Traditional Ecological Knowledge. Michigan State University.
1/21/11 Restoration and Reciprocity Michigan State University
1/24/11 Indigenous Knowledge and Conservation Michigan State University
1/26/11 Finding Common Ground between TEK and SEK. Michigan State University
3/8/11 Indigenous knowledge and restoration College of the Menominee Nation
3/10 Indigenous knowledge and Climate change College of the Menominee Nation
3/22/10 The Sacred Rights of Water. World Water Day observation. College of the Menominee Nation

Donald J. Leopold
(all invited)
From the Ground Up, Oakwood Cemetery, Syracuse, May 2010, about 40 people in attendance.
Native plants for the landscape, Watson’s Greenhouses, Lafayette, June 2010, about 25 people in attendance
Natural communities as templates for native plant selection for gardens, urban plantings, and restoration projects; Irvine Nature Center, Owings Mills, MD, August 2010, about 150 people in attendance.
Central New York wetlands, Syracuse Botanical Club, Syracuse, NY; December 2010, about 25 people in attendance.

NYS native plant species for the landscape, NYS-DEC Education Day, Buffalo, February 2011, over 200 people in attendance.

Native plants of wetlands and their borders, 14th Annual Meeting of the Connecticut Association of Wetland Scientists, North Haven, CT, February 2011, about 200 people in attendance.

CNY natural communities as templates for garden, green, and restoration plantings; CNY Blooms, Syracuse, March 2011, about 25 people in attendance.

Native trees for urban, home, and degraded landscapes, Cazenovia Village Tree Commission, Cazenovia, March 2011, about 70 people in attendance.

Rare plants and unique natural areas of upstate NY, Syracuse Chapter of the Society of Conservation Biology, Syracuse, March 2011, about 75 people in attendance.

Natural communities as templates for garden, green, and restoration plantings, Cornell University Department of Landscape Architecture, Cornell University, Ithaca, April 2011, about 75 people in attendance.

New York State-protected plant species, Chittenango Garden Club, Chittenango, April 2011, about 75 people in attendance.

Gardening with native plants, DeWitt Community Library, DeWitt, May 2011, about 25 people in attendance.

Karin E. Limburg
Limburg, K.E. Ear-Bones and Dead Zones: What Can Fish Otoliths Tell Us about Hypoxia? Marine Science Institute, University of Texas, March 17, 2011.

Mark V. Lomolino
Brown University – Guest Lecturer in General Ecology; Research Seminar on Evolution of Insular Body Size
University of Miami – Research Seminar on the Marvels and Perils of Island Life

Stacy A. McNulty
8/2010 The Wild Center ATBI public event celebrating BioBlitz
9/2010 Teddy Roosevelt Days Ecology Hike
9/2010 Girl Scouts explore Rich Lake by canoe
2/2011 Adirondack Interpretive Center community dialog
4/2011 Adirondack Interpretive Center Leapfrog! ATBI citizen science
5/2011 Adirondack Interpretive Center Women in Science

Tsutomu Nakatsugawa
Invited lecture “What’s for Dinner? Which toxics would you like – one large risk or several small ones?” at the Annual ESATYCB (Empire State Association of Two Year College Biologists) conference on the theme “The Biology of Food”. April 30, 2011. 70 ~ 80 attending.

Lee A. Newman
Using plants to solve environmental problems. O’Brien and Gere. Syracuse, NY 5 May 2011 (~20 attendees)

Using plants to solve environmental problems. Rutgers University Biotechnology Seminar Series, New Brunswick, NJ, 28 October 2011 (~40)

So where do we go from here? Bioenergy research at BNL, Brookhaven National Laboratory Minority High School Apprenticeship Program, 4 August 2010 (~35)
So where do we go from here? Bioenergy research at BNL, Brookhaven National Laboratory Community Summer Science Program, 20 July 2010 (~30)
So where do we go from here? Bioenergy research at BNL, Brookhaven National Laboratory Summer Sundays, 11 July 2010 (3 talks on same day, ~25 per talk)
Using plants to solve environmental problems, Brookhaven National Laboratory Brown Bag Lunch Seminar 9 July 2010 (~25)

William A. Powell
Restoration of the American chestnut: Old problem, New solutions. 4/30/11. Missouri Botanical Gardens, St Louis, MO (approximately 9 attended)
Restoration of the American chestnut: Old problem, New solutions. 2/17/11. Fayetteville Free Library, Fayetteville, NY (approximately 30 attended)

Kimberly L. Schulz
Limnology Poster Session for the Cortland-Onondaga Federation of Kettle Lake Associations, Inc. (COFOKLA), January 2011

William M. Shields
Invited Seminar on Forensic DNA technology. SUNY Binghamton, Dept of Biology, March 2011.

Steve A. Teale
Teale, S.A. Chemical Ecology of the Asian Longhorned Beetle. Department of Entomology, Northeast Forestry University, Harbin, P.R. China, June, 2010

J. Scott Turner
What is Life? Invited presentation to the Plenary session of International Board of Advisors meeting, John C Templeton Foundation. New York City. 8 June 2010. About 150 people in attendance.
Appendix L. Miscellaneous Publications and Outreach Activities and Materials

John D. Castello

Jonathan B. Cohen
Effect of human disturbance on Snowy Plover behavior and reproductive success. Final report submitted to Conservian, Inc., Big Pine Key, FL

John M. Farrell

Jacqueline L. Frair

Robin W. Kimmerer
“Miniature Forests” in Adirondack Life vol 62(4): 43

Karin E. Limburg
Gregory G. McGee

Stacy A. McNulty

Lee A. Newman

Dylan Parry

William A. Powell
Phone interview for article in Science: Sara Reardon. 2011. EPA Proposal Would Exempt Some GMOs From Registry. Science 332:652

Sadie J. Ryan

Stephen A. Teale
<table>
<thead>
<tr>
<th>Title/Description</th>
<th>YouTube</th>
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<tbody>
<tr>
<td>J S Turner. 2011.</td>
<td>The click of the click beetle <em>The surprising physics behind the click of the click beetle. Filmed on location in Namibia</em></td>
<td><a href="http://www.youtube.com/watch?v=NgGxSQI0k">video</a></td>
</tr>
<tr>
<td>J S Turner. 2010.</td>
<td>Keeping a dry leaf <em>How leaves use a trick of surface tension to keep dry even in pouring rain.</em></td>
<td><a href="http://www.youtube.com/watch?v=hvsExbxVPac">video</a></td>
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</table>
Keith Ward’s beautiful woodcuts from Alfred Emerson’s book Termite City.
http://www.youtube.com/watch?v=w9yg05srXCs

J S Turner. 2010. Brownian motion and Brownian motors
Brownian Motion, what it is, how it works, and why it matters to life
http://www.youtube.com/watch?v=LqVebxtZbj0

How rowers use momentum to give them the racer's edge. Recorded on location at Cambridge University.
http://www.youtube.com/watch?v=2EzwXwXoYgJAA&feature=related

J S Turner. 2010. Speed of sound
Isaac Newton’s original measurement of speed of sound, recreated where Newton himself did it, in Neville Court, Trinity College, Cambridge University.
http://www.youtube.com/watch?v=PzU4G4uW18

J S Turner. 2010. Synthetic sound
Using a computer to explore the structure of sound.
http://www.youtube.com/watch?v=yLgbSwAQI_E

J S Turner. 2010. Gas thermodynamics
How the gas laws lead us to the second law of thermodynamics and life With a special appearance by Maxwell’s Demon.
http://www.youtube.com/watch?v=20dU_G0nl-o

J S Turner. 2010. Gases
Using a particle simulation to explain how motion of gas particles leads to large-scale phenomena like pressure.
http://www.youtube.com/watch?v=uEar4s12G20
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<tr>
<td>C Baycura</td>
<td><em>Why don't trees fall down? The answer will surprise you.</em></td>
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<td>C Baycura</td>
<td><em>How the mighty Kia can be used to demonstrate the behavior of sounds from moving bodies.</em></td>
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<td>C Baycura</td>
<td><em>Miscellaneous snippets of termite building, mound construction, the termite queen</em></td>
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<td>J S Turner. 2010</td>
<td>Endocasting</td>
<td><a href="http://www.youtube.com/watch?v=f0qdiHOYEAI">http://www.youtube.com/watch?v=f0qdiHOYEAI</a></td>
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<td>C Baycura</td>
<td><em>How the most detailed picture of the tunnel network in a termite mound was made. Featuring Rupert Soar</em></td>
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<td>J S Turner. 2010</td>
<td>Termite drinkers</td>
<td><a href="http://www.youtube.com/watch?v=7AOkb0epOpk">http://www.youtube.com/watch?v=7AOkb0epOpk</a></td>
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<td>C Baycura</td>
<td><em>Macrotermes termites have a complex water economy that is tied to the construction of their mounds. This can be observed with fluorescein dye</em></td>
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<td>J S Turner. 2010</td>
<td>Cognitive trap demo</td>
<td><a href="http://www.youtube.com/watch?v=8Q8N4vRMgXM">http://www.youtube.com/watch?v=8Q8N4vRMgXM</a></td>
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<td>C Baycura</td>
<td><em>A simulated cognitive trap for termite swarms, based upon a mismatch between pheromone persistence and habituation time.</em></td>
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<tr>
<td>J S Turner. 2010</td>
<td>A swarm cognitive trap for Macrotermes michaelensi</td>
<td><a href="http://www.youtube.com/watch?v=WJCvsHJMWSM">http://www.youtube.com/watch?v=WJCvsHJMWSM</a></td>
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<td>C Baycura</td>
<td><em>A termite swarm cognitive trap, involving self-organized circling behavior in a swarm</em></td>
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<td>C Baycura</td>
<td><em>Joints - How they're built and how they work.</em></td>
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<tr>
<td>C Baycura</td>
<td><em>Measuring the material properties of bones by bending and breaking them in a big machine.</em></td>
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| C Baycura       | *How a basic understanding of fluid flow can tell us something about the biology of long-
extinct animals, like the function of the frills of Triceratops.

Christopher M. Whipps
Appendix M. Foreign Travel

Martin Dovciak

John M. Farrell
Lyon, France – worked at the University of Lyon1 with Herve Piegay – provided seminar
Lyon, France – worked at Cemagref Institute with Herve Capra
Renne, France – gave seminar and met with Martin Schlaepher, students and colleagues at the Institut national de la recherché agronomique, Ecologie et Santé des Ecosystèmes Renne, France.

Jacqueline L. Frair
San Cristobal, Mexico, 28 Jul – 15 Aug 2010, develop contacts for research collaboration linking indigenous land use practices to ecosystem health (working with Stewart Diemont)

James P. Gibbs
Galapagos Islands, Ecuador, May-June 2010. Helped launch Project Pinta Phase I (liberation of 39 tortoises to Pinta Island) and orchestrated Project Espanola (whole island survey for cactus, tortoises, waved albatross and woody vegetation) in collaboration with Galapagos National Park Service.
Altai Republic, Russia, July 20-Aug 10. Attended IUCN organized meeting on climate change in Ust Koxa then traveled to Altaisky Zapovednik to plan upcoming fieldwork in region with collaborators based there.
Xalapa, Veracruz, Mexico Feb 14-18, 2011. Participated as Member of Comité Externo de Evaluación del INECOL.
Kiev and Crimea, Ukraine 5/2-5/11. Traveled to plan upcoming engagement with National University Kiev Mohyla to help develop university training programs in conservation biology at undergraduate and graduate levels.
Galapagos Islands, Ecuador 5/15-6/12. Helped launch Project Pinta Phase II and orchestrated whole island survey of Santa Fe Island for endemic iguanas, *Scalesia* spp. and other rare species by park guards (collaboration with Galapagos National Park Service)

Charles A.S. Hall
Barcelona Spain  Give plenary and attend meeting on Advances in Energy
Cordoba, Bariloche and San Martin, Argentina.  Sabbatical: meet with colleagues, computer programming and writing.

Thomas R. Horton
Honduras, June 2010, I travelled to Honduras to teach a Molecular Techniques course at a remote research station in Cusuco National Park. I set up the lab, verified that everything was functioning properly, and taught the first batch of students taking the DNA lab in week one. Anna Conrad (EFB class of 2010) worked with me and taught the DNA course in weeks 2 – 5.

Karin E. Limburg
Vienna, Austria, April 4-8, 2011. Purpose: to present a paper at the European GeoSciences Union Meeting; I also presented a seminar at the Hydrobiology Department of the Universität für Bodenkultur Wien.
Myron J. Mitchell
Invited lectures on air pollution and biogeochemistry at Jinang University and Chinese Academy of Sciences (Beijing). Oct. 11-20, 2010

Lee Newman
Phytoremediation and Bioavailability. Croucher Advanced Study Institute, Remediation of Contaminated Land-Bioavailability and Health Risk, Hong Kong, 9-13 December 2010
Environmental bioavailability; where do we go from here? Croucher Advanced Study Institute, Remediation of Contaminated Land-Bioavailability and Health Risk, Hong Kong, 9-13 December 2010

Dylan Parry
Canada – Society for Conservation Biology, Edmonton, Alberta. Presented invited paper in symposium on conserving biodiversity in managed forests

Sadie Ryan
Limpopo, South Africa July-August 2010, Teaching Conservation Institute
Naivasha, Kenya, January, 2011, Teaching Conservation Institute

Stephen A. Teale
 a. Fuzhou, Fujian Province – Conducted field research on chemical attractants of 13 species of longhorned beetles with cooperation from the College of Forestry, Fujian Agriculture and Forestry University.
 b. Harbin, Heilongjiang – Conducted field research on pheromones of the Asian longhorned beetle and 13 other species of longhorned beetles with cooperation from Northeastern Forestry University.

J. Scott Turner
Namibia. April 2011. Field research

Alex Weir
Costa Rica, April 2011, NSF-supported Research with 3 students (2 graduate, 1 undergraduate)
Ireland, May/June 2011, Overseas Feld Trip with 8 students
Appendix N. Theses and Dissertations completed
(i.e., all requirements met and degree awarded)

**M.S. Theses**
Atwood, Meredith. 2011. Effects of basal resources on the food web of temporary freshwater pools: implications for amphibians and restoration efforts (J. Gibbs).
Dillon, Amanda. 2010. Exploration of diversity and abundance of native solitary bees and wasps in differing habitat types of Three Rivers Wildlife Management Area (B. Hager and W. Shields)
Riddle, Jess. 2011. Growth-climate relationships of *Juniperus communis* and *Juniperus virginiana* at constrasting range margins (D. Leopold)
Rockermann, Peter. 2011. Implications for invasion by emerald ash borer in New York: Ash abundance in riparian areas and moth assemblages in upland and wetland forests with high and low ash densities (M. Fierke)
Sirois, Angela. 2011. Effects of habitat alterations on bog turtles (*Glyptemys muhlenbergii*): a contrast of responses by two populations in Massachusetts, USA (J. Gibbs).
Skrip, Megan. 2010. Fall-winter survival habitat, and population dynamics of ruffed grouse in New York State (W. Porter).
Zysik, Jonathan. 2010. Using radio telemetry to calibrate an elk habitat suitability model prior to application (W. Porter).

**Ph.D. Dissertations**
Kapusinski, Kevin. 2011. Ecology of Great Lakes Muskellunge stock identification and contributions of individual spawners to young of year production as inferred from genetic analyses (J. Farrell)
Ristau, Todd. 2010. Herbaceous layer vegetation recovery following site preparation with herbicides in northern hardwood forests. (D. Raynal)
Shoemaker, Kevin T. 2011. Demography and population genetics of the bog turtle (*Glyptemys muhlenbergii*): implications for regional conservation planning (J. Gibbs).

Townsend, Jason. 2011. Mercury accumulation in soils and biota along a forested elevational gradient in the Catskill Mountains, New York, and the utility of Catharus thrushes as local- and global-scale bioindicators (J. Gibbs).

Ristau, Todd. 2010. Herbaceous layer vegetation recovery following site preparation with herbicides in northern hardwood forests (D. Raynal).

Williams, David. 2010. Contact structure and scales of movement by white-tailed deer in central New York (W. Porter).
Appendix O. MPS students who completed degree requirements

Begay, Becky Ann (Kimmerer)
Davis, Michael (Dovciak)
Norelius, Bryon (Shields)
Palermo, Michael (Shields)
Schlesinger, Anne (Saunders)
Sopchak, Lorien (Horton)
Appendix P. Faculty and Student Awards

FACULTY – DEPARTMENT, COLLEGE, AND SUNY RECOGNITION
Jacqueline Frair Undergraduate Student Association Distinguished Teaching Award
Robin W. Kimmerer Awarded title of SUNY Distinguished Teaching Professor

FACULTY – REGIONAL, NATIONAL AND INTERNATIONAL RECOGNITION

GRADUATE STUDENTS – DEPARTMENT AND COLLEGE RECOGNITION
Juan Carlos Alvarez-Yepiz Pack Graduate Student Research Travel Award
James Arrigoni Edna Bailey Sussman Foundation Fellowship
Andrew Brainard Edna Bailey Sussman Foundation Fellowship
Thomas Brumbelow Edna Bailey Sussman Foundation Fellowship
Shannon Buckley Edna Bailey Sussman Foundation Fellowship
Shannon M. Buckley Robert L. Burgess Graduate Scholarship in Ecology
Jonathan A. Cale Gerald N. Lanier Memorial Fund
Jonathan A. Cale Leroy C. Stegeman Award
Jonathan A. Cale Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Jonathan A. Cale Edwin H. Ketchledge Scholarship
Stephanie Figary 1st place (tie), SUNY ESF Spotlight on Research poster session
Kalie Gerenser Edna Bailey Sussman Foundation Fellowship
Jacob Gillette Dr. Samuel Grober ’38 Graduate Fellowship
Lauren M. Goldmann Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Sara Hansen 1st place (tie), SUNY ESF Spotlight on Research poster session
Patrick Raney Maurice and Annette Alexander Wetlands Research Award
Brian Henning Edna Bailey Sussman Foundation Fellowship
Theodore Hermann Honorable Mention, NSF Graduate Research Fellowship
Catherine Landis Edna Bailey Sussman Foundation Fellowship
Abigail Larkin 3rd place (tie), SUNY ESF Spotlight on Research poster session
Francis More Edna Bailey Sussman Foundation Fellowship
Juliana Quant Edna Bailey Sussman Foundation Fellowship
Christina R. Quinn Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Yasmin Rivera Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Katherina Searing Teaching Fellow for Graduate Assistant Colloquium on Teaching & Learning
Kevin T. Shoemaker EFB Outstanding Doctoral Student
Christopher R. Standley Leroy C. Stegeman Award
Anna Stewart Teaching Fellow for Graduate Assistant Colloquium on Teaching & Learning
Anna Stewart Alumni Association Memorial Scholarship (Graduate)
Sarah Wilkinson Edna Bailey Sussman Foundation Fellowship
Sarah Wilkinson Pack Graduate Student Research Travel Award
Jennifer Yantachka Pack Graduate Student Research Travel Award
Jennifer Yantachka Betty Moore Chamberlaine Memorial Award

GRADUATE STUDENTS – REGIONAL AND NATIONAL RECOGNITION
Juan Carlos Alvarez-Yepiz CONACyT Doctoral Fellowship
James Arrigoni Garden Club of America Fellowship in Ecological Restoration
Meredith Atwood National Science Foundation Graduate Research Fellowship
Meredith Atwood Sigma Xi Grant-in-Aid of Research
Meredith Atwood Award for poster presentation at Student Conference on Conservation Science, AMNH
Shannon M. Buckley Best Student Poster Award, American Meteorological Society’s Urban Symp.
Jonathan Cale Third place, 2010 SAF student poster contest at annual, national meeting
Kimberly Dean First Place, MS students, poster competition, North American Forest Insect Work Conference
Stephanie Figary  Sigma Xi Grant-in-Aid of Research
Jacob Gillette  National Science Foundation Doctoral Dissertation Improvement Grant
Lauren Goldmann  Award for poster at International Mycological Congress, Edinburgh, Scotland
Daniel Gurdak  National Geographic Society Young Explorers Grant
Daniel Gurdak  Fulbright IIE Award
Sara Hansen  Outstanding Graduate Student Award, NYS Chapter of The Wildlife Society
Joie Matillano  Award for oral presentation at Student Conference on Conservation Science, AMNH
Joie Matillano  Rufford Small Grants Foundation award
Joie Matillano  Russell E. Train Education for Nature Fellowship
Joie Matillano  Conservation Leadership Programme grant
Christina Quinn  Travel Award for Penn State Plant Biology Symposium
Patrick Raney  Society of Wetlands Scientists Student Research Grant
Yazmin Rivera  Award to attend workshop on population genetics at Univ. Washington
Yazmin Rivera  Honorable Mention, Ford Dissertation Fellowship
Arnold Salazar  Travel Award for Penn State Plant Biology Symposium
Anna Stewart  International Center of Syracuse’s CNY International Citizen Award Honoree
Anna Stewart  Award to attend short course at Columbia University International Research Institute for Climate and Society
Anna Stewart  Award to attend workshop at Johns Hopkins on modeling of disease dynamics
Jason Townsend  Best Student Oral Presentation award, Assoc. Field Ornithologists Annual Meet.
Cynthia Watson  Sigma Xi Grant-in-Aid of Research
Cheryl Whritenour  NOAA National Estuarine Research Reserve Graduate Fellowship (renewal)
Chengjun Zhu  Eastman Chemical Company Graduate Student award (2nd place, tie)

UNDERGRADUATE STUDENTS – DEPARTMENT, COLLEGE, AND SUNY RECOGNITION
Pamela Aracena  1st place, SUNY ESF Spotlight on Research poster session
Ryan Ash  Outstanding Undergraduate Teaching Assistant
Maja Brzezicki  Savel B. Silverborg Memorial Award
Kean Clifford  Distinguished Biology Scholar Award – Aquatic & Fisheries Science
Kean Clifford  Alumni Association Memorial Scholarship (Senior class)
Sean Fagan  Patricia D. and Jeff J. Morrell Scholarship
Gennaro Falco  3rd place, SUNY ESF Spotlight on Research poster session
Martin Holdrege  Alumni Association Memorial Scholarship (Soph. class) Honorable Mention
Craig Hoover  2nd place, SUNY ESF Spotlight on Research poster session
BettyJo Jivoff  EFB’s Departmental Scholar
BettyJo Jivoff  Distinguished Biology Scholar Award – Environmental Biology
BettyJo Jivoff  Distinguished Biology Scholar Award – All Majors
Rebecca Landis  Distinguished Biology Scholar Award – Conservation Biology
Jennifer Ma  SUNY Chancellor’s Award for Student Excellence
Jennifer Ma  Phyllis Roskin Memorial Award
Deanna Russell  Ralph T. King Memorial Award
Deanna Russell  Ralph T. King Memorial Award
Deanna Russell  Distinguished Biology Scholar Award – Wildlife Science
Adam N. Trautwig  Cranberry Lake Biological Station Undergraduate Fellowship
Justin West  Distinguished Biology Scholar Award – Forest Health
David Youngetob  Distinguished Biology Scholar Award – Biotechnology
Danielle Zeller  Distinguished Biology Scholar Award – Natural History & Interpretation

Honors Program Medal
David Christopher Youngetob, Cloning of an unknown CBS-domain protein in Chinese chestnut and expression comparison for a blight resistance assay of Chinese and American chestnut seedlings (Dr. William A. Powell, Honors Advisor)
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<tr>
<td>Beverly Agtuca</td>
<td>DOE Science Undergraduate Laboratory Internship at Brookhaven NL</td>
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<td>Kelly Jaenecke</td>
<td>Rochester Academy of Science Undergraduate Research Proposal Award</td>
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<tr>
<td>ESF Chapter TWS</td>
<td>NYS TWS Quiz Bowl Champions</td>
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