**Front Cover:** Images for collage by EFB faculty, staff, and students
Department of Environmental and Forest Biology

Annual Report

Summer 2014
Academic Year 2014 – 2015

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Introduction – Overview to Annual Report

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

Appendix A lists EFB faculty during the 2014-2015 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.

During this past academic year Dr. Myron Mitchell retired in September and Dr. Bill Shields retired in January. Dr. Shields will continue to direct the ESF Honors Program. Sadie Ryan left for a faculty position in the Department of Geography & Emerging Pathogens Institute at the University of Florida. In October, Dr. Hyatt Green began his employment at ESF as EFB’s new environmental microbiologist. Hyatt’s research interests include molecular microbial ecology, co-evolution of microbes with their animal hosts, microbial source tracking and water quality, and microbial biogeography. Dr. Martin Dovciak was promoted to Associate Professor and awarded continuing appointment (“tenure”). Dr. John Farrell was promoted to Professor.

John Castello and Steve Teale published three papers (with John’s former Ph.D. student, Jon Cale) on beech bark disease and forest health issues, and taught their People, Plagues and Pests course to over 100 students for the 10th year. Jonathan Cohen offered his most polished version yet of Wildlife Habitats and Populations and received a round of applause by the students on the last day of class! Stew Diemont offered Systems Ecology for his first time, and took 11 ESF students to Chiapas, Mexico for the 10-day field component of Restoring Ecosystems: Principles and Practice. John Farrell authored or co-authored 11 journal publications and completed guest editorial work with publication of a special issue in the Journal of Great Lakes Research. Shannon Farrell taught Wildlife Ecology and Management for the first time and ornithology for the second time, both courses being very well-received.

Danny Fernando served for the 8th year as Director of EFB’s graduate programs and in the spring, organized a meeting on the first attempt to establish a new population of the federally-listed American hart’s-tongue fern. Beth Folta co-taught (with Diane Kuehn, FNRM) a new course, Nature Tourism and Ecotourism in Panama, working with the Azuero Earth Project (AEP). Jacqui Frair offered a wildlife field techniques course during Maymester and as Associate Director of the Roosevelt Wild Life Station led the Station’s first ever strategic planning effort. Roosevelt Wild Life Station Director James Gibbs, working with Giorgos Mountrakis (ERE), received nearly $800,000 for their proposal to examine the management of social-ecological grazing systems in the Altai Mountain transboundary zone. Hyatt Green developed and offered a graduate level, introductory R course, based on the strong interest level among graduate students in this topic. Among Robin Kimmerer’s many accomplishments and highlights of this past year, her invitation to speak to the General Assembly of the United Nations in April has to be near or at the top. Don Leopold received his 30 year pin in March; the last ten as chair has made it seem like at least 40!
During her sabbatical leave, Karin Limburg travelled to Stockholm University and Lund University in Sweden; Reykjavik, Iceland; Quebec City; Mallorca, Spain; and Bordeaux, France, for numerous activities and tasks. Mark Lomolino took a sabbatical leave during the fall semester. Greg McGee, continuing in his role as EFB’s Curriculum Director, took the lead on preparing the department’s Middle States Accreditation Undergraduate Program Assessment Report, which included an analysis of the department’s seven majors. This work will help the department focus on how best to modify our majors so they are most effective in meeting their learning objectives. Stacy McNulty revamped Winter Mammalian Ecology toward a more equitable distribution of small, meso and large species and restored a field lab in the High Peaks region. Lee Newman received the President’s ESF Public/Community Service Award in March during her work at the VA, with Clear Paths, and other service contributions in the CNY community.

Gordon Paterson continues to develop courses in toxicology and environmental risk assessment, and co-taught the Tropical Ecology course this spring with Don Stewart. Bill Powell gave over 30 interviews and made nearly 30 presentations on his American chestnut research. Neil Ringler continues to provide significant teaching contributions to EFB in Aquatic Entomology and Comparative Vertebrate Anatomy, besides maintaining a robust research program on Onondaga Lake and his full-time job as Vice Provost for Research. Rebecca Rundell secured the donation of numerous, significant marine specimens from the Massachusetts Division of Fisheries and Wildlife including whale skeletons (including a 40 ft. long fin whale), a Kemp’s Ridley sea turtle skeleton and a northern gannet skeleton. Kim Schulz received the Undergraduate Student Association’s Faculty Advisor Award in April. Scott Turner offered Animal Physiology for the first time on-line, to join his on-line offering of Physics of Life. After 10 years as Director of the Cranberry Lake Biological Station, Alex Weir stepped down to devote greater attention to a variety of research projects. Justin Fiene, Visiting Instructor in EFB and who won the USA Teacher Award in April, is now the Director of CLBS. Chris Whippes took a sabbatical leave during the spring semester to work on numerous projects, and continued to serve as Chair of the Institutional Animal Care and Use Committee, and Director of the Center for Applied Microbiology.

Instructional Support Specialist Ron Giegerich received the Conservation Force Award for his work with taxidermy specimens and application to educational interpretation. Ron is currently processing the marine ecology specimens donated to EFB last fall.

Ph.D. student Dan Gurdak (Don Stewart, mp) was awarded an Explorer’s Club Flag to be carried on his National Geographic Society funded project to track giant Arapaima in the Brazilian Amazon. Earlier in the academic year, Dan received an EPA STAR Fellowship. Ph.D. student Geoff Griffiths (Greg McGee, mp) received The Garden Club of America 2015 Fellowship in Ecological Restoration for his doctoral research to engage citizen scientists in the restoration of understory plants and pollinator assemblages. Ph.D. student Tomasz Falkowski (Stew Diemont, mp) was awarded a National Geographic Young Explorers grant for his work in the Lacandon Maya in Mexico. Ph.D. student Kristen Haynes (Don Leopold, mp) received significant funding from the ADK Highpeaks Foundation for her research to examine the conservation genetics of the federally-listed Boot’s rattlesnake root in the alpine of the Northeast.

In December, Dr. Jin Yoshimura (EFB Ph.D. ’89) was honored by the College and Alumni Association as a Graduate of Distinction, in part for his papers that are still cited today especially his notion of how uncertainty influences the evolutionary process and ecological systems.
Many EFB students, faculty and staff participated in the 24 hour bioblitz held on and near Onondaga Lake last September as part of the new president’s inaugural activities. Despite less than ideal weather, there were many interesting discoveries (http://www.esf.edu/communications/view.asp?newsID=2906) and a great way to integrate many EFB courses into this unique experience.

The Department again hosted two Dale L. Travis Lectures. In September Dr. Robin Kimmerer, Distinguished Teaching Professor in EFB and Founding Director of the Center for Native Peoples and the Environment at ESF gave a talk to commemorate the 100th anniversary of the extinction of the passenger pigeon, sharing insights from indigenous environmental ethics on species conservation. In March, Distinguished Teaching Professor Emeritus George Curry (Dept. Landscape Architecture) spoke on research conducted (since 1997) by ESF Department of Landscape Architecture's Center for Cultural Landscape Preservation at the Roosevelt Estate in Hyde Park, N.Y. Both lectures were open to the public and drew hundreds of people from off campus to attend these presentations.

The Department is getting closer to initiating construction for the new Academic Research Building which will provide office and research lab space for EFB faculty who most intensively use lab facilities. This addition will occupy most of the space east of Illick up to Oak Leaf Drive; construction should be happening about this time next year. CIRTAS (Center for Integrated Research and Teaching in Aquatic Sciences), built primarily from NSF funds ($1.47 million), is now functional, although not without glitches! Dr. Kim Schulz will oversee the operation of this facility which includes state-of-the-art controlled environments. The new greenhouses on the Illick rooftop are finished and are slowly being restocked and reprogrammed, including one entire quarantine house to enhance our entomology program.

Undergraduate and graduate enrollments and quality, external funding to the department, and worldwide attention in the media have never been better. All of Illick had heat for the first time in many winters and our roof does not leak any more – it was a very good year!

**Building(s)**

Three years past the original construction completion date, EFB’s CIRTAS (Center for Integrated Research and Teaching in Aquatic Sciences) is now operating, although not without regular glitches. CIRTAS resulted from a $1.47 million award from the National Science Foundation to Drs. Ringler, Schulz (to be Director), Farrell, Whipps, and Leopold. CIRTAS was constructed in the spaces once occupied by rooms 227, 228, 231 through 237 Illick. Funding was used to renovate over 4,000 square feet for wet labs (rooms specially equipped for aquatic experiments) and cyber-infrastructure. As part of the CIRTAS construction, the ESF administration funded construction of a new lab and enhanced remote data access at the Thousand Islands Biological Station. The TIBS project, as part of CIRTAS, has established an electronic link between research activities there with the CIRTAS facility in Illick. CIRTAS is a shared-use facility designed to facilitate interdisciplinary research and training among individual researchers on campus and with other collaborative facilities.

A location has finally been decided upon for the new Academic Research Building into which one third of the Department will move when it is constructed. This new building will occupy most of the space east of Illick and Oak Leaf Drive. Construction should begin next summer (2016). The most lab-intensive EFB faculty (approximately 11) and their graduate students will move into this building upon completion.
Construction began for the new roof and roof top greenhouses on Illick during the summer 2012 and finished during the spring 2014. Terry Ettinger, EFB Instructional Support Specialist and Greenhouse Manager, began moving plants back from the greenhouse complex at the Lafayette Experiment into the renovated greenhouses on top of Illick last summer, a process that is ongoing. All houses in the Illick complex are now working except for the quarantine greenhouse, dedicated to research on invasive insect species.

The Illick heating system, which has not functioned for years at both ends of the building, leaving over a dozen faculty, some support staff, and many graduate students without heat during the winter, worked for everyone this past winter. Related to this perimeter heating project, the Illick foyer was renovated last summer, which included new lighting, ceiling, and flooring.

**Teaching**

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

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Course #</th>
<th>Course Name</th>
<th>Enrollment</th>
</tr>
</thead>
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<tr>
<td>Castello</td>
<td>217 (0.5)</td>
<td>Peoples, Plagues, &amp; Pests</td>
<td>106</td>
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<tr>
<td></td>
<td>340</td>
<td>Forest &amp; Shade Tree Pathology</td>
<td>32</td>
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<td></td>
<td>494</td>
<td>Senior synthesis Forest Health</td>
<td>5</td>
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<td>Cohen</td>
<td>493/693</td>
<td>Wildlife Habitats and Populations</td>
<td>41</td>
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<tr>
<td></td>
<td>796</td>
<td>Population Parameter Estimation</td>
<td>9</td>
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<td></td>
<td>797</td>
<td>Core Seminar</td>
<td>14</td>
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<tr>
<td></td>
<td>496/796</td>
<td>Wildlife Habitats and Pop. Class Project</td>
<td>34</td>
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<tr>
<td>Diemont</td>
<td>120</td>
<td>Global Env/Evol. Human Soc.</td>
<td>119</td>
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<tr>
<td></td>
<td>496/796</td>
<td>Restoring Ecosystems: Princ. &amp; Prac.</td>
<td>11</td>
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<td></td>
<td>496/796</td>
<td>Princ. of Restoring Ecosystems</td>
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<td>518</td>
<td>Systems Ecology</td>
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<tr>
<td>Dovciak</td>
<td>445/645</td>
<td>Plant Ecology &amp; Global Change</td>
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<td>535</td>
<td>Flowering Plants: Diversity, Evol., &amp; Syst.</td>
<td>20</td>
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<tr>
<td></td>
<td>797 (0.5)</td>
<td>Impacts of Deer on Forests</td>
<td>11</td>
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<td>Farrell, J.</td>
<td>388</td>
<td>Ecology of Adirondack Fishes</td>
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<td>Senior Synthesis AFS</td>
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<td>Aquatic Restoration Ecology</td>
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<td>488 (0.5)</td>
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<td>Farrell, S.</td>
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<td>Ornithology</td>
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<td>390</td>
<td>Wildlife Ecology &amp; Management</td>
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<td>797</td>
<td>Adaptive Peaks Grad Seminar (fall)</td>
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<td>Adaptive Peaks Grad Seminar (spring)</td>
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<td>Fernando</td>
<td>326</td>
<td>Diversity of Plants</td>
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<td>Anatomy and Development of Plants</td>
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<td>Research Design &amp; Prof Development</td>
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<td>General Biology Lecture I</td>
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<td>Entomol, Stats, Projects (13 days)</td>
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<td>EFB Core Course (spring)</td>
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<td>Non-Personal Environ. Interp. Methods</td>
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<td>Quantitative Methods and Models in R</td>
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<td>Maymester: Wildlife Field Techniques</td>
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<td>Gibbs</td>
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<td>Introduction to Conservation Biology</td>
<td>101</td>
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<td>419</td>
<td>Problem-solving in Conservation Biology</td>
<td>53</td>
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<td>Green</td>
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<td>R and Reproducible Research</td>
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<td>Horton</td>
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<td>General Ecology</td>
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<td>Mycorrhizal Ecology</td>
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<td>Kimmerer</td>
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<td>Indigenous Issues and the Environment</td>
<td>36</td>
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<td>Field Ethnobotany</td>
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<td>446/646</td>
<td>Ecology of Mosses</td>
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<td>Indigenous Environmental Leaders Future</td>
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<td>Dendrology</td>
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<td>McNulty</td>
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<td>Winter Mammalian Ecology</td>
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<td>Molecular Techniques 25</td>
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<td>496/796</td>
<td>Phytoremediation 15</td>
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<td>Cell Biology Recitation 6</td>
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<td>Parry</td>
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<td>Ecol. Monitor., Entomology 80</td>
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<td>502</td>
<td>Ecology &amp; Mgt. Invasive Species 48</td>
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<td>Plant Herbivore Interactions 14</td>
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<td>Conservation of Invertebrates 8</td>
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<td>400/600</td>
<td>Toxic Health Hazards 33</td>
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<td>523 (0.5)</td>
<td>Tropical Ecology 11</td>
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<td>496/611</td>
<td>Special Topics in Environmental Toxicology 10</td>
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<td>Ringler</td>
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<td>Comparative Vertebrate Anatomy 39</td>
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<td>Aquatic Entomology 14</td>
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<td>Principles of Evolution 169</td>
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<td>Invertebrate Zoology 42</td>
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<td>Con Bio/Invertebrates in a Changing World 7</td>
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<td>Limnology: Study of Inland Waters 72</td>
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<td>Undergraduate Seminar in Marine Ecology 10</td>
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<td>Eallonardo</td>
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<td>Dinosaurs</td>
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<td>496</td>
<td>Flora of Central New York (Maymester ’14)</td>
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<td>181</td>
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<tr>
<td></td>
<td>(0.5)</td>
<td>Diversity of Life II</td>
<td>185</td>
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</table>
Course teaching load summary by faculty members

The following data are from the Faculty “Workload” Report (sent 6/3/15) 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 “Resource Allocation Model”, only the teaching portion of a faculty member’s complete workload is included in that report.

<table>
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<tr>
<th>Faculty</th>
<th>Research CH</th>
<th>Prob./Sem. CH</th>
<th>Class CH</th>
<th>Total (U/G)</th>
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<td>McGee (1*)</td>
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<td>1119/3</td>
<td>1230 (1206/24)</td>
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<tr>
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<td>4/25</td>
<td>26/25</td>
<td>976/6</td>
<td>1062 (1006/56)</td>
</tr>
<tr>
<td>Horton (3)</td>
<td>14/11</td>
<td>0/7</td>
<td>965/18</td>
<td>1015 (979/36)</td>
</tr>
<tr>
<td>Rundell (4)</td>
<td>0/24</td>
<td>31/9</td>
<td>684/0</td>
<td>748 (715/33)</td>
</tr>
<tr>
<td>Turner (5)</td>
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<td>0/0</td>
<td>702/9</td>
<td>711 (702/9)</td>
</tr>
<tr>
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<td>18/12</td>
<td>593/8</td>
<td>638 (614/24)</td>
</tr>
<tr>
<td>Newman (7)</td>
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<td>40/0</td>
<td>411/43</td>
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</tr>
<tr>
<td>Diemont (8)</td>
<td>1/57</td>
<td>2/12</td>
<td>467/54</td>
<td>593 (470/123)</td>
</tr>
<tr>
<td>Leopold (9)</td>
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<td>25/8</td>
<td>474/9</td>
<td>561 (505/56)</td>
</tr>
<tr>
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<td>4/30</td>
<td>18/0</td>
<td>462/0</td>
<td>514 (484/30)</td>
</tr>
<tr>
<td>Teale (11)</td>
<td>24/58</td>
<td>15/3</td>
<td>366/27</td>
<td>493 (405/88)</td>
</tr>
<tr>
<td>Schulz (12)</td>
<td>24/32</td>
<td>27/1</td>
<td>272/0</td>
<td>356 (323/33)</td>
</tr>
<tr>
<td>Fernando (13)</td>
<td>19/20</td>
<td>27/0</td>
<td>270/9</td>
<td>345 (316/29)</td>
</tr>
<tr>
<td>Cohen (14)</td>
<td>6/54</td>
<td>23/7</td>
<td>209/41</td>
<td>340 (238/102)</td>
</tr>
<tr>
<td>Foita (15)</td>
<td>3/6</td>
<td>29/1</td>
<td>234/57</td>
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<tr>
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<td>238/11</td>
<td>300 (265/35)</td>
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<td>251/0</td>
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<td>274/0</td>
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<td>0/9</td>
<td>124/33</td>
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<tr>
<td>Farrell, J. (25)</td>
<td>6/35</td>
<td>4/0</td>
<td>74/23</td>
<td>142 (84/58)</td>
</tr>
<tr>
<td>Powell (26)</td>
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<td>15/0</td>
<td>33/6</td>
<td>79 (60/19)</td>
</tr>
<tr>
<td>Whippes** (27)</td>
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<td>10/13</td>
<td>2/0</td>
<td>77 (27/50)</td>
</tr>
<tr>
<td>Frair (28)</td>
<td>2/20</td>
<td>25/0</td>
<td>6/17</td>
<td>70 (33/37)</td>
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<td>McNulty (29)</td>
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<td>0/0</td>
<td>36/6</td>
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<td>2/4</td>
<td>0/34</td>
<td>45 (4/41)</td>
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<tr>
<td>Green (31)</td>
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<td>0/0</td>
<td>0/27</td>
<td>27 (0/27)</td>
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</table>

*rank out of all faculty; 1 highest, 31 lowest
** sabbatical leave during time period
Teaching Load Statistics by Adjunct Faculty, Emeriti, Instructional Support Specialists, AEC Staff, Visiting Instructors, etc.

<table>
<thead>
<tr>
<th>Name</th>
<th>Undergraduates</th>
<th>Graduates</th>
<th>Credit Hours</th>
<th>Total Credit Hours</th>
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</thead>
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<td>0/0</td>
<td>550/0</td>
<td>550 (550/0)</td>
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</tr>
<tr>
<td>Bremmer</td>
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<td>0/0</td>
<td>110/0</td>
<td>110 (110/0)</td>
</tr>
<tr>
<td>Ettinger</td>
<td>1/0</td>
<td>0/0</td>
<td>45/6</td>
<td>52 (46/6)</td>
</tr>
<tr>
<td>Evans</td>
<td>0/0</td>
<td>0/0</td>
<td>104/13</td>
<td>117 (104/13)</td>
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<td>0/0</td>
<td>17/0</td>
<td>1269/3</td>
<td>1406 (1403/3)</td>
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<td>116/0</td>
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<td>0/0</td>
<td>22/0</td>
<td>26 (26/0)</td>
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<tr>
<td>Hager</td>
<td>0/0</td>
<td>0/0</td>
<td>24/0</td>
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<td>0/0</td>
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<td>5/24</td>
<td>0/30</td>
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</tbody>
</table>

Dr. McGee had the highest teaching workload (1230 total credit hours), followed by Drs. Fierke (1062), Horton (1015), Rundell (748), and Turner (711). EFB faculty was responsible for 12,429 credit hours (versus 14,231 last reporting period) of instruction, an average of 401 credit hours per faculty per year (vs. 431 hours last reporting period). Another 5185 credit hours were delivered by Visiting Instructors and others (versus 3038 in last reporting period) for an EFB total of 17,614 credit hours (vs. 17,269 credit hours last reporting period). Using the total number of credit hours for the past year (i.e., 59,102) as compiled by the Registrar for eleven departments (e.g., including the Library), these EFB credit hours are about 28% of the total credit hours generated by all departments during this reporting period, depending on the total number reported for EFB (i.e., 16,546 as reported by the Registrar’s summary or 17,614 as stated in Report from Dr. Fellows).

Undergraduate Student Advising Loads

Listed below is the number of undergraduate advisees assigned to each faculty member, as reported by that faculty member. EFB faculty advise their students from the time the students matriculate at ESF until they graduate. Some faculty members also regularly and informally advise a much larger number of undergraduates, and some advise ESC undergraduate students. Advisees are temporarily reassigned to other faculty during an advisor’s sabbatical leave.

<table>
<thead>
<tr>
<th>Name</th>
<th>Undergraduates</th>
<th>Graduates</th>
<th>Graduates</th>
<th>Credit Hours</th>
<th>Total Credit Hours</th>
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<td>17</td>
<td></td>
<td></td>
<td></td>
<td>17 (17/0)</td>
</tr>
<tr>
<td>Diemont</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td>14 (14/0)</td>
</tr>
<tr>
<td>Dovciak</td>
<td>23</td>
<td></td>
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<td>23 (23/0)</td>
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<tr>
<td>Fernando</td>
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<td>Limburg</td>
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<td>Lomolino</td>
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<td></td>
<td>?</td>
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<tr>
<td>McGee**</td>
<td>27</td>
<td></td>
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<td>27 (27/0)</td>
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</tbody>
</table>

Dr. McGee had the highest teaching workload (1230 total credit hours), followed by Drs. Fierke (1062), Horton (1015), Rundell (748), and Turner (711). EFB faculty was responsible for 12,429 credit hours (versus 14,231 last reporting period) of instruction, an average of 401 credit hours per faculty per year (vs. 431 hours last reporting period). Another 5185 credit hours were delivered by Visiting Instructors and others (versus 3038 in last reporting period) for an EFB total of 17,614 credit hours (vs. 17,269 credit hours last reporting period). Using the total number of credit hours for the past year (i.e., 59,102) as compiled by the Registrar for eleven departments (e.g., including the Library), these EFB credit hours are about 28% of the total credit hours generated by all departments during this reporting period, depending on the total number reported for EFB (i.e., 16,546 as reported by the Registrar’s summary or 17,614 as stated in Report from Dr. Fellows).
Curriculum changes

Dr. Beth Folta has finished revising course offerings and requirements for the Natural History and Interpretation major, and initiated a change in name for this major to better reflect its purpose and make the content easier for potential students to understand. The new name for this major, Environmental Education and Interpretation, has been approved.

Undergraduate students enrolled in each EFB major

Enrollment numbers change throughout the year, especially after December and May graduations, e.g., there were 631 EFB undergraduate students enrolled in classes during the fall ’14 semester and 596 registered for the spring ’15 semester (versus 634 and 584, respectively, fall ’13 and spring ’14; 634 undergraduates is the second largest number in the history of the department – the greatest number enrolled (641) was during the fall ’12 semester. The third largest number of 633 enrolled at the beginning of fall ’11). The total number of undergraduates in EFB represented nearly 37% of all full and part-time undergraduates (1715) at ESF last fall.

Fall ’14 undergraduate enrollments (and percent of total) in each major were:

- Conservation Biology: 183 (29%)
- Environmental Biology: 157 (25%)
- Wildlife Science: 149 (24%)
- Aquatic and Fisheries Science: 54 (9%)
- Biotechnology: 53 (8%)
- Environmental Ed. & Interpretation: 19 (3%)
- Forest Health: 16 (3%)

Total 631 undergraduates in EFB (fall ’14)

Listing of awards and recognition

Justin Fiene: SUNY-ESF Undergraduate Student Association Best Teacher Award
Kimberly L. Schulz: SUNY-ESF Undergraduate Student Association Best Advisor Award

Research/Scholarship

Summary of publications/presentations

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

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

Science Citation Indices

Scholarly Metrics (written by Jessica Clemons, Senior Assistant Librarian in Moon Library and liaison to the department)

The impact of one’s overall publication record can be assessed by a variety of citation indices. The tools used for this analysis include Scopus, a subscription database from Elsevier, and Google Scholar, a freely available database.

Citation analysis is a tool by which faculty can gauge the impact and visibility of their work on the scholarly community, and the relative influence of their research. Scopus is the world’s largest abstract and citation database containing peer-reviewed research and other scholarly sources. Scopus includes over 57 million records from journals, conference proceedings, books, and patents. Content is expanding but inconsistent prior to 1996. Google Scholar offers additional insight into the analysis of research impact. Some faculty have chosen to set up their profiles in Google Scholar which offers additional insight and visibility. Google Scholar aims to index all of the peer-reviewed research and scholarly literature available on the web from any time period.

The databases referenced above do not correct errors in citing papers. This means that one paper may be cited several different ways and appear as separate entries. These tools concatenate citation when possible but there are inevitable errors. Also, author and institutional naming inconsistencies complicate these analyses. Comparisons between these tools should be avoided. They should be seen as complementary. The databases use different sources to generate data and some are more comprehensive than others.

The Hirsch index, or h-index, has become the standard accepted measurement of academic output and can be generated in both Scopus and Google Scholar. The h-index is defined as: A scientist has index h if h of his/her Np papers have at least h citations each and the other (Np − h) papers have no more than h citations each. However, the h-index has significant limitations in terms of what it measures: (1) it does not include citations to the same work that have small mistakes in their referencing (of which for some publications there are many); (2) it only includes citation to journal articles (not to books, book chapters, working papers, reports, etc.); and, (3) it only includes citations in journals that are listed in the database being searched, which is never comprehensive of academic journals in the field. Therefore, the h-index should be viewed as one metric among many in considering academic output and productivity.

In addition to the h-index, faculty 1, 5, and 10 year citation numbers are included to provide a more meaningful understanding of their work. The total number of documents in the databases is included which may offer more context of faculty work. This table was generated by Jessica Clemons, Senior Assistant Librarian in Moon Library and liaison to the department.

Using the number of citations for 2005 to 2014 as determined by Scopus, Dr. Karin Limburg had the highest number of citations followed by Drs. James Gibbs, Tom Horton, Mark Lomolino, and Jacqui Frair. Using this same data base for only last year, Dr. Karin Limburg had
the highest number of citations followed by James Gibbs, Tom Horton, Jacqui Frair, and Mark Lomolino.

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Summary of grant activity

From May 1, 2014 to April 30, 2015, EFB submitted 41% of all proposals (of 324 total) submitted by all units at ESF. These EFB proposals represent 33.3% of the $52,955,872 amount for all proposals submitted by all units to the ESF Office of Research Programs. The average amount per EFB proposal was $132,001. Nearly 46% of EFB proposals submitted during this period (for $5,212,672) have already been awarded, with another nearly 39% still pending (for $9,783,746) and 15% rejected (for $2,636,572).

The proposal submission activity of each faculty member for the 12 month period ending April 30, 2015 follows. Dr. J. Frair had the highest credited number of proposals submitted, followed by Drs. L. Newman, J. Cohen, N. Ringler, and K. Limburg. Dr. J. Gibbs had the highest credited dollar amount of proposals submitted, followed by Drs. J. Frair, J. Cohen, E. Folta, and M. Fierke; these five accounted for $8,781,339 of the total.

Proposal Activity Summary by PI/CoPI

(12-Month Period ending 4/30/15)

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<th>Credited Amount</th>
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NYNHP Personnel
Evans, Dorothy 11.50 $755,416
Howard, Timothy 3.25 $427,059
Schlesinger, Matthew 3.00 $273,920

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

**rank by credited amount (excluding NYNHP personnel); 1 highest, 30 lowest

Appendix F lists all active grants of each EFB faculty. For the 12-month period ending June 30, 2015, EFB accounted for 42% of all active sponsored research projects (of 415 total) submitted by all units at ESF, versus nearly the same % during the previous reporting period, and 46% of the $15,501.381 of all sponsored program expenditures by all units at ESF. The average amount of expenditure per project was $40,932 versus $39,286 in the last reporting period.

Sponsored program expenditure activity by PI/coPI among EFB faculty for the 12-month reporting period ending 4/30/15 follows. Dr. Cohen had the highest credited number of program expenditures (excluding the NYNHP personnel), followed by Drs. Leopold, Frair, Gibbs, and J. Farrell. Dr. Leopold had the highest credited dollar amount of program expenditures, followed by Drs. Frair, Ringler, Cohen, and J. Farrell.

Sponsored Program Expenditure Activity Summary by PI/CoPI
(12-Month Period ending 4/30/15)

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McNulty, Stacy 3.03 $58,054 (15)
Newman, Lee 6.58 $186,535 (12)
Parry, Dylan 1.42 $45,415 (18)
Paterson, Gordon 0.00 $0 (30)
Powell, William 5.33 $207,253 (8)
Ringer, Neil 6.25 $452,828 (3)
Rundell, Rebecca 1.00 $43,633 (20)
Schulz, Kimberly 5.67 $7,856 (25)
Stewart, Donald 1.00 $3,990 (28)
Teale, Stephen 7.00 $204,661 (9)
Turner, Scott 2.00 $103,784 (14)
Weir, Alexander 1.00 $14,017 (24)
Whipps, Christopher 7.67 $313,518 (6)

(NYNHP Personnel)
Evans, Dorothy 19.58 $1,599,924
Howard, Timothy 4.67 $138,101
Schlesinger, Matthew 1.83 $81,495

*rank by credited amount, not including NYNHP personnel; 1 highest, 30 lowest

**Patents and Patent Applications**

**Listing of Awards and Recognition**

Jacqueline L. Frair: Inducted as “Fellow” to The Wildlife Society
James P. Gibbs: Michigan Tech Distinguished Ecologist Lecturer
James P. Gibbs: University of Maine 2015 “Distinguished Wildlife Alumna/Alumnus” Award
Robin W. Kimmerer: Sigurd Olson Nature Writing Award
Robin W. Kimmerer: Orion Book Award Finalist
Robin W. Kimmerer: Midwest Booksellers Award for Braiding Sweetgrass
Robin W. Kimmerer: Honorary Doctorate, Northland College
Karin E. Limburg: Became a Visiting Professor, 10% time, Department of Aquatic Resources
Swedish University of Agricultural Sciences, 1 May 2014 (3-year appointment)
Karin E. Limburg: Nominated for Lise Meitner Visiting Professorship, Department of Physics,
Lund University (have not yet heard the outcome)
Rebecca Rundell: Research Associate, Paleontological Research Institution, Ithaca, New York
(3-yr term beginning January 2015)

**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.

Although there are no data to support this claim, the Department generates more print in the Syracuse Post-Standard than all other academic departments combined, and all other offices at ESF (except for the Top 10 Species List) and Syracuse University (except their athletic programs). Most of the dozens of local newspaper articles of this past year are posted in the main foyer of Illick. Much media attention often comes from beyond central New York, e.g., this past year in the Guardian, Huffington Post, and New York Times. Increasingly, important web sites are featuring work done by EFB faculty, e.g., Marketplace (American Public Media; radio and website), National Geographic, Science Daily, Our Amazing Planet, MSNBC, and CBS News. In July last year, Radiolab produced a one hour segment on the Galapagos, including an interview with Dr. James Gibbs. Dr. Karin Limburg co-authored an Op Ed piece for the New York Times, published in September. Dr. Bill Powell’s Chestnut Project was responsible for ESF’s second-highest spike in ESF web traffic (25,000 visitors on Nov 13-14) with 31,781 unique page views between May 13, 2014 to May 13, 2015. This increased national attention by EFB faculty has resulted in tens of thousands of new viewers to ESF web pages.

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)
K. Schulz: National Science Foundation Panel

Summary of journal editorial board service
Applied Vegetation Science: M. Dovciak
Bio-Complexity: S. Turner
Bulletin of Environmental Contamination & Toxicology: G. Paterson
Ecological Engineering: S. Diemont (Guest Editor, Special Issue, with Marc Beutel)
Ecology and Society: K. Limburg
Ecology of Freshwater Fish: N. Ringler
Estuaries and Coasts: K. Limburg
Forest Science: M. Fierke (Associate Editor)
Frontier of Biogeography, Monographs in Biogeography: M. Lomolino (Editor)
Number of journal manuscripts reviewed by faculty (#journals/total #manuscripts reviewed; excludes reviews of NSF, EPA, USDA, McIntire-Stennis, state agency, etc. proposals)

Castello, J.: 1/1  Limburg, K.: 8/11
Diemont, S.: 4/4  Mc Gee 1/1
Dovcia k, M.: 8/9  Newman, L.: 8/10
Farrell, J.: 2/2  Parry, D.: 7/10
Fernando, D.: 4/4  Powell, W.: 0
Fierke, M.: 5/7  Ringler, N.: 1/1
Folta, E.: 1/2  Rundell, R.: 3/5
Frair, J.: 3/14  Schulz, K.: ?
Green: 1/1  Teale, S.: 5/?
Kimmerer, R.: 1/1  Weir, A.: 2/2

Listing of Awards and Recognition
Melissa Fierke: 2014 SUNY ESF Presidential Award for Public Service/Outreach
Lee A. Newman: SUNY-ESF President’s Award for Community Service

Service Learning

Besides the engagement of students in classes listed below, EFB students were also very involved through independent studies (EFB 498) and internships (EFB 420).

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

EFB 496 and EFB 796, Restoring Ecosystems included several service learning components. Students worked with the community members from the village of Lacanja Chansayab, Mexico on a biocultural restoration project; they created a Lacandon Maya field guide that has been adopted used in local school to help incorporate Lacandon Maya TEK into the standard education. With a faculty member at El Colegio de La Frontera in San Cristobal de Las Casas, they worked on siting neighborhood-level natural wastewater treatment systems for the city of San Cristobal de Las Casas, Mexico, a community that currently does not have wastewater treatment. This project also included design of a rainwater capture system and wetland restoration design.
EFB 417/617 Non-Personal Environmental Interpretative Methods – This year the students worked with four community and ESF Greenhouses. The students worked with Beaver Lake, Central Region of NY State Parks, DEC, ESF Greenhouses, and the Rosamond Gifford Zoo. The students created brochures, waysides, and podcasts for the organizations to use. Not all organizations needed all three projects, so at minimum the students created a brochure and one of the other projects for their organization. Below are links to the podcasts created by the students in EFB 417/617:

- Beaver Lake - https://drive.google.com/file/d/0B5Gq8xMtqyrZcDJsTmRtMVh1NkE/view?usp=sharing
- Central Region NY State Parks – https://drive.google.com/file/d/0B5Gq8xMtqyrZTmZTmJYbGtWbFE/view?usp=sharing
- DEC - https://drive.google.com/file/d/0B5Gq8xMtqyrZemtxWEloRnktMHM/view?usp=sharing
- ESF Greenhouses
  o General Overview - https://drive.google.com/file/d/0B5Gq8xMtqyrZNNDNKZmdpUGpzDA/view?usp=sharing
  o Brazilian Pepper Tree - https://drive.google.com/file/d/0B5Gq8xMtqyrZN2h6ZGowUZhFZFE/view?usp=sharing
  o Graduate Research - https://drive.google.com/file/d/0B5Gq8xMtqyrZT11UWXFObXhld00/view?usp=sharing
- Rosamond Gifford Zoo - https://drive.google.com/file/d/0B5Gq8xMtqyrZdFpXQW1rVGLYA1k/view?usp=sharing

In total, the students donate over 478 hours to the four different community organizations and the ESF Greenhouses. All of the organizations have worked with us for before and would like to participate again in the future.

EFB 496/796 Advanced Interpretation and Certification offered eight environmental education programs for the public this spring. Four were offered at Green Lakes State Park and four were offered at Clark Reservation State Park. Each was an hour long program designed for families. They ranged in topics from geologic formations of the two parks, wild edibles, and spring adaptations. We had a total of 88 participants.

FOR 496 Nature Tourism and Ecotourism in Panama created interpretive brochures for three ecotourism sites in Panama as well as mapped all the hiking trails on the three properties.

EFB 305 Indigenous Issues and the Environment and EFB 446 Ecology of Mosses both had a service learning component. The Ecology of Mosses class conducted a bryological inventory of Carpenters Brook Fish Hatchery and prepared an educational brochure for public visitors, to share their knowledge of mosses. The students in Indigenous Issues and the Environment prepared detailed lesson plans for inclusion in the ESF in the High School Global Environment class, to facilitate teaching about traditional ecological knowledge and its application to environmental science.

EFB 525 Limnology Practicum had a significant service learning component for the fifth time this year. Students worked with two allied local lake associations (Song Lake Association and COFOKLA – Cortland Onondaga Federation of Kettle Lake Associations) to develop their independent projects on topics that were both scientifically relevant and of interest to the homeowners. About half of student time in the course was devoted to developing and performing these independent projects, in co-operation with homeowners (when applicable). This culminated in a scientific poster session and reception in 12 Illick Hall during finals week (12 December 2014) that was open to the public and attended by over 45 individuals including other undergraduate and graduate students not in the Practicum, faculty, and
members of the Song Lake Association and COFOKLA, as well as the community. The projects continue to expand a database of water quality and species presence data that will be useful to the homeowners in lake management decisions. Among student final posters were:

- Indications of Anthropogenic-Derived Nutrient Loading: Localized Concentrations of $^{15}$N Isotopes in Song Lake
- Invasion of Variable Leaf Milfoil in Little York Lake
- Effects of Turbidity on Phytoplankton and Planktivore Abundance in Four Central New York Lakes
- Stop Aquatic Hitchhikers! Implications for a Watercraft Steward Program in New York’s Kettle Lakes
- Optical Characterization of Several Lakes in Upstate New York
- Trace Element and Nutrient Concentrations Across an Anthropogenic Gradient in Webster Duck Pond, NY
- Effects on Macrophyte & Macroinvertebrate Abundance Due to Eurasian Milfoil Treatments in Cazenovia Lake
- Macroinvertebrate Micro-Migration: Juxtaposition of Impounded and Free Flowing Streams of New York
- Do Introduced Salmonids Displace Native Brook Trout in the Salmon River Watershed of New York?

In spring 2015, the students working on the local lakes the previous Fall were invited to present their posters at a COFOLKLA meeting on March 17, 2015 (after the fall term limnology class and during a busy time in the spring term), and students brought the class posters to this meeting and met with the public and regional lake association members. The student-public interactions have been very positive, and helped the residents as they consider management alternatives on their lakes. This service learning component is highly beneficial for both students and the public, and I hope to continue similar efforts in the future with this class. I hope to continue and expand these interactions in the coming year.

In addition, one of the senior projects for Environmental Science students that I mentored (Wendy Huang) involved an assessment of fecal and non-fecal coliform in a creek leading to Tully Lake and in Song Lake. The data we are compiling and collecting on the lakes from graduate student projects, undergraduate independent projects and capstone projects are being made publicly available during 2015-2016 and will be available for the benefit of homeowners and public users of the lakes with boater access. Wendy provided her poster and data to the lake associations.

Finally, another undergraduate project (Erik Hazelton) from the Fall 2013 Limnology Practicum class was continued and expanded as an honors project in 2014-2015 (co-supervised by me and Alex Weir) and has an outreach component. This project deals with foam build-up on Skaneateles Lake. The foam has been increasing in recent years and there is a lot of homeowner and drinking water concern about this foam. We meet with a small group of scientists, regulators involved in the lake’s water management, and home owner association representatives about the foam issue and ESF involvement, and Erik is working on converting his honor’s dissertation to a manuscript this fall; he has made his final poster (presented at the Spotlight on Student Research) available to representatives of the Skaneateles Lake Association.

**Graduate Students**

By the end of this reporting period, 33 (51, 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 Fall '14, there were 131 graduate students officially enrolled in EFB, a decrease of 19 compared to Fall '13. The largest number of graduate students (156) ever enrolled in the department occurred in Fall '11 and Fall '12; the lowest number of graduate students in EFB since 2005 was 128, at the beginning of fall 2008. The average number of EFB graduate students each fall since 2005 is 142.

EFB graduate students were about 28% of the total number of all full- and part-time graduate students at ESF during the fall ‘14. Of this EFB total, about 50% (51% previous year) were in our M.S., 10% (13%) M.P.S., and 38% (35%) Ph.D. programs. The approximate percentage of students in each of our ten graduate areas of study is as follows (with percentages of previous year in parentheses):

<table>
<thead>
<tr>
<th>Graduate Area</th>
<th>Percentage</th>
<th>Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology</td>
<td>45%</td>
<td>31%</td>
</tr>
<tr>
<td>Fish and Wildlife Biology and Management</td>
<td>26%</td>
<td>21%</td>
</tr>
<tr>
<td>Conservation Biology</td>
<td>15%</td>
<td>21%</td>
</tr>
<tr>
<td>Plant Science and Biotechnology</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Entomology</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Environmental Interpretation</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Forest Pathology and Mycology</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Chemical Ecology</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Applied Ecology</td>
<td>&lt;1%</td>
<td>3%</td>
</tr>
<tr>
<td>Environmental Physiology</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Graduate student awards (listed in Appendix P)

Graduate recruitment efforts

There were 146 graduate applications to EFB for spring ’15 (30) and fall ’15 (116) matriculation, versus 138 in the last reporting period. This total number of applications, specifically the decrease compared to the number of applications three years ago (183, the largest number of applications ever), is misleading as a number of EFB faculty strongly discourage potential applicants to formally apply if a review of submitted materials prior to a formal application indicates that acceptance and funding are unlikely. Some of us individually recommend to two or three dozen potential applicants each, not to formally apply because their academic records will likely be below the upper 25% of the anticipated applicant pool. The individual EFB faculty with the most robust graduate programs are generally those who receive the largest number of grad school inquiries and formal grad applications. Of the 116 applicants for fall ’14 matriculation, 43 (37%) were rejected, versus a rejection rate of 42% last year.

Despite this decrease in total number of applications versus three years ago (and a slight increase in applications compared to last year), EFB has recruited at least 44 new graduate students (i.e., “new” since August 2014) for this coming academic year versus 36 at the start of last fall. As of mid July 2014, at least 31 new graduate students (i.e., “accepted/coming” applicants) will matriculate this fall ’15 semester (versus about 28 for fall semester ‘14); additionally, nine new grads matriculated in January ’15 and four began this summer.

Until very recently, EFB has not had sufficient faculty capacity to increase graduate enrollment in Wildlife Sciences and Toxicology. With the addition of new faculty in these areas (Drs. Shannon Farrell and Gordon Paterson, respectively) we should see graduate enrollments
increase overall in EFB although finding adequate space will only become a greater challenge than it is now. Illick Hall was not designed to accommodate the current number of graduate students in EFB. Without minor renovations to existing spaces and replacement of large desks with smaller, more efficient ones, Illick has exceeded its capacity to provide sufficient, quality space for all funded graduate students, based on current graduate student enrollments.

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

- 1st authored peer reviewed pub: 100 pts, or 125 pts if done while an undergrad; (PER PAPER)
- 2nd authored/multi-authored: 50 pts (PER PAPER)
- Master's degree (not MPS): 75 pts
- Discretionary points for each faculty person to dispense: 150 pts

This new scheme has now been applied to seven cohorts of applications, i.e., those who applied for fall ’12, ’13, ’14 and ’15 and spring ’13, ‘14 and ’15 matriculation. This new ranking scheme greatly altered the ranking of applicants, and the faculty generally seemed very pleased by the change. However, it will take a few years to evaluate whether our new scheme helps us accept and support the applicants who are likely to be most successful in our graduate program.

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, including graduate students who finished. 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>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castello</td>
<td>1</td>
</tr>
<tr>
<td>Cohen</td>
<td>5.5</td>
</tr>
<tr>
<td>Diemont</td>
<td>11</td>
</tr>
<tr>
<td>Dovciak</td>
<td>3</td>
</tr>
<tr>
<td>Farrell, J.</td>
<td>8</td>
</tr>
<tr>
<td>Farrell, S.</td>
<td>2.5</td>
</tr>
<tr>
<td>Fernando</td>
<td>4</td>
</tr>
<tr>
<td>Fierke</td>
<td>6.5</td>
</tr>
<tr>
<td>Folta</td>
<td>9.5</td>
</tr>
<tr>
<td>Frair</td>
<td>9</td>
</tr>
<tr>
<td>Gibbs</td>
<td>7.5</td>
</tr>
<tr>
<td>Green</td>
<td>0</td>
</tr>
<tr>
<td>Horton</td>
<td>1</td>
</tr>
<tr>
<td>Kimmerer</td>
<td>6</td>
</tr>
<tr>
<td>Leopold</td>
<td>14</td>
</tr>
<tr>
<td>Course #</td>
<td>Course Name</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>101</td>
<td>General Biology Lecture I</td>
</tr>
<tr>
<td>102</td>
<td>General Biology Lab I</td>
</tr>
<tr>
<td>103</td>
<td>General Biology Lecture II</td>
</tr>
<tr>
<td>104</td>
<td>General Biology Lab II</td>
</tr>
<tr>
<td>120</td>
<td>Global Environment (spring)</td>
</tr>
<tr>
<td>132</td>
<td>Orientation Seminar</td>
</tr>
<tr>
<td>200</td>
<td>Physics of Life</td>
</tr>
<tr>
<td>210</td>
<td>Diversity of Life I</td>
</tr>
<tr>
<td>211</td>
<td>Diversity of Life II</td>
</tr>
<tr>
<td>217</td>
<td>Peoples, Plagues, &amp; Pests</td>
</tr>
<tr>
<td>303</td>
<td>Intro Environ. Microbiology</td>
</tr>
<tr>
<td>305/605</td>
<td>Indigenous Issues and the Environment</td>
</tr>
<tr>
<td>308</td>
<td>Principles of Genetics Lab</td>
</tr>
<tr>
<td>311</td>
<td>Principles of Evolution</td>
</tr>
<tr>
<td>312/512</td>
<td>Intro. to Environ. Interpretation</td>
</tr>
<tr>
<td>320</td>
<td>General Ecology</td>
</tr>
<tr>
<td>325</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>326</td>
<td>Diversity of Plants</td>
</tr>
<tr>
<td>336</td>
<td>Dendrology</td>
</tr>
<tr>
<td>340</td>
<td>Forest &amp; Shade Tree Pathology</td>
</tr>
<tr>
<td>352/552</td>
<td>Entomology</td>
</tr>
<tr>
<td>355</td>
<td>Invertebrate Zoology</td>
</tr>
<tr>
<td>385</td>
<td>Comparative Vertebrate Anatomy</td>
</tr>
<tr>
<td>390</td>
<td>Wildlife Ecology and Management</td>
</tr>
<tr>
<td>401/601</td>
<td>Molecular Biology Techniques</td>
</tr>
<tr>
<td>413</td>
<td>Introduction to Conservation Biology</td>
</tr>
<tr>
<td>417/617</td>
<td>Advanced Perspectives of Interpretation</td>
</tr>
<tr>
<td>419</td>
<td>Problem Solving in Conserv. Biol.</td>
</tr>
<tr>
<td>424/525</td>
<td>Limnology/Limnology Practicum</td>
</tr>
<tr>
<td>435/635</td>
<td>Flowering Plants: Diversity, Evolution…</td>
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<tr>
<td>440/640</td>
<td>Mycology</td>
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<tr>
<td>445/645</td>
<td>Plant Ecology</td>
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<tr>
<td>446/646</td>
<td>Ecology of Mosses</td>
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<tr>
<td>462/662</td>
<td>Animal Physiol.: Environ. &amp; Ecol.</td>
</tr>
<tr>
<td>480</td>
<td>Principles of Animal Behavior</td>
</tr>
<tr>
<td>482</td>
<td>Ornithology</td>
</tr>
<tr>
<td>483</td>
<td>Mammal Diversity</td>
</tr>
</tbody>
</table>

Courses having TA support and enrollment in each
Governance and Administrative Structure

Components:
Chair (D. Leopold)
Duties:
- Manage allocation of state, Research Foundation (research incentives), and College Foundation accounts
- Manage allocation of about 40 state graduate teaching assistantships
- Convene regular department meetings
- Represent department at biweekly Academic Council meetings
- Work with Development Office for fundraising
- Supervise about 34 faculty, one administrative assistant, two Instructional Support Specialists and other staff
- Promote faculty and staff within and outside of the department and facilitate the many good ideas that regularly emanate from faculty
- Ensure that all regular and new undergraduate and graduate courses are offered as listed in the College Catalog or webpage; main contact with Registrar for any course changes.
- Work with Physical Plant on all planned renovations and emergency repairs
- Assist Provost with special projects as needed
- Represent department at all college open houses
- Prepare annual department report

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


Curriculum and Course Assessment Committee (K. Schulz, chair; C. Whipps, M. Fierke, J. Gibbs, G. McGee, L. Newman)
Duties: review all course and curricula changes in EFB and College; oversee course assessment of seven EFB undergraduate majors

Graduate Program Advisory Committee (K. Limburg, chair; M. Dovciak, D. Fernando, M. Fierke, T. Horton; Jay Wason and Kean Clifford, graduate student representatives)
Duties: advise chair on graduate matters and facilitate department decisions about policies

Building and Space Committee (currently vacant)

Field Program (including International Programs) Committee (Stephen Teale, chair; R. Davis, J. Farrell, C. Nowak, A. Weir, C. Westbrook)
Awards Committee (chaired by J. Castello)
- Undergraduate and Graduate Academic Awards
- Illustrious Alumni, Emeriti Awards

Supporting Offices, Committees, Directors, and Coordinators

Administrative Office
- Administrative Assistant to the Chair/Secretary 1 (Sandra Polimino)
  Duties: manages all department accounts (state, research foundation, and development) and submits payment for department bills; manages ranking of graduate applicants and currently overseeing administrative aspects of EFB graduate program; assists with annual student recognition the day of convocation; manages EFB’s digital display in foyer; manages requests by faculty for all vehicles for their classes; assists in managing the chair’s calendar and schedule; assists in development activities; assists faculty in various ways; handles reimbursements, etc. for seminar speakers; assists the chair with a multitude of tasks.
- Secretary 1 (AnnMarie Clarke)
  Duties: provides support to Undergraduate Curriculum Director (UCD) for undergraduate program (7 majors); schedules prospective/accepted undergraduate student visits with Admissions; assists UCD with open house and transfer days; oversees summer mailings to incoming students; revises undergraduate handbook; assists with data collection for Undergraduate Program Assessments; provides faculty support for manuscripts, class work, and report preparations; assists with arranging meetings, conferences, travel and hotel accommodations; orders department supplies; processes State and Research purchase requisitions for faculty and staff; modifies, updates and maintains EFB websites for EFB faculty; handles incoming and outgoing mail when KB 1 is out; handles routine maintenance of office equipment including fax and copier; assists with Cranberry Lake Biological Station registration; assists with assigning rooms for graduate students; provides support to Department Chair and Secretary 1
- Keyboard Specialist 1 (Joanne Rappleyea)
  Duties: responsible for meeting and greeting all visitors to EFB; responds to all inquiries made by faculty, staff, and students; handles all incoming mail for EFB faculty, staff, and graduate students; assists Secretary 1, Keyboard Specialist 2, and Department Chair; orders office supplies for EFB administrative office; sets up a chart of each EFB conference room; handles routine maintenance of office equipment; oversees sign-out of digital equipment; types roster of faculty, staff and other key campus numbers and distributes to EFB faculty, staff, and grads; processes all Work Orders to Physical Plant; types Class Schedules (fall & spring) and post outside main office; processes State and Research purchase requisitions.

Undergraduate Curriculum Director (G. McGee)
Duties:
- Coordinate student recruitment events with Admissions;
- Develop orientation materials and programs for freshmen and transfer students;
- Update curriculum plan sheets, directed elective lists and the student handbook;
- Facilitate petitions;
- Coordinate department undergraduate advising;
Serve as the department’s representative on the Academic Standards Review Committee; compile and summarize ENB assessment data.

Undergraduate Curriculum Coordinators (by major)
- Environmental Biology (G. McGee)
- Aquatic and Fisheries Science (D. Stewart)
- Biotechnology (W. Powell)
- Conservation Biology (D. Parry)
- Forest Health (J. Castello)
- Natural History and Interpretation (E. Folta)
- Wildlife Science (J. Cohen)

Graduate Program Director (D. Fernando)

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

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

Instructional Support Specialist Supervisors
- K. Adams – S. Teale
- R. Giegerich – J. Frair
- P. McHale – D. Leopold
- B. McMaster – D. Leopold
- T. Ettinger – D. Leopold
**Budget**

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

**State Budget Allocations:** $49,750 (state budget allocation to EFB in ’07-’08 was $79,500 for fewer faculty, students, and courses); excludes search committee allocations from the Provost, Biotechnology, Tree Pest Info Service, and Academic Equipment Replacement allocations – amounts of these shown below)

Initial Allocation (August 22, 2014): $49,750 ($45,000 OTPS; $4,750 TS)

<table>
<thead>
<tr>
<th>Planned* Expenditures:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices (administration, faculty, staff, grads):</td>
<td>$13,500</td>
</tr>
<tr>
<td>Computers:</td>
<td>$0</td>
</tr>
<tr>
<td>Photocopy:</td>
<td>$5,000</td>
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<tr>
<td>Mileage/Travel:</td>
<td>$3,000</td>
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<tr>
<td>Repairs:</td>
<td>$2,000</td>
</tr>
<tr>
<td>Building, facilities, exhibits:</td>
<td>$3,000</td>
</tr>
<tr>
<td>Seminars and receptions</td>
<td>$8,500</td>
</tr>
<tr>
<td>Chairman Operating (over expenditures, all categories)</td>
<td>$5,000</td>
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<tr>
<td>Greenhouses</td>
<td>$1,000</td>
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<tr>
<td>Subtotal</td>
<td>$41,000</td>
</tr>
</tbody>
</table>

Faculty subaccounts and additional requests: $31,700

Total Planned Expenditures: $72,700

Total OTPS: $45,000

Total OTPS + Course Fees ($27,700): $72,700

Temporary services (TS): $4,750

*because $27,700 in course fees was anticipated to be collected during the last reporting period, budgeting was based on an assumed OTPS amount of $72,700, i.e., $45,000 + $27,700

Course Fee Allocation: $27,700
Biotechnology accounts: $8,450
Tree Pest Info Service account: $1,600
Academic Equipment Replacement: $40,720 (versus $26,459 previous year)
End-of-year allocation: $0 (versus $0 previous year)

The total state budget allocation to EFB for 2014-2015 was $48,750. Course fees of $27,700 were expected to be collected in the fall ’14 and spring ’15 semesters, and these fees were transferred into our OTPS account as needed. In February, the Provost notified the
Department that course fees collected for the fall ’14 and spring ’15 semesters exceeded the
$27,700 projected by at least $3,500, so that additional amount was added to the course fees
account. Funds in the course fee account can be carried over to the following academic year, a
significant advantage over funds in the OTPS account which must be spent by the end of each
June.

Of the extraordinary expenditures that are covered by state funds, the cost of the
Department’s pre-Convocation award ceremony and reception for graduating students, their
families and friends, and faculty and staff was $5,505 (food and drink for reception, award
plaques). Copiers in EFB cost about $9000 each year. The Presidential Inaugural Bioblitz cost
EFB about $1000, but the press generated from this event far exceeded these costs. Increasingly,
state funds are needed for development-related activities – although these activities should
eventually result in financial support for currently unfunded programs and ideas, there are no
state funds explicitly allocated for the travel and other costs associated with these efforts.
Academic Equipment Funds allocated to EFB ($40,720 this past period) have been instrumental
in allowing faculty to replace equipment required for classroom instruction. Significant portions
of these funds recently have been used to purchase dozens of dissecting and compound
microscopes which are used by many hundreds of students every year. With fewer Instructional
Support Specialists in the department and at the College to help maintain these scopes, they do
not last for decades as they once did. Our specialized courses have also relied on these funds to
upgrade badly outdated equipment. Unfortunately, these funds cannot be used to help replace
the boats and other equipment needed for our aquatic sciences courses so we are still without a
dedicated funding source for these required types of equipment.

**Funds Generated by Summer Courses and Grad Tuition Incentive Program**

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Courses:</td>
<td>$11,009.68</td>
</tr>
<tr>
<td>Grad Tuition Incentive Program</td>
<td>$0</td>
</tr>
</tbody>
</table>

Funds from these sources have only recently been available and provide much incentive
for the department to offer relevant summer courses during Maymester and Summer Session, as
well as increasing enrollment in the department’s M.P.S. programs, the likely graduate programs
to see an increase in self-paying students (i.e., those not on state or research graduate
assistantships). The funds generated from self-paying graduate students, however, were
insufficient to continue this incentive program, so it was eliminated.

Funds from summer ’14 courses of $11,009.68 were the highest amount yet generated by
summer course offerings (versus $9,455 in ‘13). Nearly all of these funds, except for the
remaining $2,500, were spent on EFB’s Adaptive Peaks graduate seminar series and speakers for
Dr. Newman’s Phytoremediation Seminar, specifically to cover the travel, lodging, food and
honaria of the speakers, and costs of the reception and hosting dinners. Based on enrollment
numbers for the summer ’15, we expect a similar allocation in the fall of ’15.

**SUNY RF Departmental Research Incentives Funds**: $17,680 allocated 12/4/14 with an
additional $7,825 (withheld from expected allocation in Dec. ’14) allocated June 1, 2015 for
a total allocation since last reporting period of $25,505 (versus $22,752 last year and
$24,274 in ’12-‘13); carryover of $6,942 balance from previous year; total available $32,447.

Expenditures (by general categories):
Department Seminars (incl. Adaptive Peaks) $5,000
Faculty and Staff Development and Recognition $6,770
Faculty and Staff Equipment and Supplies $0
TIBS, CLBS undergraduate student fellowships $0,000
Building Equipment and Supplies $250
Office Copiers (supplies) $1,200
Student Development and Recognition $2,000
Searches (Environmental Microbiologist) $1,500
Development $1,500
Greenhouse $475
Dept and Field Station Dues $750

Total Expenditures $19,445

Balance (July 17, 2015) $13,002

A few years ago departments received 5% of the indirect costs generated by their faculty research grants as Research Incentives. Then the amount was reduced to 4%, then last fall (2014) to 3% (i.e., the $17,680 allocated in December). In June 2015, the Research Incentive for academic departments was restored to 4%, with the possibility of an additional restoration to 5%, to be considered at fiscal year-end (June 30, 2015).

An additional $4,300 was allocated to an existing $1,487 in the Department Chair Account in December 2014; $1,448 was spent for similar purposes as shown in the previous table from this account, leaving a balance of $4,339 in this account. These modest allocations are made biannually to support special program development and academic program enhancement needs for each academic department. These funds are from the collection of unexpended residuals from RF accounts and the recovery of costs associated with the provision of services to grants and contracts.

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 large doctoral-granting biology program. Because of the significant reduction in Research Incentives funds the past four years and anticipated/unanticipated expenditures, the department suspended the TIBS and CLBS undergraduate student summer fellowship programs. However, with the course fees collected to pay for the expendable supplies in lab courses with state funds, the department should be able to activate these programs during ’15 – ’16 by not having to cover basic teaching expenditures with Research Incentive funds.

Development Funds ($69,550 budgeted for ’14-’15; does not include balance in EFB Fund nor College Foundation accounts for the RWLS, CNPE, Dale L. Travis Lecture)

Undergraduate and graduate student awards come from the following endowments: Maurice and Annette Alexander Wetlands Research Fund, Robert L. Burgess Graduate Scholarship in Ecology, Betty Moore Chamberlaine Memorial Fund, Leroy C. Stegeman Endowment in Invertebrate Ecology, Robert A. Zabel Endowed Scholarship, John and Etta Simeone Graduate Fellowship, Josiah L. Lowe-Hugh E. Wilcox Scholarship Fund, Phyllis Roskin, Joseph and Ruth Hasenstab, Edwin H. Ketchledge Scholarship, Lanier Memorial, Silverborg Memorial, and Patricia D. and Jeff J. Morrell Scholarship, and Dr. Samuel Grober ’38 Graduate Fellowship. During the academic year but especially at the annual EFB Spring
Celebration and Awards Ceremony prior to the ESF Convocation, $42,318 was given out to EFB undergraduate and graduate students to assist them in their research endeavors and for outstanding accomplishments; additional money was given out during the academic year to students based on financial need. Awardees are included in Appendix P.

A new undergraduate award was established, without an endowment, during the spring of 2012 in honor of Dr. Chun-Juan K. Wang. Since then, this award has been given annually to the outstanding graduating woman who best exemplifies Dr. Wang’s love of learning, teaching and research, in hopes that it will inspire her to achieve her highest goals. The Chun Wang Honor Award recognizes the many contributions that Dr. Wang has made to the College since 1959 when she began here as the first woman professor at ESF. Dr. Wang is a Professor Emerita in Botany and Mycology and is a world renowned mycologist, known especially for her groundbreaking work with the Fungi Imperfecti. In addition to her exemplary research, Dr. Wang is highly respected for her years of service as a beloved teacher, introducing generations of students to the wonders of plants through her courses in Botany, Diversity of Plants and many aspects of Mycology. She has inspired hundreds of students with her knowledge, her enthusiasm and her passion for learning and has served as a wise mentor and role model for students and faculty alike. And she still regularly comes into Illick to work! This award was established by the women faculty in EFB, now representing 30% of the current EFB faculty.

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 policy and management, waterfowl ecology, etc.), museum display cases for the Roosevelt Discovery Center in Illick, a graduate seminar series, graduate fellowships (to attract the top applicants) and scholarships (to fully fund attendance at professional meetings), and undergraduate scholarships (for recruiting top students and support for attending professional meetings and field trips offered in our program, e.g., to Russia, Ireland, Australia, and Africa).

In May ’12 the ESF College Foundation received a donation of $25K from an ESF alumnus to establish a lecture series and other activities to publicly promote significant activities of ESF faculty. In March 2013 Dr. James Gibbs delivered the first Dale L. Travis Lecture. Donations of the same amount were made in spring ’13, spring ’14, and spring ‘15 to continue this series. Dr. Robin Kimmerer gave the Dale L. Travis Lecture in September 2014 and Distinguished Teaching Professor Emeritus George Curry (Department of Landscape Architecture) gave the lecture in March 2015. Details on these lectures and videos of the presentations are posted at: http://www.esf.edu/efb/travislecture/. We will continue to use this series for lectures on the Syracuse campus as well as support lectures in other strategic locations.

Student Learning Outcomes Assessment

The following section is the Introduction from the recent assessment of the seven department majors from 2009 to 2012, led by the department’s Undergraduate Curriculum Director, Dr. Greg McGee, and prepared for Middle States. The entire 166 page report is posted at: www.esf.edu/efb/documents/2015-EBF-Middle-States-Assessment-Report_final.pdf

This report provides analysis and discussion of assessment data for the seven majors administered by the Department of Environmental Biology. This introduction presents background and preliminary information regarding assessment methods that are common among all or many of the reports for each major, given the common origin of the seven majors and faculty involvement among these majors.
Departmental Structure

Between 1965-2002, the Bachelor of Science in Environmental & Forest Biology was the single undergraduate major program offered by the Department of Environmental & Forest Biology. Students enrolled in the degree program pursued eleven areas of focused study ("options") based upon personal interests and professional objectives. In response to an increased desire among undergraduates and EFB faculty to establish multiple, focused majors within the department, and to increase visibility and recruitment potential in traditional or growing fields like wildlife biology, conservation biology and biotechnology, the undergraduate program was divided into seven majors. Biotechnology was first offered in 2003, and five others (Wildlife Science, Aquatic & Fisheries Science, Conservation Biology, Forest Health and Natural History and Interpretation) were initiated in 2004 to provide focused professional study. Also in 2004, the new Environmental Biology major was established, but that major retains the overall structure of the pre-2004 EFB major. In 2014 the Natural History and Interpretation major was renamed Environmental Education and Interpretation.

At the beginning of the 2014-15 academic year the combined total undergraduate enrollment was 631. Current enrollment for Spring 2015 is 595 (due to December graduations) and distributed as described below among the seven majors:

<table>
<thead>
<tr>
<th>Major</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation Biology</td>
<td>179</td>
</tr>
<tr>
<td>Wildlife Science</td>
<td>124</td>
</tr>
<tr>
<td>Environmental Biology</td>
<td>155</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>56</td>
</tr>
<tr>
<td>Aquatic and Fisheries Science</td>
<td>51</td>
</tr>
<tr>
<td>Natural History and Interpretation</td>
<td>18</td>
</tr>
<tr>
<td>Forest Health</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>595</td>
</tr>
</tbody>
</table>

The 31 current faculty within the department typically identify with two or more majors for the purpose of undergraduate advising. Each major has a curriculum coordinator with responsibilities including curriculum assessment.

Department-wide Student Skills Development

Given the common origin of our seven majors, many of them share substantial similarities in core and directed elective requirements. Consequently many courses serve to fulfill learning objectives that are common to all majors and as assessment points for the different majors. Given the universal prioritization by all majors to develop student skills in written and oral communication, group work, applications of physics, chemistry and higher math skills, field skills, and organismal diversity, we were prompted to acquire information from all EFB faculty regarding the extent to which each course is contributing to department-wide priorities.

These data are presented in Appendices 1-3. Of the 70 courses that are currently taught regularly, 24 involve student preparation of one or more hypothesis-driven technical laboratory reports, and in all instances faculty report providing students with guidance in preparation of those reports. Furthermore, students are required to prepare one or more term papers of varying length that summarize, synthesize or analyze biological or ecological principles in 26 of the 70 courses. Of the 70 EFB courses 33 require no substantial research writing (although they may...
include regular, smaller writing assignments) and 12 require both. Other courses include oral communication skills development, with 25 courses including opportunities for students to prepare technical oral presentations or oral presentations that summarize, synthesize or analyze biological or ecological principles.

Instructors from 27 of the 70 courses report that students apply higher math skills (statistics, modelling or calculus) in their coursework and 25 apply chemical or physical principles to solve biological problems. Students are engaged in group problem-solving, project development or research activities in 41 courses EFB courses. A total of 30 classes, including General Biology I, the Diversity of Life I & II sequence, and 27 upper-division elective courses emphasize the study of organismal biodiversity. Students typically learn the field identification, application of taxonomic keys or molecular techniques for identification, phylogenetic relationships and natural histories of more than 100 species or higher-order taxa in these biodiversity courses.

Curriculum Assessment

All EFB majors developed new assessment plans in 2008 and collection, archiving and coordination of data began immediately thereafter. Given the common history of all EFB majors, many of the assessment plans contain similar or identical student learning objectives. An effort was made in 2009 to develop an approach for gathering and archiving assessment data into a common database for use by all majors. This approach proved to be unworkable due to difficulties coordinating data collection from among majors and the college Registrar. In addition, departmental progress toward achieving assessment goals were complicated by the fact that responsibilities for assessment often fell to coordinators and assessment team members having no prior experience in institutional assessment or to senior faculty lacking motivation to prioritize their assessments.

Assessment data were eventually gathered for the years 2009-2012. We acknowledge the recent two-year lapse in data collection, which resulted from these administrative and practical data management challenges. A decision was made among the curriculum coordinators to apply the data that we had in order to complete a first cycle of assessment, and make necessary changes in the respective assessment plans, before gathering any new data that we thought would be of questionable value. Consequently within the three-year dataset, there are frequent instances of missing data for some measures for some or all years. In some instances, assessment coordinators realized early on that the measures proposed in 2008 would be ineffective metrics, so they were immediately discarded or replaced. These instances are indicated in each major’s respective reports.

Proposed modifications to assessment plans are included in each major’s report. These plans are in place to reinitiate assessment data collection beginning with the 2015-16 academic year.

Assessment Methods

Assessment instruments for all majors included a combination of final course grades, grades on targeted assignments embedded in key courses, and student peer reviews. Letter grades and Likert Scale assessments were converted to numeric scales using the following conversions:

Likert scale (1-5) data were converted to numeric scale (0-100) using the following relationship:

\[ \text{Numeric} = (\text{Likert} \times 10) + 45 \]
Letter grades and numeric scales were categorized into performance standards using the following schedule:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Numeric Scale</th>
<th>Performance Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100</td>
<td>Exceeds Standard</td>
</tr>
<tr>
<td>A-</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>89</td>
<td>Meets Standard</td>
</tr>
<tr>
<td>B</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>81</td>
<td>Approaches Standard</td>
</tr>
<tr>
<td>C+</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>75</td>
<td>Does Not Meet Standard</td>
</tr>
<tr>
<td>C-</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>55</td>
<td></td>
</tr>
</tbody>
</table>

For all measures of student learning outcomes in all majors, goals have been set for 80% of students to meet or exceed the performance standards.

**Objectives 2014-2015**

**Objectives, status, and relations to strategic plan**

To coincide with the College’s strategic planning process that began in April 2001 and resulted in the Vision 20:20 strategic plan (http://www.esf.edu/vision2020/vision2020.pdf), 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. collaboration as College partners on data development and utilization.
Numerous examples and data throughout this annual report indicate that EFB continues to make substantial progress towards accomplishing these tasks.

Beginning in summer 2014 the College began a strategic planning process that should result in an initial plan at the end of this calendar year (2015). Departments are expected to develop their own strategic plans, after this initial College strategic plan is finished.

This past year EFB had hoped to initiate a search to replace EFB faculty member Dr. Sadie Ryan because of her role in the College’s emerging Environmental Health program, specifically her Epidemiology course. Although not a departmental program, the Environmental Health major in Environmental Sciences, was approved by SUNY and the first group of students matriculated in this program last fall ’14 semester. EFB has a significant role in offering this major, and administering it, with Dr. Lee Newman as the Director of this interdepartmental program.

We also hoped to initiate searches for two faculty who retired this past reporting period. In September 2014 Dr. Myron Mitchell retired, followed by Dr. Bill Shields in January 2015. We had to hire a substitute instructor for Dr. Shields’ very popular Principles of Animal Behavior class. Given the dire financial situation at the College, we have not yet been authorized to replace anyone.

Although we were very fortunate to hire Dr. Lee Newman a few years ago to cover some of the key teaching duties of Drs. Annette Kretzer and Larry Smart who are no longer in the department, EFB is still without a plant physiologist. A doctoral granting environmental biology program must have a plant physiologist so we are anxious to explore options that would fill this significant void.

The Dale L. Travis Lecture Series offered two very successful lectures this past reporting period. In September Dr. Robin Kimmerer, Distinguished Teaching Professor in EFB and Founding Director of the Center for Native Peoples and the Environment at ESF gave a talk to commemorate the 100th anniversary of the extinction of the passenger pigeon, sharing insights from indigenous environmental ethics on species conservation. In March, Distinguished Teaching Professor Emeritus George Curry (Dept. Landscape Architecture) spoke on research conducted (since 1997) by ESF Department of Landscape Architecture’s Center for Cultural Landscape Preservation at the Roosevelt Estate in Hyde Park, N.Y. Both lectures were open to the public and drew hundreds of people from off campus to attend these presentations.

The work by the EFB Promotion and Tenure Committee (PTC) to develop metrics to evaluate faculty at various points in their career, is very important although some faculty have expressed serious concerns about implementing such an evaluation. The PTC gathered data from peer departments and institutions on faculty teaching, research, and outreach to compare with data in these categories produced by EFB faculty. Based on these data, as well as a detailed analysis of metrics of only EFB faculty, the PTC substantially revised their original plan (presented in May 2013) to eliminate these concerns and gain support from the majority of the faculty. Because of lingering faculty concerns about the revised evaluation plan and metrics, the PTC has made additional revisions for faculty to review during the fall 2015.
**Objectives 2015-2016**

**Objectives and relations to strategic plan**

Recently we learned that although we implemented a mentoring program for new faculty, there sometimes has been a disconnect between guidance of a faculty member’s mentoring committee and evaluations made at various levels in the department and College-wide promotion and tenure process. Metrics to objectively indicate which area(s) need strengthening have been developed by the EFB Promotion and Tenure Committee but have met with strong resistance from some of the faculty in the department. These metrics have been revised based on faculty input and ideally would be included in the department’s Promotion and Tenure Guidelines, if not as requirements, then as benchmarks for which faculty can ascertain whether they are on a satisfactory track for promotion and tenure.

The seven EFB undergraduate majors need a formal assessment, planned for this coming academic year. The EFB Curriculum and Course Assessment Committee, working with the Chair and Coordinators of each major, are working on the plan for this assessment, likely to be done during the spring ’16 semester, which will include a site visit by evaluators. The composition of that evaluation team is currently being reviewed.

With substantial time invested in development activities, we hope that there will be some significant results soon. Although it appears that most of these efforts are concentrated on the Roosevelt Wild Life Station because of the endowed professorships being pursued and bioblitzes done, any successes with these efforts will have a significant direct and indirect impact on the department as well. Without funds from external sources, we will never fully reach the potential and aspirations of the faculty and students. Besides ongoing development activities for EFB programs, seeking external funds for the new undergraduate Environmental Health major is a high priority.

Following the development and implementation of the College’s new strategic plan, likely by January 2016, the Department should undergo a similar process to facilitate that plan and take advantage of opportunities that result. Department-level strategic planning will likely be a primary objective of 2016, likely spilling over into the fall if not beyond. By that time, the most important current unknowns should be more certain, e.g., the status of the Academic Research Building and status of key development efforts, especially related to endowed professorships.

**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 overview 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; one of EFB’s Secretary 1’s is responsible for organizing these meetings.
EFB’s undergraduate curriculum director sends a letter to all Fall-accepted undergraduates in the summer, welcoming each into our program. These letters are individualized to the student, and tailored to the circumstances, e.g., whether the accepted student is a Presidential Scholar, or in a particular major. Similar letters go to the few applicants who start in the Spring semester.

Seven 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. The chair also sent a personal email to each of the 37 accepted EFB freshmen who were also invited to join the ESF Honors Program, encouraging each to attend ESF this fall.

As of June 20, 2015 we had received 902 total applications for fall 2015 (freshman + transfer students; vs. 886 last June and 864 in June 2013). We have accepted 410 (vs. 388 and 386 the previous two years) applicants and have received 197 deposits (vs. 203 and 179). Of the total number of applications that we received, 64% were for freshman; about 63% of our deposits are from this group; about 45% (44% last year) of all applicants were accepted. The total number of deposits by EFB major and percent of total for the class entering fall 2015 (in parentheses) are: Aquatic and Fisheries Science, 15 (8% vs. 10% for class entering fall 2014); Biotechnology, 22 (11% vs. 9%); Conservation Biology, 57 (29% vs. 23%); Environmental Biology, 53 (27% vs. 26%); Environmental Education and Interpretation, 5 (3% vs. 2%); Forest Health, 1 (about 1% vs. 1%); and, Wildlife Science, 44 (22% vs. 29%).

**Longer Term Visioning and Planning**

The EFB Chair and a few colleagues (notably Drs. Frair and Gibbs) spend a substantial amount of time on development efforts. Of the various purposes for which development funds are sought, the highest priority is still to fund at least three endowed chair positions (Boone and Crockett, Conservation Biology, Waterfowl Ecology) although endowed professorships in other areas of significance to EFB are of great interest. Additionally, the Chair spends much time advising Physical Plant on campus plantings, which also are very important to EFB’s (and the Department of Landscape Architecture’s) teaching programs. This time commitment has greatly increased with the attention that the Gateway Building green roof and grounds plantings has required. Of all the new positions that the Chair would find most helpful in meeting short and long-term goals of the Department, a full-time person devoted 50% to alumni relations and 50% to development activities, could make a dramatic difference to the Department. Given the size of EFB in terms of number of students, faculty, staff, and alumni, equal to the size of many Colleges, the Chair is not aware of similar size departments without at least one staff person dedicated for these purposes.

Over the next few years we hope to attract sufficient development funds for many significant purposes, e.g., endowed chairs (in biotechnology, conservation biology, wildlife management, waterfowl ecology), a residential building for scientists and graduate students at the Cranberry Lake Biological Station, museum display cases and public interaction space for the Roosevelt Discovery Center, a funded graduate seminar series, graduate fellowships (to attract the top applicants) and scholarships (to fully fund attendance at professional meetings), and undergraduate scholarships (for recruiting top students and support for attending professional
meetings and field trips offered in our program, e.g., to Russia, Ireland, Australia, and Africa). The Cranberry Lake Biological Station could become an important facility linking ESF with the public via natural history education and perhaps outdoors experiential learning opportunities. We also hope to find a means to highlight and mobilize our significant biological collections that serve a critical function in our teaching programs but likely have a much greater value to the public and researchers. We remain convinced that the opportunities for biology education that we provide with our strong emphasis on field experience, problem-solving and integration across taxa and the biological hierarchy from genes to ecosystems is much sought after and will remain even more so in the age of changing ways of learning.

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 the amount of time it takes to get information and tasks done, greatly limit the extent to which many significant ideas can be pursued. With the hiring of Nora Heaphy in the Development Office we are very optimistic that we will soon be successful in getting one or more requests for external gifts. Additionally, efforts are focused on unique opportunities that arise with little or no planning, e.g., the recent $2 million grant from SUNY to create a natural history museum in the 5000 square feet shell of the lower level of the Gateway Center. While such surprises are very welcome, the time now needed to develop those plans and eventual implementation has begun to greatly consume the limited time needed to meet goals laid out years ago, with careful planning.

Regardless, with very healthy undergraduate and graduate enrollments, the addition of thirteen faculty the past ten years (Drs. Frair, Whipps, Dovciak, Fierke, Folta, McGee, Newman, Cohen, Rundell, S. Farrell, Paterson, Diemont, and Green) tremendous effort by some of the senior faculty, greater use efficiency and enhancements of existing space, and improvements at our field stations, the department is closer towards realizing its basic goal of being one of the premier environmental biology programs. The EFB Chair hopes that with the department’s strong foundation and energy from many new faculty that the department is poised to discuss and move towards EFB’s aspirations beyond what has already been articulated and attained.
## Appendix A. EFB Faculty: Rank (at end of reporting period), Education, and Interests

<table>
<thead>
<tr>
<th>Name and Title</th>
<th>Degrees</th>
<th>Interest Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Castello, John D.</strong>&lt;br&gt;Professor and Associate Chair</td>
<td>PhD, Univ. of Wisconsin&lt;br&gt;MS, Washington State Univ.&lt;br&gt;BA, Montclair State College</td>
<td>Assessment of forest health, beech bark disease</td>
</tr>
<tr>
<td><strong>Cohen, Jonathan B.</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, Virginia Tech&lt;br&gt;MS, U. Connecticut&lt;br&gt;BS, Cornell University</td>
<td>Wildlife ecology and management, population and habitat ecology, threatened and endangered species.</td>
</tr>
<tr>
<td><strong>Diemont, Stewart A.W.</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, Ohio State&lt;br&gt;MS, Univ. of North Carolina&lt;br&gt;BA, Univ. of Texas</td>
<td>Systems ecology, ecological engineering, traditional ecological knowledge, ecosystem restoration, sustainability analysis, natural wastewater treatment systems and re-use, lesser-developed countries, agroecology</td>
</tr>
<tr>
<td><strong>Dovciak, Martin</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, Univ. of Minnesota&lt;br&gt;Dipl. Engin., Zvolen Technical University</td>
<td>Plant ecology; forest ecology; biodiversity; plant population &amp; community dynamics; spatial ecology; ecosystem management &amp; restoration</td>
</tr>
<tr>
<td><strong>Farrell, John M.</strong>&lt;br&gt;Associate Professor</td>
<td>PhD, SUNY ESF&lt;br&gt;MS, SUNY ESF&lt;br&gt;BS, Cornell University</td>
<td>Fisheries management, aquatic ecology, wetlands restoration, St. Lawrence River studies, muskellunge and northern pike ecology &amp; mgt., invasive species</td>
</tr>
<tr>
<td><strong>Farrell, Shannon L.</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, Texas A&amp;M&lt;br&gt;MS, Texas A&amp;M&lt;br&gt;BA, Brown University</td>
<td>Wildlife ecology, E&amp;T species and habitat, anthropogenic impacts, quantification approaches for wildlife habitat services, policy innovations for implementing the ESA</td>
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<td><strong>Fernando, Danilo D.</strong>&lt;br&gt;Associate Professor</td>
<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><strong>Fierke, Melissa K.</strong>&lt;br&gt;Associate Professor</td>
<td>PhD, University of Arkansas&lt;br&gt;MS, Oregon State University&lt;br&gt;BS, Arkansas Tech University&lt;br&gt;AA, North Arkansas CC</td>
<td>Forest entomology and forest ecology; impacts of invasives in forested settings with a focus on wood-boring insects.</td>
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<td><strong>Folta, Elizabeth</strong>&lt;br&gt;Assistant Professor</td>
<td>PhD, North Carolina State&lt;br&gt;MS, North Carolina State&lt;br&gt;BA, University North Carolina</td>
<td>Natural history &amp; interpretation, informal biology education, environmental education.</td>
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<td><strong>Frair, Jacqueline L.</strong>&lt;br&gt;Associate Professor</td>
<td>PhD, Univ of Alberta, Canada&lt;br&gt;MS, University of Wisconsin&lt;br&gt;BS, Cornell University</td>
<td>Wildlife and landscape ecology, animal movements and habitat use, predator-prey interactions</td>
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<td><strong>Gibbs, James P.</strong>&lt;br&gt;Professor and Associate Chair</td>
<td>PhD, Yale University&lt;br&gt;MA, University of Missouri&lt;br&gt;BS, University of Maine</td>
<td>Conservation biology, ecological monitoring, wildlife management, population biology and conservation genetics</td>
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<tr>
<td>Name</td>
<td>Position</td>
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| **Green, Hyatt C.** | Associate Professor      | PhD, Oregon State Univ.  
                       | BS, Univ. Georgia  
                       | Molecular microbial ecology, co-evolution of microbes with their animal hosts, microbial source tracking and water quality, microbial biogeography |
| **Horton, Thomas R.** | Associate Professor      | PhD, Univ of Cal.-Berkeley  
                       | MA, San Francisco State Univ.  
                       | Mycorrhizal ecology and systematics, mycology, restoration ecology |
| **Kimmerer, Robin W.** | Distinguished Teaching Professor | PhD, Univ. of Wisconsin  
                       | MS, Univ. of Wisconsin  
                       | Ethnobotany, conservation biology, and bryophyte ecology |
| **Leopold, Donald J.** | Distinguished Teaching Professor and Chair | PhD, Purdue University  
                       | MSF, University of Kentucky  
                       | Forest and wetland ecology; understanding drivers of species abundance and diversity at micro to macro scales; application of unique communities to sustainable landscapes; dendrology |
| **Limburg, Karin E.** | Professor                | PhD, Cornell University  
                       | MS, University of Florida  
                       | Fisheries ecology, ecosystem ecology, fish migration, biogeochemical tracers, ecological modeling, ecological economics |
| **Lomolino, Mark V.** | Professor                | PhD, SUNY Binghamton  
                       | MS, University of Florida  
                       | Biogeography; conservation biology, diversity in isolated ecosystems and habitat islands. |
| **McGee, Gregory G.** | Assistant Professor      | PhD, SUNY ESF  
                       | MS, SUNY ESF  
                       | Forest ecology, management, and restoration; effects of atmospheric nitrogen deposition on northern hardwood forests. |
| **McNulty, Stacy A.** | Research Associate       | MS, SUNY ESF  
                       | BA, SUNY Geneseo  
                       | Forest and landscape ecology, applied GIS; ecology, conservation, and forest management in the Adirondacks |
| **Newman, Lee A.**   | Associate Professor      | PhD, Rutgers & RWJ Med. Sch.  
                       | MS, Rutgers & RWJ Med Sch.  
                       | Phytoremediation and molecular and cellular biology. |
| **Parry, Dylan**     | Associate Professor      | PhD, Michigan State Univ.  
                       | MS, University of Alberta  
                       | Forest insect ecology, population dynamics of defoliating Lepidoptera, ecology of predators, parasitoids, and pathogens of forest caterpillars, invasive species in forested environments, top-down (natural enemies) and bottom-up (host plant) regulation of insect populations, evolution of life-history strategies in solitary and gregarious caterpillars. |
| **Paterson, Gordon** | Assistant Professor      | PhD, University of Windsor  
                       | MS, Trent University  
<pre><code>                   | Environmental and aquatic toxicology, ecotoxicology, emerging pollutants, food web bioaccumulation and biomagnification, persistent organic pollutants as indicators of species bioenergetics and individual, food web and ecological efficiencies. |
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<th>Name</th>
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<th>Research Interests</th>
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<td>Powell, William A.</td>
<td>Professor</td>
<td>PhD, Utah State University, BS, Salisbury State University</td>
<td>Forest biotechnology, molecular plant-microbe interactions, plant genetic engineering, plant gene analysis</td>
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<tr>
<td>Ringler, Neil H.</td>
<td>Distinguished Teaching Professor and Vice Provost for Research</td>
<td>PhD, Univ. Michigan, MS, Oregon State Univ., BA, California State at Long Beach</td>
<td>Aquatic ecology, fish behavior, fisheries science</td>
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<td>Rundell, Rebecca J.</td>
<td>Assistant Professor</td>
<td>PhD, Univ. Chicago, MS, Univ. Chicago; Cornell BS, Cornell</td>
<td>Invertebrate conservation biology, evolutionary biology, tropical biodiversity, adaptive and non-Adaptive radiations, organismal biology (Pacific island land snails, microscopic marine invertebrates)</td>
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<td>Schulz, Kimberly L.</td>
<td>Associate Professor</td>
<td>PhD, University of Michigan, BA, Cornell University</td>
<td>Nutrient and exotic species effects on aquatic ecosystems; ecological stoichiometry, aquatic community and ecosystem ecology; bioenergetics; nutrient cycling; lower food web studies; Great Lakes; Finger Lakes</td>
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<td>Stewart, Donald J.</td>
<td>Professor</td>
<td>PhD, University of Wisconsin, MS, University of Michigan BS, University of Michigan</td>
<td>Fish ecology and fisheries management; ecological energetics; modeling predation and production processes; Great Lakes ecosystems; Amazonian ecosystems; ecology and systematics of Neotropical freshwater fishes</td>
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<td>Teale, Stephen A.</td>
<td>Professor</td>
<td>PhD, SUNY ESF, MS, University of Kansas BA, College of St. Rose</td>
<td>Forest entomology; chemical ecology; pheromones of forest insects; evolution of pheromone communication</td>
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<td>Turner, J. Scott</td>
<td>Professor</td>
<td>PhD, Colorado State Univ., MS &amp; BA University of California-Santa-Cruz</td>
<td>Animal physiology; physiological ecology, thermal energetics; biology of body size; physiology of gas exchange</td>
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<td>Weir, Alexander</td>
<td>Associate Professor</td>
<td>PhD, University of Newcastle upon Tyne BS, University of Bradford, UK</td>
<td>Systematics and evolutionary biology of fungi using classical and modern molecular approaches; fungal biodiversity and conservation; fungal arthropod interactions; biology of parasites and symbionts</td>
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<td>Whipps, Christopher M.</td>
<td>Associate Professor</td>
<td>PhD, Oregon State University, BS, University of Victoria at Malaspina University-College</td>
<td>Fish and wildlife diseases, parasitology, microbiology, taxonomy, molecular systematics, diagnostics, parasites as biological tags and ecological indicators</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?”

John D. Castello
Students: Steve Teale and I continue to teach EFB 217 to over 100 students for the 10th year. We will continue to do so as long as it remains popular. I oversee the senior synthesis course for the forest health majors. This year seven students completed their degree in Forest Health and presented their senior synthesis projects. John Cale completed his PhD, and is now a postdoc at the University of Alberta.

Department/College: I have been actively engaged as Chair of the departmental P/T Committee to complete revision of the departmental protocol for evaluation of faculty for promotion and tenure decisions, and to assess faculty/departmental productivity over time. I have overseen the successful review of Drs. Farrell and Dovciak for promotion to Professor and Associate Professor, respectively. I will continue to assist the Chair as Associate Chair as long as he requests my help.

Self: I published the first of several manuscripts on my baseline mortality method to evaluate forest mortality attributed to climate change. It was published in Forests 2014. Jon Cale and I published three manuscripts resulting from his PhD research this year alone. We are working on several others. The baseline mortality methodology is being considered for patent and copyright protection.

Jonathan B. Cohen
Students: This was a year where I polished Wildlife Habitats and Populations. With another excellent TA this year, I could focus on making some small refinements to the class, and I was happy when once again the students applauded on the last day of lecture. Enrollment in this class is starting to be large enough, however, that I might have to rethink some aspects of the course, mainly the way group projects are done. So next semester may bring that new challenge. In the Spring I taught my parameter estimation class for the third time. However, it was the first time without a co-instructor. So I developed some new material for the class including a new lecture and more details on topics that have always been part of the course. Next time I teach it I will have to formally describe the class, but my time on CCAC and COC should prepare me well for that. In the spring I co-taught the Core seminar with Melissa Fierke. That is always interesting to lead because I meet graduate students that are outside of my discipline and the discussions are lively. My first Honors student finished her thesis and presented a poster at an undergraduate research symposium. Both of my recent Honors students submitted manuscripts to peer-reviewed journals. I began work with another Honors student on piping plovers, a species near and dear to my heart. I also worked with two other undergrads on independent research, including one student from Syracuse University’s Earth Sciences department. I had another M.S. student graduate, and she decided to stay and work with me as a research scientist because we got a substantial one year grant together from the National Fish and Wildlife Foundation ($150,000). She also submitted part of her thesis work to the Journal of Field Ornithology, and was invited to revise the manuscript for further consideration. My first post doc joined my lab in November, and it has been fun developing the research project together. My other recent graduates are close to having manuscripts ready, and three other grads whose committee I have served on, or else collaborated with, have manuscripts either in revision or review. I became a co-advisor to a Ph.D. My students distinguished themselves at several regional, national, and international meetings. We had a great time presenting in Japan and Mexico at ornithological meetings, and my students successfully obtained travel awards ranging from $200 to $1000 to attend. At our lab’s first mammalogy conference, my Ph.D. student won the best overall poster award.
Partly stemming from that success, we received an invitation to speak in a lagomorph symposium at the International Wildlife Congress in Sapporo, Japan this July. I was able to find funding to send my Ph.D. student to speak during the symposium, and my colleague Sadie Ryan will give another talk stemming from our collaborative research. My M.S. student will also be giving an invited talk this year, at the Waterbird Society meeting in Bar Harbor, Maine in August. Overall I was managing $2.1 million in first-authored grants and was a coauthor on another $3.3 million.

Department/College: I finished my term on the Committee on Curriculum but will be re-enlisting for another two years. This past year I reviewed dozens of course proposals as the University prepares for seamless transfer and the Environmental Health program. I also served for another term on the Sussman Review Committee, for which I reviewed 16 proposals. I continued to work on the CCAC and as co-chair of GPAC with Dr. Fierke. We had several accomplishments. The two graduate student reps on the committee undertook a survey of EFB grad students’ satisfaction with course offerings and the grad program in general, and the results were presented at a faculty meeting and are likely to lead to some changes. We also are close to finishing a grad student handbook. I also joined the IACUC committee where I have reviewed several animal care protocols. I served another year as advisor to The Wildlife Society Student Chapter, and I was proud that once more they won the state quiz bowl and had another successful beast feast. I also had a very enjoyable time working with my Ph.D. student and many other EFB faculty and students to run the Onondaga Lake Bioblitz in September. I assisted with the small mammal trapping, and with interacting with the public in one of the tents.

Self: For my own professional development, I agreed to a request to run for Vice President of The Waterbird Society. If elected, I would be president-elect and would become president in two years. I continued to serve the Society as a Council member. I continue to pursue small projects on my own, mainly involving data analysis, and I expect to have at least one first authored paper submitted to Ecological Applications by the end of June 2015. I also have begun mentoring one high school student in fieldwork for his school’s science program, and together with my Ph.D. student we helped him to initiate data collection on a New England cottontail project. I also have agreed to have another high school student join my Piping Plover research in New Jersey this year.

Stewart A.W. Diemont

Students: I worked considerably this year on course development and modifications for all three of my major courses, and I advised 12 graduate students; they disseminated their work, won awards, worked internationally, and 4 completed their studies. I offered EFB 518 Systems Ecology for the first time, a course with a 25-year history at ESF. I developed a new syllabus with updated readings and software, added a new field component at Cranberry Lake Biological Station, and experimented with many new teaching techniques during both lecture and laboratory, including systems ecology in the field near ESF, in-class design exercises, and modeling races. EFB 120 Global Environment I was teaching for the second year. Based on student feedback, this year I decided to un-“flip” the classroom. I still incorporated non-traditional classroom experiences. 120 students visited the South Side urban ecosystem, and they examined soils at Oakwood Cemetery. Every class I tried to include classroom activities, such as creating a human systems diagram and a poster session of the global environment as they understood it. I also added a design component to the course. I wanted students to think about not only the problems, but how they can solve the problems. I changed course deliverables to make them more consistent throughout the semester to keep student involvement consistent. Feedback about these changes was generally positive. Although I have taught ecosystem restoration for seven years, I changed the textbook and revised course content to enhance learning in restoration techniques beyond ecological engineering. For example, in the field component of the course in Mexico, we conducted wildlife restoration through protected sea turtle egg collection and nest creation. This year 11 ESF students accompanied me to Chiapas, Mexico for the 10-day field component of Restoring Ecosystems: Principles and Practice. My graduate students were very successful this year. Of the graduate students who studied with me as adviser or co-adviser, four students graduated (two MS, two MPS). Two Ph.D. students passed their Candidacy Exam. Two graduate students had peer-reviewed papers published with me. One other student submitted
her first manuscript for peer-review. Currently, five students are preparing with me additional manuscripts for submission. Four students presented their work at international conferences, and one student presented his work at a regional conference. One student received a National Geographic Young Explorers Award. Four graduate students working with me conducted research internationally (three in Mexico and one in India). Another MS student completed his Peace Corps service in Jamaica. One undergraduate student also worked with me in Mexico this summer.

Department/College: I worked toward maintaining and improving ESF in a number of ways. I began working with the committee on assessment for the Environmental Biology major. We considered current assessment methods and revised places in the curriculum where assessment would take place. At the college level, I continue to serve as the Area Leader for the Ecosystem Restoration area for the Graduate Program in Environmental Science (GPES), a position for which I make decisions on applications, help determine funding, and serve on the GPES leadership committee. I am also a member of three other college committees, the Faculty Governance Awards Committee, Faculty Governance Library Committee, and the Advisory Board for the Center for Native People and the Environment (CNPE). As a member of the Awards Committee I helped make recommendations about Chancellor’s Awards, Distinguished Professorships, and Honorary Degrees/Commencement Speakers. With the Library Committee I helped make recommendations about the library resources allocations and faculty communication. As a member of the Advisory Board for the CNPE I helped advise about the hiring of the new Assistant Director for the CNPE. I was also actively involved in the college strategic planning by serving on the committee which considered research questions about human’s relationship with nature. With ESF students we also founded the Society for Ecological Restoration Student Chapter at ESF, for which I am Adviser.

Self: I continue to move forward with my research into indigenous ecosystem management and restoration. This work is taking place in New York, where I have an active research experiment looking at fire and restoration of field using native edibles, and internationally, where I have two experimental sites in Mexico (one in Oaxaca and one in Chiapas). I submitted proposals related to both traditional prescribed burning and Native American student education to the USDA. I submitted other proposals related to traditional ecological knowledge in Mexico (TEK) to NSF and with students to National Geographic and to CONACYT (Mexican NSF). I wrote several papers this year related to this topic. One paper published in Ecological Modelling that compares TEK education to scientific education, finding that natural field education could improve the sustainability of our education without sacrificing embodied energy; I submitted another paper that details soil fertility related to indigenous agroforestry system trees in Mexico. These papers come from work funded by NSF to look at TEK and ecological engineering in Mexico; we are preparing three other papers that detail nematode populations in these systems, compare bird populations to other non-TEK systems, and that describe the results of an experiment comparing government to TEK restoration, respectively. I also published two papers in Ecological Engineering that consider how natural systems could be incorporated into sustainable designs. This summer I will continue the work I began a few years back looking at Itza Maya (in Guatemala) and Mopan Maya (in Belize) ecosystem management. I am working toward a framework of sustainable ecosystem design and restoration that is based on knowledge and perspectives from indigenous systems. This work requires transcending typical disciplinary boundaries. In part to better learn how to work across disciplines, I participated in two SUNY workshops which transcended disciplines, one related to Jamaica Bay and one specifically looking at collaborative team research. Both these workshops led to further collaboration and grant applications, the latter to NSF.

Martin Dovciak

Students: I taught Flowering Plants: Diversity, Evolution, and Systematics (EFB 435/635) to the highest enrollment in this class since I started to teach it at ESF (20 students), and Plant Ecology and Global Change (EFB 445/645) to an average enrollment for that class (31 students). I also co-taught a seminar with a post-doctoral associate in my lab, Dr. Mark Lesser (11 students). I have started to experiment with Team-Basel Learning™, especially by including team as well as individual based testing
and group exercises in the Flowering Plants class; this was met by positive comments of the vast majority of students and increased my own enjoyment of the class. I continued to contribute to our large departmental course, EFB 210-Diversity of Life I, by providing lectures on Flowering Plants, and I contributed a guest lecture to EFB 326-Diversity of Plants. I graduated my 11th graduate student (5th MS student), my third PhD student advanced to candidacy this Spring, and I have recruited 3 new PhD students (one started this April, supported by NYSERDA funding, and two more are coming in the Fall). Most of my previously completed graduate students and several undergraduate researches continue to be successful, with professional positions at universities or in environmental consulting firms such as Jones Ecological Research Center, UC Berkley, University of Arizona, University of Miami, or O'Brian & Gere. Four of my former students published papers with me this past academic year as first authors or co-authors, and several additional manuscripts with former students are currently in advanced stages of preparation.

Department/College: I continued to represent College/Department in my broader professional service, which included serving as a PI, co-PI, or collaborator in larger collaborative research groupings that included: (1) Cooperation with NYS DEC and Cornell Cooperative Extension on a research project “Evaluating deer impacts on forests of New York State” (supporting Dr. Mark Lesser), (2) Cooperation with New York Power Authority on a research project “Cost effectiveness of cleaning techniques for controlling human-based transport of invasive exotic plants on electric transmission line rights-of-way across New York” (supporting one of my recent graduates, J. Quant, as a full-time Research Analyst), (3) Cooperation with several state and federal land and forest management agencies in New York, Vermont, New Hampshire, and Maine in establishing climate and forest vegetation monitoring network across latitudinal and elevational gradients of the northeastern U.S. as a part of a research projects “Global change fingerprints in montane boreal forests: Implications for biodiversity and management of the northeastern protected areas” (supporting J. Wason), (4) Collaboration with US Geological Survey, US Forest Service, and Carry Institute on the “Appalachian Trail Mega-Transect Study”, and (5) newly funded project by NYSERDA on plant diversity in the Adirondacks and acid deposition (supporting Mike Whalen and Matt Glaub). In addition, I continued to serve as the Chair for the Selection Committee for the Burgess Graduate Scholarship in Ecology, and as a member of the Graduate Program Advisory Committee. At the college level, I served as a faculty mentor in the CSTEP program, a member in two of the GPES Areas (Ecosystem Restoration, Environmental Monitoring and Modeling), a faculty member in the Center for Urban Environment, ESF Beech working group, and I offered a college wide seminar on Team-Based Learning via ESF Outreach Office.

Self: My greatest accomplishment this past cycle was to be promoted to associate professor with tenure in our department. I am also proud for becoming an editorial board member in two flagship journals of the International Association for Vegetation Science (Journal of Vegetation Science, Applied Vegetation Science) and for being invited to give a seminar at the University of Connecticut. Importantly, I have significantly focused on further development of my teaching by including Team Based Learning into teaching my classes, and I was pleased to note that the students responded to this positively. My teaching also benefited from taking part in ESF winter retreat focused on Undergraduate Experience at ESF. In terms of research, I have published (or have in press) 5 refereed papers (1 first-authored), and I have one other manuscript in revision and several (3-4) in advanced stages of preparation (to be submitted this summer). Importantly, I developed a NSF GSS full proposal (as a sole PI) “Geography of Forest Change: Spatially Explicit Forest Community Dynamics Along Climatic Gradients”; although it was not selected for funding, it received an encouraging and constructive feedback and it was ranked within the top 36% of proposals providing favorable framework for a resubmission. My summer travel to Slovakia continued to enhance my research on woody invasions of grasslands (a manuscript in revision and resubmission to PLOS One this summer).
John M. Farrell

Students: For undergraduates I taught or co-taught three classes, served as an advisor and helped our Aquatic and Fisheries Science seniors prepare for the professional world with many receiving jobs after graduation with help from this process. Several undergrads were employed at TIBS and in my lab during the summer and academic year. I helped Tom Evans offer the Fisheries Practicum to ensure our graduating class had the opportunity to take this class during Dr. Limburg’s sabbatical. I finished four graduate students including two MPS and two co-advised MS students. Additionally several graduates received honors for oral and poster presentations at professional conferences.

Department/college: I hosted the EFB department at TIBS with a program where students gave posters and demonstrations of their research and gave tours to our faculty and staff. I served another year on the promotion and tenure committee performing reviews and helping to evaluate faculty performance. I continued to advance the Thousand Islands Biological Station with completion of several projects while working with the ESF Physical Plant and ESF Development Office including Cean Building interior completion, well water distribution, and laboratory plumbing upgrades.

Self: In May 2015, I received notification of my promotion to professor by the ESF president following review of my dossier and credentials in October. I gave several invited presentations at professional conferences including as a plenary speaker for the International Larval Fish Conference in Quebec City. I co-authored or authored 11 journal publications this period and completed guest editorial work with publication of a special issue in the Journal of Great Lakes Research. I started some new collaborations with researchers at Carleton University in Ottawa, Canada, the University of Laval in Quebec City, and the University of Victoria.

Shannon L. Farrell

Students: Helping students get exposure to wildlife professionals and access opportunities to find and prepare for internships, seasonal jobs, and grad school opportunities has been a guiding focus this semester. I taught EFB 390 for the 1st time this Fall and piloted a well-received effort that will now be a regular part of the course. Roughly once per week, I brought in Wildlife Professionals from around the country from a wide array of jobs from state and federal agencies to non-profits, NGOs, and industry, both live and via web streaming, to give brief introductions to what their job is like, the best and most challenging aspects, how they prepared, and what they are looking for in new hires, and take student questions. I implemented a culminating class project: teams had abridged Oxford-style debates on a variety of contemporary wildlife management challenges that were to consider the ecological, social, ethical, legal, and economic implications. Many who were assigned to argue perspectives that were not their own indicated they enjoyed this activity and had newfound understanding of alternate viewpoints.

In Ornithology this spring, I provided a forum on our blackboard page for new summer technician jobs & internships (in birds or other wildlife), and had several open office forums for working on resumes and cover letters, and prepping for interviews. Teaching Ornithology for the 2nd time, I also focused on enhancing the lab portion of the class to provide key identification and field skills to help students prepare for summer field jobs and internships. I’m currently working with several students to develop a website/blog-type forum for students to share their field and internship experiences, from working with NY DEC to tracking moose in Montana or capturing owls in Arizona to help other students find paths that fit their interests. Additionally, to meet special student accommodations this Fall for EFB 390, I acquired the tools and skills to record class lectures (screen captures and voice over) and I’m currently working to edit these and create new video tools to add to course websites which are currently under construction this summer. This year Gordon Paterson and I (co-leads for Adaptive Peaks in Fall & Spring) worked on lining up a wide variety well-known, high impact speakers, and working to improve publicity and awareness of the seminar series to improve participation and attendance by grad and undergrad students and faculty and did see substantial improvements in attendance.

Department/College: This year, my College Service work has been particularly challenging and interesting and has felt like I’ve had the opportunity to do more than just serve on committees but participate in committees that were working on projects to make meaningful contributions the college. As
a member of the IQAS committee, I’ve had the opportunity to work on several of the significant efforts the committee has been tasked with including working on identifying and assessing a new course evaluation system that works better for both students and faculty than our current system. Our largest task on IQAS this year was planning, executing, and reporting out on a College-wide Gen-Ed Assessment, for which no solid previous framework or plan existed. After substantial time and effort we conducted this pilot assessment and most importantly used it to develop plans for future improvement in both the assessment process and to the overall college-wide Gen Ed goals and implementation. I was asked to serve on the Undergraduate Experience Committee for the strategic planning process this winter and spring and I was glad to have an opportunity to play a role in this. The small committee worked hard to compile the ideas generated by the ESF community during the initial stages of the strategic planning process, some of the lessons learned during the Gen Ed assessment, consider what we currently do well and generate a proposed set of priorities and aims to make the most of our strengths and find places for improvement and for setting us apart as a college. I have been serving on the Fink Fellowship committee since Fall 2013, but this past year we did more than just reviewing a pool of applications, mainly overhauling the application, criteria, and priorities for what kinds of applications the committee if focused on funding, to make the application process more clear and straightforward, and allow students to discern whether their proposal fits with the newly-clarified priorities of this particular award.

Self: I am now almost 2 years in to building my lab, my research program, and my niche here. My first graduate student, who began in January 2015, is conducting our first season of field sampling on Cape Cod and Fire Island National Seashores along with my second soon-to-be graduate student who will be starting in the Fall. Getting this NPS-funded project planned and launched has been the focus of my spring semester, along with my first foray into advising a graduate student, including joining with Jonathan Cohen’s lab for joint lab meetings. I have continued to focus on developing relationships with prospective collaborators and funders, in particular with the Society of American Foresters (i.e. helping with assessment of effects of listing of northern long-eared bats as threatened), and CNY Ruffed Grouse Society to develop opportunities for student research on ruffed grouse habitat. This year I got my lab website launched, with several additional components in development for EFB 390, EFB 482 to document our field and lab adventures and the aforementioned site for student field experiences- with some help from interested students. My continued work on lesser prairie chicken conservation planning has allowed me to continue to develop connections with partners including Environmental Defense Fund, Farm Bureau, USFWS, several major energy companies, and state, regional, and leaders for USFWS Southeast region. Our final draft - a Habitat Conservation Plan, along with implementation documents for the science & operations for a brand new habitat crediting system approach- was recently submitted to USFWS and the EIS is in progress, and we expect the plan to appear in the federal register this summer for public comment. Developing a unique expertise in bridging the science into the development of innovative policy instruments for natural resource policy should lay the groundwork for interesting future opportunities; it has already connected me with opportunities in development to work on conservation planning for the greater sage grouse, spot-tailed earless lizard, and additional work on the golden-cheeked warbler, and with the intent to keep working to leverage these into at least one future funded graduate student project and some undergraduate opportunities in the future. I have continued to work with colleagues at Texas A&M University and now Bird Ecology and Conservation Ontario.

Danilo D. Fernando

Students: This past academic year, I taught EFB 427/627 (Anatomy and Development of Plants), EFB 326 (Diversity of Plants), BTC 497 (Research Design and Professional Development), EFB 495 (Undergraduate Experience in College Teaching) and BTC/EFB 498 (Independent Research in Biotechnology/Environmental Biology), and in total, 112 undergraduate students have been served through this capacity. I did not have a graduate Teaching Assistant for EFB 427/627 which had two lab sections and a total of 24 students, which meant that I did the pre-lab preparations, actual lab instructions of at least 6 hours per week, and marked all of the lab reports (5 per student) for this course. In addition to the formal interactions with the students in all the courses I taught this past academic year, I also
interacted with many of them out of the lecture and lab periods through involvement in their respective lab projects and/or writing assignments. Many of the students also came in during my office hours for clarifications, questions and/or conversations on various topics including practical applications of concepts covered in the lectures and labs. I updated the laboratory manuals in both of my major courses (Plant Anatomy & Development, and Plant Diversity) and the revisions included suggestions from the graduate and undergrad TAs, as well as from the students who went through them. I have trained several undergraduate students in my lab through independent research and internship and presented invited lectures to other courses here in ESF. I advised at least 16 undergraduate students in various aspects of their curriculum. As for graduate students, I have advised many graduate students from the department regarding their program requirements, filing up of the required forms and shifting from one major or degree program to another. I have worked with my graduate students on various aspects of the laboratory and/or field components of their research projects, draft manuscripts, grant/fellowship applications, and poster/oral presentations.

Department/college: I served as EFB’s Graduate Director for the 8th year and my major responsibilities included the following: 1) acted on various petitions concerning different aspects of EFB graduate program requirements and policies; 2) reviewed and signed on various forms required for the completion of different degrees and majors (e.g., 2A, 3B, 4 and 6A); 3) replied to inquiries concerning EFB graduate program (through email, phone, and/or personal appearances) from several potential applicants and current graduate students; 4) learned and assisted the EFB faculty with the new online graduate application system (Hobsons’ AppReview); 5) processed a total of 127 applications (18 for spring 2014 and 109 for fall 2015) that involved the review of each application for initial assessment and designation of faculty reviewers, followed up on the completion of the reviews on each application, summarized the reviews for each application, and submitted EFB’s recommendation for each accepted and rejected applications to the Dean of Instructions and Graduate Studies; 6) provided informal orientation to new graduate students regarding EFB graduate program and new faculty about the graduate application and review procedures; 7) I also worked with EFB Secretaries on the update and improvement of the various facets of the EFB’s Graduate Webpage, graduate application filing system, and continued the survey on the most effective means of attracting/recruiting graduate students; and 8) As a member of EFB’s Graduate Program Academic Committee and ESF’s Graduate Council, I provided connections between the department and college on issues pertaining to graduate degree program offerings and requirements, admission/review process, policies, and other related matters.

Self: The following are what I consider as significant: 1) Successful completion of my 5th Master of Science student - Jennifer R. Potrikus (Fall 2013 to Spring 2015); 2) Successful completion of my 3rd Master of Professional Student - Rie Iriyama (Fall 2011-Fall 2014); 3) Recruitment of two new Master of Science students (Michael J. Serviss and Joshua Weber-Townsend) to work on American hart’s-tongue fern reintroduction and reproductive mechanisms, respectively; 4) Publication of two papers, particularly the co-authorship with my former graduate students - Quinn CR, Iriyama R, Fernando DD (2015) on Computational Predictions and Expression Patterns of Conserved MicroRNAs in Loblolly Pine (Pinus taeda), Tree Genetics and Genomes 11:806; 5) Invited as Panel Review Member for NSF’s Plants, Fungi and Microbial Evolution and Developmental Mechanisms; 6) Organized a meeting on American hart’s-tongue fern re-introduction, with participants from government agencies such as DEC and USF&W; and 7) last but not the least, I have continued writing and editing the chapters of the textbook (Sexual Reproduction in Forest Trees) that I am co-authoring with Dr. John Owens through Cambridge University Press.

Melissa K. Fierke

Students: I taught General Biology for the seventh year with >320 students (a college enrollment record). I supervised three graduate and six undergraduate teaching assistants along with their workshops and grading - all went smoothly with overall class evaluations again strong for the two lecture sections. I facilitated the EFB Core Course for graduate students where the main goal was get grads off to a good start in the department, forming a supportive cohort of students as well as working with my PhD grad,
Chris Foelker, to provide an overview of Philosophy of Science. I oversaw five internships summer and fall 2014. Two students worked on research projects under me this past fall/spring and one of them presented at ESF’s Spotlight on Research. I’ve written >20 UG student recommendation letters with many resulting in successful internships, positions, or scholarships. I am happy with the current state of my research program and the progress of my graduate students. We have several publications submitted and are working on many more. Three of my graduate students presented at the National Entomological Society meeting in Portland, OR this past year, and two at Annual USDA Invasive Insect meeting in Annapolis and the New York Society of American Foresters meeting in Syracuse. I’ve had four new MS students start in August/Jan/May. I have accepted several invitations to speak on my labs research this past year at local, state and regional meetings, but have passed on the opportunity to Chris Foelker, my PhD student finishing up, so he can network and hopefully find a position when he finishes. I have also had to turn down a couple of invitations. Particularly noteworthy is that Chris received the EFB Outstanding PhD award for EFB this past spring. Mike Jones (PhD) and Mike Parisio (MS) also received awards via the Stegeman Fellowship to support their travel to the Portland ESA meeting.

Department/College: I served on six departmental and college committees as well as taking an active part in the ESF First Year Experience Committee, working with other faculty and Student Affairs staff on student retention and success. I have continued my efforts on our ESF Bicycle Safety Committee and have been working with ESF partners, Syracuse University engineers, planners and safety officials as well as the City of Syracuse Transportation Planner, and multiple neighborhood groups to make bicycling a safer commuting option for faculty, staff and students at ESF. I’ve continued my entomology outreach efforts, doing presentations and media interviews, however, I now pass most opportunities to my graduate students who are doing an excellent job of taking them on, being enthusiastic and getting our science out there.

Self: Lastly, I received the 2014 President’s Award for Community Service this past year for the work I have done on the Bike Safety Committee, advocating for bicyclists in the community, and outreach efforts for emerald ash borer. I am continuing community engagement with new partnerships with Common Councilor Nadar Maroun on deer density issues along with Brian Underwood (ESF). This ties into newly funded research (with Steve Shaw, ERE) on distribution and densities of black legged deer ticks and tick borne disease prevalence, with an emphasis on Lyme disease. We have presented at a meeting with the Onondaga Health Commission and will be working with them and the NY Department of Health on this salient issue.

Elizabeth Folta

Students: This year I taught four interpretive courses and co-taught two additional courses that focused on interpretation and ecotourism, which had a total enrollment of a 111 students. EFB 796 Research in Interpretation and Environmental Education was offered for the third time. This year I altered the course to give the students more practical experience in research and evaluation. The students designed a survey for the Presidential Inauguration Bioblitz at Onondaga Lake and then collected and analyzed data from the event. In addition, they collected data at the local state parks (Green Lakes and Clark Reservation) using the One Health survey. They then analyzed the data they collected. Finally, they worked with the Environmental Educator for the Central Region of the NY State Parks to create an evaluation plan for the region. The hands-on experiences worked well and I am already planning to continue the partnership with NY State Parks next year. The plan is for the students to design an evaluation plan for the new nature play playground at Clark Reservation. I co-taught a new course designed by Diane Kuehn, Nature Tourism and Ecotourism in Panama. We worked with the Azuero Earth Project (AEP), which is a non-profit based in the Azuero Peninsula as well as New York. We took 12 students to Panama where they experienced a variety of different ecotourism sites. The focus of the class was the service learning projects for AEP. The students participated in three projects 1) mapping all trails on three ecotourism sites, 2) mortality counts for trees that AEP had previously planted, and 3) interpretive brochures for the three ecotourism sites. The students really enjoyed the class. Diane and I are polishing the interpretive brochures to send to AEP. We are still waiting to hear if AEP wants to
continue this course next year. This spring was the second time I co-taught Advanced Interpretation and Certification with Katie Mulverhill. She is a National Association for Interpretation Certified Interpretive Trainer. Because Katie is now an environmental educator for NY State Parks Central Region we changed the location of the public programs. Previously, we offered them at Beaver Lake and Baltimore Woods Nature Centers, but had low attendance at one of the locations. This year we offered the programs at Green Lakes and Clark Reservation State Parks and attendance was better. In addition, to changing the location we made the students responsible for publicizing the programs. This part of the course did not work as I had hoped. They ended up relying on Katie and her normal advertising locations which was Facebook and MeetUp. In the future, I will keep the changes but put a percentage of the grade associated with advertising. They are welcome to use social media but they will be expected to find “x” number of different methods (e.g.; flyers around the park and campus, community event calendars, ESF communications office, roving). Another thing that Katie and I learned that the program topic really matters. Specific topics/skill programs (e.g.; geology and wild edibles) did better than general topic programs (e.g.; winter/spring adaptations and signs of spring). This seems to hold true from the previous time the course was offered as well. I like giving the students the freedom of choosing topics they are comfortable with, but we will push a more towards topics that will attract larger audiences. Finally, I started working with six new graduate students this year (4 MS and 2 MPS). The two MPS students will graduate early or on time. Two of the MS students are already actively collecting data and the other two are working on the details of their projects.

Department/College: I served on the CCAC for the fourth year. As part of the work on the CCAC I wrote the assessment report and finalized the new assessment strategy for the Environmental and Interpretation major. I learned this year at the NAAEE conference that they are now accrediting university program in Environmental Education. In order to go up for accreditation we need two years of data following the NAAEE’s Guidelines for the Preparation and Professional Development of Environmental Educators. Last year, I started tailoring the new assessment plan using these standards as well as some from NAI. This year I redesigned our assessment to focus on the NAAEE guidelines in the hopes of moving towards accreditation as well as solidifying an assessment plan that can be used for years to come. Accreditation would have to be completed at both the undergraduate and graduate levels. The plan will be to move towards accreditation at the undergraduate level first then the graduate level.

Self: While I continued to focus this year on trying to get some funding for research projects I did take a step back to focus on the assessment for the Environmental Education and Interpretation major. I was a part of $3 million in research proposals this year. Three of the proposals were rejected and the others are still under review. I have continued my partnership with NY State Parks in hope that this partnership will lead to some funding opportunities. Even though NYSPARC did not get funded we are moving forward with a variation of it with one of my graduate students. They are indirectly paying for part of the research by funding the student over the summer through one of their invasive species positions. She will work part-time on her research and part-time on initiatives. This year I focused on improving how I work with my graduate students and pushing them to be ready for data collection this summer. In the past I have let the students do things in their own time, but this year I have been pushing them to meet more specific deadlines. This year I have been helping to plan the Project Learning Tree (PLT) International Coordinators’ Conference in Saratoga Springs, NY. This is the first conference I have been a part of planning. It has been an invaluable experience and has helped to strengthen my relationship with both the DEC and the National PLT staff. Finally, as I mentioned above I worked on improving two of my courses.

Jacqueline L. Ffair

Students: this year I offered a wildlife field techniques course during the Maymester, which I think is the perfect time to offer such a course, coming as it does before most summer field jobs occur. In fact, one student in the course was hired this summer on a telemetry study and received in my class a comprehensive introduction to the process of triangulating and homing into the source of a radio signal. The course also provided students with certification in hunter education and trapper education, exposing
them to critical constituencies they would serve as wildlife professionals, and helping to frame the context of wildlife management in North America. The course was completed by 14 students – from all across NY State and other states, from a diversity of ethnic backgrounds, and from both rural and urban environments. The venue was the Lucky Star Ranch, and ranch owners Jody and Doreen Garrett underwrote the course, providing funding for tents, food, and field supplies which greatly reduced the cost of this intensive field course for students. The course was co-taught by Paul Schuette, Roosevelt Post-Doctoral Scholar, helping him to develop desired teaching skills in a field course setting.

Department/College: this year I focused on helping the Roosevelt Wild Life Station define itself and fund its initiatives. With tremendous help and support from Terra Rentz, James Gibbs, and Don Leopold, I led the first ever strategic planning effort for the Roosevelt Station. In so doing we defined who we are, what our mission is, and focused our efforts for the next 5 years on key areas that will help to elevate our brand and ensure our long-term success. I coordinated monthly meeting this spring with the Station’s Scientists-in-Residence to finalize the strategic plan and begin acting on it – together we worked on what kind of communications the station wants to deliver (print – maybe, online – certainly, blog form – probably), what a branded scholars program might look like for both students and post-docs, and what form our first ever annual report would take, something I’ll be working on assembling yet this summer. I also worked very closely this year with the ESF College Foundation, and specifically with Nora Heaphy, to secure the fundraising contract for the endowed professorship with the Boone and Crockett Foundation (signed December 2014) and begin fundraising in earnest (we’ve raised $376,000 since January).

Self: I focused on managing the omnibus MOU with the NYS DEC, which went into full force in 2014. That involved setting up 8 project budgets – some that I manage for other PIs and several that I oversee directly. The ones I directly oversee included one new research project (monitoring moose in the Adirondacks), one project that provides some general administrative support to the Roosevelt Wild Life Station, and a third that provides statistical support to the DEC (hiring statistician and database administrator positions for the DEC central office). In addition, I am co-PI on another DEC research project (monitoring deer impacts on forest regeneration in NY State). Both the moose and deer projects are large collaborations among multiple institutions, and even involve managing subcontracts to these other institutions. Hiring Terra Rentz to help manage this large MOU was probably the best thing I did for myself professionally this past year – she has been instrumental in keeping track of the ever-changing budgets, in cross-walking ESF’s reporting with DEC’s reporting requirements, and in managing quarterly reports and time sheets for all the various projects and peoples. I would also mention as a major professional accomplishment having been inducted as a “Fellow” to The Wildlife Society, an honor that I am truly humbled by.

James P. Gibbs

Students: I continue to teach two of the three core courses in the Department’s largest major. One of those courses – Introduction to Conservation Biology – serves all members of the major and an equal number of students from around the College and Syracuse University. During the spring semester I orchestrated the ESF-NYSDEC/FWMR internship program that placed many EFB students in well-paying internships. I finished two M.S. students during the spring semester. I also oversaw (with Leopold) a biological survey undertaken by field crew of our graduate students on private property near New York City that showcased the many talents of EFB’s grads; these surveys are at this time the only significant revenue source for the Roosevelt Wild Life Station, with more planned for 2015 and 2016.

Department/College: I serve on the EFB P&T committee, assist with assessment matters for the conservation biology major, and serve as Director of the Roosevelt Wild Life Station which is now advancing on many fronts. Publications in Nature and PLoS and related research and service activity garnered major media attention for the College this year.

Self: I was awarded the University of Maine Distinguished Wildlife Alumnus award for 2015 and was featured as Distinguished Ecologist at Michigan Tech. I continue to push ahead a complicated, ambitious and on-going Galapagos Tortoise Restoration Initiative (serving as co-Director of this joint effort between the Galapagos Conservancy and the Galapagos National Park Service Directorate).
Service as board member to The Wetland Trust and Nine Mile Creek Conservation Council has occurred at a time of progress on significant land protections by these groups this year.

**Hyatt C. Green**

Students: After my first eight months here I am totally amazed and inspired by the dedication and focus of our students who are such a pleasure to work with in and out of the classroom. It’s been about a year since graduate students and I agreed that an intensive introductory R course was lacking on ESF campus. Students had also indicated a lack of quantitative course offerings in general through GPAC surveys. Since then I designed and offered a novel introductory R course (EFB 796) incorporating the latest developments in reproducible research and R programming. Students learn tools that let them not only wield large or complex data sets, but also document all analyses in detail so that they are reproducible—an increasingly important feature in high-profile research. One student wrote that the “class was excellent and will be among the most useful courses I take as a college student” and that it “fills an important niche and I hope you continue to offer it!” Current efforts are underway to better integrate the course into our existing collection of quantitative offerings taught by Cohen, Friar, Stella, Limburg, etc. After some streamlining, I anticipate the course will exceed 20-25 students in Spring ’16 and will be in high-demand for grads across all departments. As many of my students know, my door is always open to resolve issues or help answer questions and they take me up on it daily. While the R course targeted a clear gap in the course catalogue, I am excited to finally offer EFB 303: Environmental Microbiology and Lab in Fall ’15, for which 39 students are currently registered. I was also able to participate in Diversity of Life II by giving a lecture on the latest human microbiome research conducted by the Human Microbiome Project consortia and others, which was a great opportunity to illustrate how host-microbe interactions can help us improve environmental health. My first week at ESF I was asked to serve as a M.S. graduate student committee member on a project that seeks to find cost-effective ways of treating wastewater. This student defends Summer ’15, which also marks the start of real work in the Green lab. I recruited an undergraduate student from Brazil to work with Onondaga Environmental Institute to quantify source-specific molecular markers from Onondaga Lake tributaries, some of which contain remarkably high levels of fecal coliforms in dry weather. This study, while small, is intended to help change the way we think about aquatic bacterial contaminants at a basic level with the intent of improving the health of the lake and protecting that of swimmers. Even after having been here for only a few months, two prospective PhD students wanted to work under me starting Fall ’15, but neither ended up coming to ESF for reasons out of my control.

Departmental and College: Currently, I advise six EFB undergraduates, but hope to take on more next year as advising week is probably my favorite part of the term because I get to see students outside my role as instructor. I have also recently joined the ESF Technology Committee. I also enjoyed serving as a judge for graduate student posters during the Spotlight on Student Research Spring ’15 and was overwhelmed by the diversity and quality of grad student research on campus.

Self: Relocating a thousand miles means creating a new professional network locally while maintaining strong ties within the previous network. I am currently familiarizing myself with the players in local water quality issues, such as Atlantic States Legal Foundation, Onondaga Environmental Institute, NY DEC, US EPA Region 2, etc. I recently attended the Great Lakes Research Consortium Mentoring Workshop to gain insights into local funding opportunities. On a parallel track, I’m also seeking collaborators on- and off-campus to investigate the utility of eDNA in assessing species of concern (invasive or endangered). One such species is the endangered bog turtle. Along with a multi-state consortia, I submitted a proposal to the State Wildlife Competitive Grants Program (US FWS) to develop new methods of enumerating these cryptic turtles in their native habitats. I am also working with researchers at UNC-Chapel Hill to develop molecular markers for biosolid wastes. Second author work with UW-Milwaukee researchers entitled “Comparison of sewage and animal fecal microbiomes using oligotyping reveals potential human fecal indicators in multiple taxonomic groups” was just submitted to Applied and Environmental Microbiology. Similar work trying to integrate new molecular methods into water quality standards with researchers at the US EPA, UW-Milwaukee, and Wood’s Hole is also
ongoing. Still after many, many days of clearing out old equipment, chemicals, and glassware and buying new equipment to put in its place, the lab still needs more work to properly support all the work I have planned for it in the near future. While the current lab is not completely ideal for molecular work, I am positive we can generate some good data until new facilities are completed.

Thomas R. Horton

Students: I hope my efforts teaching EFB 320, General Ecology, pay off and make a difference to the students in the course. I certainly enjoy those students who I get to know. This past fall I also taught Mycorrhizal Ecology, EFB 428/628. This is an upper division course in my area of specialization. Based on conversation with the students in EFB 428/628 and seeing them pursue research opportunities in mycorrhizal systems, I believe this course is having a positive impact. I led an EFB 797 seminar, A History of Ecosystem Thought, a seminar designed to be particularly helpful for students in several of our graduate disciplines as they prepared for their various graduate exams. It was a very active year in my lab and it was a pleasure working with such capable students. Undergraduate students are coming to get experience working in a research lab, including several students working towards an undergraduate Honors Thesis. Graduate students are also seeking training in the lab, with students conducting successful graduate level research in the lab. I had four graduate students from other departments camping out in my lab as they pursued mycological questions methods in their research (2 from ERE and 2 from FNRM). I again chaired the awards committee for the Lowe-Wilcox, Zabel, Morrell and Silverborg scholarship awards. The awards ceremony and graduation is probably the best day of the year for me. Lastly, I highlight one undergraduate who really excelled. Gabriel Smith was accepted to work with a colleague at the University of New Mexico. Even more exciting, he will postpone his start date for his graduate program to work as a Fulbright scholar with colleagues in Sweden. Gabriel is the first undergraduate Fulbright scholar from ESF. I could not be happier for him and us! He told me last year he came to ESF to work on mycorrhizal fungi, and he leaves ready to make a real difference in the field.

Department/College: I again highlight first my effort for the college with respect to General Ecology. Teaching such a large course is not trivial, and while specialized courses such as my Mycorrhizal Ecology take up just as much time, my impact for the college is really felt in General Ecology with the large student population that crosses departments. Equally important is the time I put into the Promotion and Tenure committee. The work on clarifying criteria for Promotion and Tenure is ongoing, but is very close to being complete. We also reviewed the dossier for one faculty member who was promoted to Associate Professor with continuing appointment. I also conducted third-year teaching reviews for one Assistant Professor. The Academic Research Building committee was revived and we are now finalizing the plan for placing the building east of Illick Hall. I suspect activity on the ARB committee will continue into the 2015-2016 academic year. It is hugely important to have EFB representatives on this committee to provide advice during the planning process from an occupants viewpoint and to report back to the department. I get a lot of informal queries from colleagues! I threw my hat in for a new committee assignment, the Strategic Planning: What are Earth’s Species and Dynamics committee. My unique contribution was to raise the importance of unseen organisms both in terms of diversity estimates on the planet, but also in terms of the importance of the ecological roles these organisms play.

Self: This has been a great year for me. I learned that the EFB 797 courses I’ve been organizing, especially History of Ecosystem Thought and Origin of the Species have been well received from the graduate students. I had a feeling that was true based on the enrollment and dynamic in the classroom, but to get such positive feedback from the GPAC was very rewarding. I have had an army of undergraduate students knocking on my door for research experiences in my lab and I really enjoy guiding the students through a research effort. With respect to publications, it has been a very good year with 5 refereed articles published in journals with an average impact factor of 4.6 (New Phytologist, Ecology, Applied and Environmental Microbiology, Fungal Ecology, Molecular Ecology). My work continues to influence the field as evidenced by a relatively H-index value. In addition to journal articles, I am very happy to be at the tail end of my book project on Mycorrhizal Networks. I sent the manuscript
to Dr. Harold Mooney, the subject editor for the Springer Ecological Studies Series, who got back within one week with a positive assessment. I look forward to putting this in the out box. The book itself is already generating interest as evidenced by my invitation to run a symposium on the topic at this summer’s International Conference on Mycorrhiza and a recent interview by a journalist with the journal Science interested in writing an article on forest health and mycorrhizal networks. With respect to granting, I am happy to have coauthored two successful grants totaling $115,000. These are relatively small and I am actively seeking a larger award. Fortunately, a co-authored pre-proposal submitted with a colleague at UNH has been invited for a full proposal and with any luck, we will be successful this time around. I am very excited about the chance to conduct research at the Albany Pine Bush Preserve where I will able to apply my knowledge on pine fire ecology, mycorrhizal ecology, and restoration ecology. I am also excited to do my first round of NextGen Sequencing to characterize soil fungal communities. This is possible through the new McSten funding, but will also be supported with funding from other sources from colleagues at UNH. Finally, I am very excited to have attracted a new student, Taylor Patterson, who has excellent ideas and goals for his graduate experience.

Robin W. Kimmerer

Students: My major and most rewarding contributions to our students during 2014-15 have been through my focus on the scholarship of teaching and mentoring. I have taught 5 distinct courses this year, (7 if grad and undergrad sections are counted separately) all of which are fully subscribed with a waiting list. Student feedback indicates that they appreciate the diverse, creative approaches and perspectives offered in these courses. Every semester I learn a great deal from the input of our students and refine the courses accordingly. I have sought to make these transformative perspectives more widely available to our students and led the development of a new College-wide minor in “Native Peoples and the Environment” which was implemented this year. I teach a mentoring program, entitled “Indigenous Environmental Leaders for the Future” with a weekly seminar, supported by a grant from the USDA Multicultural Scholars Program, which also provides fellowships to our students. I am also actively engaged as a guest lecturer in numerous ESF and SU course. In addition to these responsibilities and my assigned advisees, I have worked closely with several undergraduates in independent study projects, as a CSTEP mentor, helping to mentor the academic, personal and professional development of our most promising undergraduates. I also serve as advisor to a student organization, Primitive Pursuits. Our undergraduates are also benefitting from the research exchange that Dr. Beier and I run in the summer entitled “Learning From the Land” which provides forest ecology research and cultural exchange opportunities for ESF undergraduates. I have a strong commitment to graduate student mentoring. I have contributed to teaching in diverse outreach settings and through a wide array of invited public presentations around the country. In addition to guiding my own graduate students, I have been invited to serve on the graduate committees of three students at other universities.

Department/college: I serve as founder and Director of The Center for Native Peoples and the Environment in 2014-15 which has brought significant positive attention to the College’s leadership role in incorporating traditional ecological knowledge in environmental education and research. I’m particularly proud of the contributions of the Center as an emerging change agent in broadening the scientific dialogue to include traditional ecological knowledge. Our major accomplishments this year include the development and submission of a major grant proposal (with collaborations at a tribal college and a Native-serving educational non-profit) which would develop a new graduate program in traditional ecological knowledge, if funded. The Center also hosted the historic first ever meeting between the Haudenosaunee Nations and the New York State Department of Environmental Conservation, thanks to the efforts of our Assistant Director Neil Patterson. The many activities of the Center include a summer community environmental internship program at Onondaga Nation and at Tuscarora nation. The Center continues to develop and present the “Native Earth Environmental Youth Camp” with funding from the National Science Foundation. The camp has been a focal point for wide-ranging collaborations with 8 different indigenous nations in the region. The impact of the Center can be seen in the number of invited presentations and collaborations on traditional ecological knowledge requested from around the country.
The validity of using TEK as a partner to ecological science in education and research is gaining traction through our efforts. The successful development of the Center has created a platform from which grant proposals have developed. The momentum behind this endeavor is reflected in the submission of a major collaborative grant proposal during the past year. We are currently implementing a climate change and forest knowledge revitalization education program with tribal partners. My work on behalf of these important ideas is also recognized through numerous invitations for lectures and presentations. This year, I have given at least 30 public presentations to academic, professional, governmental and community organizations all over the country, as well as numerous interviews, videos etc., which I trust brings attention and respect to the work of SUNY ESF. The significance of our efforts in advancing these important ideas are borne out in the invitation to address influential organizations and thought leaders such as Bioneers. The impact of our work was manifest in the opportunity to address the United Nations General Assembly for the commemoration of International Mother Earth Day in April 2015.

Self: Outside of a full teaching load and the leadership of the Center for Native Peoples and the Environment, my scholarly energies this year have been devoted to disseminating the body of work related to integration of traditional indigenous and western scientific knowledge, primarily through a large number of public presentations in diverse arenas. My invited participation with the NSF FIRST Research Coordination Network will take our efforts in indigenous/scientific knowledge integration to a higher level, engaging with international scholars and indigenous academics. Much of the demand for keynote addresses has been generated I believe by the impact of “Braiding Sweetgrass” which is now in its fourth printing. Given the urgent environmental issues we face, and the power of literary non-fiction as a cultural change agent, I am committed to investment of my scholarly efforts in that arena. I am continuing to learn and appreciate the power of engaged scholarship of writing and speaking to a non-academic audience as a pathway to influence public dialog on sustainability. Working in this interdisciplinary arena of public dialogue and engaging teaching tools outside of my academic expectations has been both challenging and rewarding, contributing to professional growth in new directions which can benefit my creative capacity as an educator and writer. I have developed a book proposal and prepared an application to the Guggenheim Foundation (which proved unsuccessful) but have nonetheless begun work on a new book in the realm of literary botany, which will be supported by a writers residency from the Blue Mountain Center for the Arts.

Donald J. Leopold
With the assistance of many faculty, students, and off campus partners I organized the Onondaga Lake bioblitz held in September as part of the President’s inauguration, and found the funds to pay for the majority of costs (drinks, food, including final picnic, t-shirts). The event was very successful for the College and received significant media attention. Hundreds of students and many faculty and staff were involved in the event. I finished three graduate students this past year, bringing the total of Ph.D., M.S., and M.P.S. students I have finished the past 30 years at ESF to 65. This past year I spent more time on College strategic planning activities than on any other tasks.

Karin E. Limburg
Students: I mentored and taught in the spring semester as I was on sabbatical leave in the fall. I spent a great deal of time working with my graduate students, helping them to write manuscripts and work on their theses and dissertations. This has resulted in higher publication rates by these students, as evidenced by their dominance in this year’s publication list. I also provided informal advisory guidance to several students from other universities, and trained students from the University of Southern Maine in the use of our laser ablation ICP-mass spectrometer. I will be training more students over the summer.

Department/College: I continued service on the Graduate Program Advisory Committee, and have now turned over the reins to co-chairs Melissa Fierke and Jonathan. Under their leadership, new initiatives include a survey of the graduate students, a stock-taking of quantitative course offerings, and a revised grad student manual. I also continue to serve on the department’s Promotion and Tenure Committee. One of the most fun things I did for the department was to participate in our Bio-blitz of
Onondaga Lake and surroundings. Despite the poor weather, it was great to collaborate with faculty and students as we surveyed the biota of the region; we in the tributaries group witnessed the take-over of benthic habitat by the round goby, for example. **For the college.** I served this year on a sub-committee for developing directions in our strategic planning; this committee was charged with the question, “how can we meet human needs while conserving the environment?” Our suggestions were exciting, as they could potentially place ESF in a leadership role on several key topics including ecological economics. I also represent the college as a member of the Technical Steering Committee as well as the Faculty Leadership Team of the SUNY 4E Network of Excellence. Finally, I serve as ESF’s liaison to the Environmental Consortium of Colleges and Universities (a consortium within the Hudson River watershed).

**Self:** I still feel that my biggest accomplishment was finally to publish a coherent paper on the use of biogeochemical tracers of hypoxia (“dead zones”) recorded in fish otoliths. Online and open access, this paper rose to the top of the “Most Downloaded Articles” in the journal *Journal of Marine Systems*, which although not read by many ESF faculty, is highly regarded in the marine science community). It has remained on the top-10 list for over a year (currently #3).

On sabbatical leave in the fall, I began work on a different kind of a book. Tentatively titled *Fish Tales Through Fish Heads*, it is intended for the general public, and describes fishes I have learned about through study of their ear-stones (otoliths), the small, calcified structures in their inner ears. I have spent the past 18 years learning to measure and interpret the chemical composition of these structures via making 2-dimensional “maps” of trace elements in these otoliths. In some cases, the maps are striking and artistic, which was the inspiration for undertaking this book. I was able to get a good start on it, and hope to flesh out enough chapters over the summer to be able to take it to an agent or a publisher. The book has become more of a synthesis of prose and art, and I hope it will reach a large audience of those interested in “hearing fishes tell their own story.”

I was interested in becoming an adjunct at a Swedish university, in order to compete for grants and students there. Because that is not easy to do in Sweden, instead I became a Visiting Professor (10% time, 3 years beginning May 1) in the Department of Aquatic Resources, Swedish University of Agricultural Sciences (Sveriges Lantbruksuniversitet, SLU). Note that this department is the research arm of the former Fisheries Board of Sweden; that agency was dismantled several years ago and re-organized.

In addition, I have been nominated for a Lise Meitner Visiting Professorship in the College of Engineering, Lund University. The decision is still pending. If approved, it would run concurrently with the other visiting professorship at SLU.

I continue to do national- and international-scale service. Nationally, I will be transitioning into President (from President-Elect) of the Estuaries Section of the American Fisheries Society. Internationally, I serve as advisor to a center of excellence in interdisciplinary environmental research at the University of Bordeaux, and also as co-chair of the IMBER-Future Earth Coasts Continental Margins Working Group; we are in the process of re-constituting its committee and thrust for our next three-year term, but it will undoubtedly involve a focus on the Arctic.

Finally, I continued to engage in the debate about mainstem dam removal, co-authoring an op-ed in the *New York Times* that drew many comments (mostly positive) and has opened a window on “out of the box” thinking about this thorny issue.

**Mark V. Lomolino**

Students: I have continued to teach courses that emphasize fundamental biological, geological and geographic factors that influence biodiversity, and challenge students to develop an integrative understanding of relevant patterns and to articulate this in writing (essay form exams that I grade myself). The mammal diversity course has now grown to approximately 60 students. This course continues to receive excellent reviews from students. I also continue to offer a series of graduate seminars and courses on various topics in conservation biology and biogeography, including a new seminar in Biogeography of Humanity, which I hope to develop into an upper division and graduate course in the near future.
Department/College: My service to the department and college should continue to develop following my return from sabbatical leave and should as deemed appropriate include increasing service on departmental and other committees.

Self: I have developed my international network of colleagues and research programs in the areas of biogeography, ecology and macroecology. As a result, I have begun to publish with new collaborators, develop new proposal and received invitations to give guest lectures, keynote addresses and serve as external evaluator of faculty and research programs. I have begun a new line of research on Soundscape Ecology, which is an emerging discipline focusing on the spatial and temporal variation in the sounds of nature. We have published our first paper on this new line of research and have submitted two proposals to NSF, now in review.

Gregory G. McGee

I served again this year as EFB’s Undergraduate Curriculum Director and Curriculum Coordinator for the Environmental Biology major. In my capacity as UCD I coordinated undergraduate advising for the department; provided departmental orientation to freshmen and August/January transfer cohorts; pre-registered all transfer students; represented EFB at two end-of-semester Academic Standards meetings; worked with Admissions to organize two departmental open houses and five accepted student receptions, and personally participated in six of these seven events; served as ESF representative on the SUNY working group for the SUNY-wide Biology transfer pathway; and maintained current information for EFB program catalog descriptions, plan sheets and directed elective offerings for all seven majors. Apart from my own advisees, I advised numerous other EFB undergraduate students on a variety of curricular matters, provided initial advising for several internal transfer students, and facilitated numerous student petitions. This past year I assumed responsibility for preparing the department’s Middle States Accreditation Undergraduate Program Assessment Report, by which I conducted the analyses and delivered summaries of the 2009-12 assessment data for six of the seven majors (all but A&FS), and then worked with the other curriculum coordinators and assessment teams to finalize their assessment in advance of working with Kim Schulz to compile the final departmental report. Immediately after submitting the report, Kim and I set to work with the curriculum coordinators to make final revisions to the seven major assessment plans and develop the data management strategy to gather and archive future assessment data on a timely and consistent schedule. Kim and I also began preparing the EFB Self Study in advance of the SUNY Program Evaluation that is scheduled for this autumn. This year I have reduced my involvement in organizing, administering and instructing EFB202 at Cranberry Lake, but I have and will continue to provide guidance to J. Fiene on coordinating the course, and will contribute four days of instruction for EFB202.

Last year (‘13-14) Kelley Donaghy and I launched a two-year course sequence in Environmental Leadership and Civic Engagement. This initiative emerged from the results of the ESF 2011 National Survey of Student Engagement (compiled by the Student Affairs Committee), which suggested that following compulsory community service in their freshman year, few ESF students continue to engage in community service. Further, we recognized that ESF does not provide any formal study or training in leadership, beyond periodic workshops offered by Student Affairs. Kelley and I believe an opportunity exists to launch a meaningful, structured program in Environmental Leadership at ESF that uniquely integrates aspects of civic engagement. Our first attempt at formal leadership development in ’13-14 was to initiate a Sophomore-Junior year experience consisting of an introductory seminar on leadership theory and skills, followed by a practicum in which students design high-impact, service-based professional or research projects that promote civic engagement by their fellow students. Finally, participants were to implement their projects through independent research and internship experiences in subsequent semesters beginning in ’14-15. None of our students opted to implement their proposed service projects, due in part to lack of resources. This situation prompted Kelley and me to prepare an NSF S-STEM proposal to develop this initiative as a scholarship program through which we will recruit students with leadership interests and tendencies, and provide ongoing incentives for them to carry out their service-
based projects. Although the proposal received good reviews, it was not funded, but we intend to resubmit the scholarship proposal later this summer.

This year I completed the third of a three-year NSF-TUES research initiative with Neal Abrams and Betsy Hogan aimed at exploring innovative approaches to improve first-year student learning gains and attitudes towards STEM disciplines through an integrated chemistry-biology-communications course sequence (Project SYNAPSE). We now have three full years of outcomes assessment data and 5-6 laboratory exercises to develop into peer reviewed manuscripts and teaching modules. I believe the SYNAPSE project outcomes will demonstrate that an integrated first-year experience can be an effective and engaging instructional model, and provide inquiry-based context for a true first-year learning community experience, which we do not offer at ESF. Our students have consistently reported these three years that they enjoyed the integrated approach and valued the built-in support structure that they experienced by taking five courses together as a cohort during their first two semesters. From an instructional perspective, I found the experience of co-teaching three courses with the same faculty colleagues and students to be very enjoyable, stimulating and rewarding. However, the effort of piloting this project was substantial for Neal, Betsy and me, and we need to assess the benefits, costs and practicalities of continuing or expanding the experience in future years. Also, this spring two very productive MS students (Molly Hassett and Miguel Garmendia) defended their theses, and I will be assisting them in developing their work into 4-5 manuscripts. Molly contributed to understanding the possible ecological relationships that sustain emerald ash borer parasitoids in ash-dominated forests. Miguel’s work extended my research goals of understanding the topo-edaphic conditions and disturbance impacts that influence epiphytic communities in northern hardwood systems. I currently have two new graduate students (Stephen Pecylak and Vernon Coffey) who will be following up on this research. Finally, Geoff Griffiths has initiated his dissertation research on interactions between pollinator and forest herbaceous communities in post-agricultural secondary forests. Wendy Burgess will be joining my lab this fall to collaborate with Geoff in developing volunteer-based herb restoration efforts.

Stacy A. McNulty

Students: This past year I revamped Winter Mammalian Ecology (EFB484/684) toward a more equitable distribution of small, meso and large species and restored a field lab in the High Peaks region; the course was highly-regarded by students (mean rating 9.1 on a 1-10 scale). I also created numerous opportunities for ESF students to participate in scientific endeavors, most notably a pollinator-focused bioblitz where bee experts from across the Northeast convened to sample and identify over 100 Adirondack species. Students helped collect data and teamed up with naturalists and scientists to experience first-hand a modern collection and taxonomic organization effort. Finally, I initiated a new Early-Career Representative board position for the Organization of Biological Field Stations; the first holder is an incoming EFB graduate student and he has already begun providing the perspective of a recent field station user and potential career field ecologist. While this position will likely be held by students of other schools in the future, it gives ESF students an internationally-visible position of leadership.

Department/College: A great deal of my energy went into participating in ESF and AEC strategic planning for improvement of future academic programs and facilities. I spent significant time on the Syracuse campus this past year to build intra-college partnerships including the AEC faculty membership that began in 2014. As a co-PI on the Great South Woods project, I worked closely with an interdisciplinary team of ESF faculty and students and regional agency and non-profit partners to execute a series of public meetings and planning activities. GSW is a collaborative, community-based planning initiative to enhance and diversify public access to the Forest Preserve and Conservation Easement lands in the southern Adirondack Park. Our team received hundreds of suggestions for creating or connecting public recreational opportunities with amenities in Adirondack towns; it has been satisfying to see the maturation of the APR-GIS geospatial/technical project, started over a decade ago, which has evolved to a comprehensive, landscape-scale, inclusive process for natural resource protection and promotion of recreation in Adirondack Park.
Self: I applied and was accepted into a doctoral program in GPES. I am enthusiastic about the directions my research will take and how this work may be integrated into college scholarship, academic programming and other ventures.

Lee A. Newman

Students: I have continued to teach the three required courses, Cell Biology, Senior Synthesis and Molecular Techniques. Last year, I did a field trip with the Molecular Techniques to the Flow cytometry center at Syracuse University. I continue to teach the Phytoremediation course (EFB496/796), well received. I will discuss this more in the service to the Department and College. I taught the EFB496/796 Cell Biology Recitation again this year. As all of my students had taken the course, the numbers were lower, but the students who did take the course said that they greatly enjoyed the course and they learned valuable skills in both reading and understanding research articles, as well as presentation skills. I also taught the EFB496/796 Plant Physiology Recitation this year. I plan to continue to teach this course, but have it focus on different areas of plant physiology every year so that students can take the course more than once and continue to learn new material with each time the course runs. Last year, the course focused on plant microbe interactions. I also continue to co-teach Biodiversity II, with the topic area of Procyotes. It is a fun lecture series, and the students seem to enjoy it and ask a lot of good questions. This year I have had 33 students in the lab, PhD, MS and undergraduate. The student from Iran has stayed on, and is now a Post-Doctoral Fellow in the lab. In addition to these two international students, there are four other international students in the lab, one from China, one from Nigeria, as well as a visiting scholar from China. The lab also hosts students from a variety of ethnic backgrounds, including Trinidad, Philippines, and China. The lab hosts not only a diversity of nationalities, but also religious and political backgrounds. Several students are or were in the Honors program, and several others are in CSTEP. The best thing about this is how proud the students themselves are of being in this diverse group. The students are extremely hard working, and this is reflected in the number of awards they have won locally and at internationally attended conferences. I continue to work with the students to develop their sense of community by hosting laboratory trips to places that are both fun and educational (Corning Museum of Glass and the Rosamond Gifford Zoo). I also work with the students to develop the importance of community service by participating in a food drive – last year the lab purchased and delivered over $1600 of food to a local food pantry.

Department/College/SUNY: I am continuing my work on the departmental Course and Curriculum Assessment Committee and the college Committee on Research. I also continue to participate in three Hill Collaboration groups, Neuroscience, Cancer, and Wounded Warrior. As part of this last group, we are working for the third year with a former ESF graduate, Dr. Stephen Lebduska, who currently serves as the head of the Spinal Cord Injury Unit at the Syracuse Veterans Hospital on a Horticultural Therapy program for inpatients in the unit. We are working not only with the hospital, but also with other community groups to obtain the plants and supplies for the program, and we currently have two current students and two former students working at the VA on this program. The program involves growing plants on a rooftop garden, in room plants for patients, maintaining plants in common areas, and devising enrichment programs involving gardens and plants for the patients during the winter months. We are also working with Clear Path for Vets to develop a garden for their Culinary Command program. I co-chaired the departmental search committee for the new faculty hire in Environmental Health. For the fourth year, I was chair of the organizing committee for the Biotechnology Research Symposium, which continues to attract both academic and industry representatives. In 2014, I invited as a speaker Dr. Daniel van der Lelie, who is the Global Director for Biological Research at FMC, who is recognized world-wide as a leader in the area of plant/microbe interactions. He came to ESF and gave a seminar at the school in the Plant Physiology Recitation course, and we then spent time working to develop a collaborative research program, and to discuss ESF Biotechnology students to intern in his lab. This visit resulted in obtaining research funds to do a collaborative project. During the past year in the EFB496/796 Phytoremediation course, I had two speakers give seminars that were open to the college and the public, Dr. Stephen Ebbs, Chair of the Biology Department at Southern Illinois University and Dr.
Scott Angle, Dean of the College of Agriculture and Environmental Sciences. I am still working with the administration at Brookhaven National Laboratory and Garrett Sanders of the Research Foundation to forward the major goals of the MOU, which was to increase research collaborations between SUNY and BNL. I have been working with Drs. Bongarten and Shannon to develop a joint diploma program with Mahidol University in Bangkok, Thailand for the Environmental Biology, Biotechnology and Environmental Health majors. This program would allow students from Mahidol University to do their last two academic years here at ESF, and then receive diplomas from both ESF and MU. As the program develops, ESF students would also be able to go to MU for a semester or academic year to participate in an international learning program. In this vein, I am still working with the SUNY COIL program to develop a jointly-taught course with the University of Parma, where students at both universities would take a phytoremediation course, and run joint literature review projects between the two universities. I have also become more involved in the ESF health related programs. I have continued working with both ESF and UMU administration to develop and implement a joint MD/PhD program, and this is moving forward. I am the Pre Health Advisor for students in the Environmental Biology Major. I am also the ESF advisor for students wishing to participate in the UMU 3+3 program to earn a Doctor of Physical Therapy degree. I am also the Coordinator for the Health and the Environment option in Environmental Science, and the Coordinator for the new major in Environmental Health, where I am not only doing curriculum coordination, but also updating the web site and promotional materials for students, administrators and fund raising, and worked with Dr. Bongarten on developing descriptions for new faculty hires for the program as well as recruiting new ESF faculty to participate in the program. This past year I co-chaired the search committee for a new hire in Environmental Studies to teach in the Environmental Health program. I also reorganized the plan sheet for the major, and course descriptions for seven undergraduate courses, four of which also had co-taught graduate course approved. I also oversaw the purchasing (selection, specification) and set up of $650,000 of equipment for the Environmental Health/Environmental Medicine Biotechnology center, and currently supervise the management of the laboratory for use by ESF, Upstate Medical University and the Biotechnology Accelerator personnel.

Self: I continue as Co-Editor in Chief for the International Phytoremediation Journal, which has continued to increase the number of submissions received every year. The publishers continue to increase the number of issues, and from a quarterly journal we are now publish 12 issues a year, in the 8.5 x 11 page format. For the third year in a row, our annual and 5-year impact factor continues to be strong for a highly specialized journal, being in the upper 50% for all Environmental journals. I continued to serve as the Founding President of the International Phytotechnology Society after serving 6 years as President. The Society continues to grow and the conferences remain strong every year. I was on the organizing committee for last year’s conference, which was held in Herkalon, Crete, Greece in October 2014. I continue to chair both the Awards Committee and the Education Committees for the Society. I also continued my role on the Scientific Advisory Board member for the Association for Environmental Health Sciences. I am also working to developing more collaborative ties within the SUNY system, and I am starting to work with colleagues from SUNY Upstate to develop joint research programs. Last year, I submitted two grants as PI with collaborators from SUNY Upstate and SUNY Polytechnic Institute to the SUNY Health NOW program. While they were not funded, we plan to resubmit. While my publications remain excellent in quality and are published in top journals in my field, I look forward to increasing the number as more graduate students move through the lab. And finally, I continue to work with an international team of editors to work on the books Phytoremediation: Management of Environmental Contaminants. Volumes I and II were published this year, and we are working on Volumes III and IV. In 2014, I was approached by a local NPR reporter to be interviewed about our Horticultural Therapy program at the VA. And finally, in the past year I received the President's Award for Community Service, for the work we are doing in the lab both with the veteran community and for getting students involved in assisting the local food banks and animal care.
Dylan Parry

Students: Undergraduate – I am the coordinator of the undergraduate major in Conservation Biology (currently 165 students). I teach demanding rigorous classes and refuse to use multiple-choice despite the significant time spent grading written answers. In spring 2015, I again taught EFB-502, continuing to add new components to this course to keep it fresh and current in this rapidly developing field and I turned over more than 20% of the lecture material this year. Although the FTE’s are low, these are the kinds of courses that set ESF apart from competing institutions and give students value for their dollar and are one of our best marketing tools for getting students to come here. As I have done for 11 yrs, I taught the Entomology component of EFB-202 at Cranberry Lake. I am one of only a handful of EFB faculty that consistently instruct at our flagship undergraduate experience. Graduate – I taught two graduate seminars in 2014-2015 (27 students) and consistently rank among the top faculty in graduate FTE’s. I also served on GPAC and oversaw the Stegeman Award, again providing a well-deserving student with an award and some supplemental funds for research.

Department and College: As coordinator, I drafted (with G. McGee and J. Gibbs) the Middle States Assessment report and took the lead in implementing some long discussed curricular changes to the program. The completion of the report was critical to maintain accreditation of the major and ultimately the department and college. In addition to the myriads of petitions and assessment requirements, I promoted the College and the Conservation Biology Major at accepted student recognition events and open houses, fielded questions from prospective students and parents, and wrote letters to top potential recruits. I represent the College’s interests and perspective as a member on the NY State Invasive Species Advisory Committee, an assemblage of governmental, non-profit, private sector, and academic organizations who function to advise NY State on invasive species issues and help to craft legislation that effectively combats targeted species or pathways. Although budget cuts have taken a toll on the organization, we were still able to play a large role in developing and changing the forth-coming ‘clean-boat’ bill that the governor signed into law this year, the inaugural state wide Invasive Species Awareness Week, and the forthcoming invasive species list of prohibited and restricted species.

Self: I have begun collaboration with multiple investigators (particularly Derek Johnson and Kristine Grayson at VCU and Patrick Tobin with the University of Washington) looking at the effects of climatic shifts on invasive insects. I have recently partnered with Kimberly Wallin (UVM) and initiated research at Hubbard Brook Experimental Forest. We are cooperators on a large NSF funded project that seeks to emulate ice storms in northern hardwood forests. By mechanically applying water to the forest canopy in winter, we have been able to realistically mimic the accretion of ice and subsequent damage. Our role is to examine the trophic response of insects and their natural enemies. My graduate program has grown and with 2 new PhD’s coming aboard in the fall, I’ll have a nice mix of students at various points in their academic development. I was able to recruit two of our top ten graduate applicants (W. Leuenberger in 2014) and Chelsea Jahant-Miller (2015) to my program.

Gordon Paterson

During the fall of 2014 I taught Toxic Health Hazards and received strong positive feedback from multiple students regarding the course content. This included a recent ESF graduate student whom indicated that much of the course syllabus was responsible for their receipt of an offer of employment with an environmental consulting firm. I also offered the Environmental Risk Assessment course requirement for the Environmental Health program, however, this course was closed due to low enrollment. This course will again be offered as a mandatory requirement during the fall 2015 semester. I again co-taught the Adaptive Peaks graduate seminar course with Dr. Shannon Farrell during the fall 2014 and spring 2015 semesters. The highlight of the course this year was visiting speaker and ESF alumnus Dr. Russ Lea, director of the NSF’s National Ecological Observatory Network, who was very well received by both student and faculty members in EFB and across campus. I again taught a special topics course in environmental toxicology during the spring semester which expanded on specific concepts introduced in Toxic Health Hazards. This course also challenged students to learn some of the thermodynamic and mathematical concepts associated with understanding pollutant bioaccumulation in
terrestrial and aquatic food webs. I co-taught Tropical Ecology with Dr. Donald Stewart in the spring 2015 semester. The cancellation of the field trip to Dominica during Spring Break due to weather related concerns highly disappointed approximately 50% of the students registered in the course. However, an additional effort was made to complete the field component of this course from May 13 – 24th, 2015 and was very well received by the students that were able to participate. I was also able to supervise a range of students (6) through research internships, independent research projects and also the honors thesis program. These projects were very enjoyable and valuable for helping teach students the lab and data analysis skills associated with pollutant extraction and analysis in biological samples and also for evaluating the status of laboratory facilities for this research. Despite my enjoyment in contributing to the multitude of undergraduate courses previously listed above, I feel I need to reduce the number of such commitments in order to focus on my research program and graduate student training.

Much of the summer of 2014 was spent trying to resolve contamination issues in the laboratory that continue to be challenging with respect to completing trace chemical analysis in Illick Hall lab space. Ongoing construction issues including the perimeter heating project in Illick Hall resulted in the lab requiring substantial cleaning in addition to a prolonged absence of hot water resulting in substantial challenges for simple pursuits such as glassware cleaning. My laboratory space also requires continued attention with respect to cleaning and regular maintenance in order to maintain a suitable facility for trace chemical research. I was able to submit approximately $1.3 million in research funding proposals this year unfortunately, none of these proposals were accepted for funding. There remains an outstanding issue of $10,000 in funding awarded in March 2014 that has yet to materialize despite multiple attempts to establish the fate of this money and the almost $1000 cost for the associated research publication. I will have a new MS student beginning in the fall 2015 with another beginning in spring 2016. I had tentatively agreed to co-supervise a PhD student with Dr. Donald Stewart, however, issues raised during further discussion with the student’s current PhD supervisor indicated that the candidate was unsuitable for the proposed project. One unknown issue associated with graduate student recruitment regarded the absence of my name in the graduate application system in order for students to select myself as their major professor. This issue was only brought to light by a current graduate student applicant who notified me of the situation and initiated the fix for the problem.

I began my first term on the Cranberry Lake Biological Station Advisory Committee. During that time, issues raised and discussed included the capacity for station facilities to continue to support the mandatory requirements of EFB202 and potential solutions for this ongoing issue. Participation on this committee also included application review and candidate selection for the Grober Research Fellowship and the Burgess graduate research award. I also completed another term on the ad-hoc library committee and contributed to the curriculum assessment process for the Aquatics and Fisheries major. I continue to communicate with and mentor young students interested in environmental toxicology and issues related to water contamination and industrial pollutants.

For my own professional development, I participated in an NSF Career grant workshop sponsored by Syracuse University which helped provide valuable information regarding hints and information toward preparing successful proposals for this program and the opportunity to meet and discuss the program with successful program applicants. I also received valuable feedback on Hudson River Foundation and New York Sea Grant proposals which will hopefully help to improve my future success in competitive funding proposals. I continue to work in an associate editor capacity for the Bulletin of Environmental Contamination and Toxicology for which I was responsible for the editorial processing of approximately 35 bulletin publication style manuscripts. For this journal, I also hosted the annual editorial board meeting which also provided an opportunity to showcase the ESF Gateway Center to a range of international faculty, research scientists and Springer administrative staff. I also acted as a professional reference for two post-doctoral fellows, one for a successful faculty position interview and the second who was hired for an environmental consulting firm. In addition to these activities, I also reviewed session abstracts for the 2015 Annual Conference of the International Association for Great Lakes Research.
William A. Powell

Last year’s most significant accomplishment was to prove we have developed blight resistant American chestnut trees. This year we are building on that accomplishment by moving to the next stage, preparing for the long, expensive, and complicated federal regulatory review. There will be many unique facets to this process because nobody has tried to deregulate a genetically engineered organism to be used for ecosystem restoration. SUNY-ESF will be the first.

First we must gather significant public support. To accomplish this, we have reached out to the press and have initiated at least 31 news items (articles, blogs, radio, and TV) in a single year, with a Ranger school article and a NYFOA article written and just waiting to be published. The American chestnut project is one of the three most reported ESF projects this year and produced over double the 14 news reports on the chestnut project last year. Julia Allis in the communications office said, “it is safe to say that the Chestnut Project is one of our top 5 news stories ever.” For web traffic, the Chestnut Project is responsible for our second-highest spike this year (25,000 visitors on Nov 13-14, behind Top 10 Species last May). All pages taken together, the Chestnut Project website had 31,781 unique page views between May 13, 2014 to May 13, 2015. Julia also wrote, “Between those three stories last year (Top 10 Species, Lonesome George, and American chestnut), I am seeing a sea change in how ESF gets recognized and talked about in science news and social media. We are getting more new traffic to our site and social media, and more of that traffic originates outside the northeast US (our international numbers are also going up). We are getting mentioned and talked about more on social media. It has also led to new contacts for us at a high level of potential media exposure. News articles are also now making an effort to include the college’s name (historically they tended to trim it out, and now they are sometimes even slipping it into photo captions just to make sure we get mentioned), and journalists and media organizations have subscribed to our social media accounts to monitor them for potential news stories. So congratulations! The Chestnut Project has played a key role in increasing ESF’s visibility!”

I personally have given 27 public seminars to scientists and lay people this year and have more scheduled out to Jan. 2016. I have even reached out to the Haundenosaunee peoples of New York and received positive. I have learned to use social media such as Twitter (@ChestnutPowell) and Facebook (https://www.facebook.com/groups/esfchestnut/?fref=nf) to help promote the chestnut project and ESF. The chestnut project’s webpages has also been updated (http://www.esf.edu/chestnut). These webpages include videos such as my TEDx talk with 11,531 views, a small stem assay with 3,364 views, the 10,000 Chestnut Challenge with 1,588 views, etc. We have developed mailing lists of over 1000 chestnut supporters. I have worked with TACFNY to establish a “mother” tree program where we have distributed over 1200 wild type nuts this year for people to plant as they wait for the transgenic trees. All this is essential to reach out to the public. We need their help to get the chestnut through the regulatory process. There is a significant anti-GMO movement that may try to stop the deregulation of the blight resistant trees. Therefore, we need strong public support to counter any roadblock they try to erect. We are building that foundational support.

The regulatory process will also cost significant amount of funds. In addition to work at ESF, we may need to hire regulatory lawyers at $425/hr to help complete parts of the submission. Just as one example, if we are required to do animal feeding studies, they will cost a minimum of $25K. But we are working closely with experienced regulatory people and have already receive some pro bono help. We are actively seeking new sources of funding because the typical federal granting agencies do not fund this type of applied regulatory work.

So we are being creative. This year, with the development office, we launched the first ESF crowd funding campaign called the 10,000 Chestnut Challenge. In just 30 days it raised over $100,000, double what was expected. But this is only the start of the predicted $3 million needed over the next 5 years to complete the regulatory review. So we are seeking funding from a variety of sources as seen in the grants section of this report, including a legislative grant of $100,000 that we hope will continue for a few years. And, like the RWLS, we are seeking large donors to ensure we complete the review process in a timely manner and are free to begin the restoration of the American chestnut tree.
The American chestnut Research & Restoration project is the foundation of a larger goal to make ESF a center for biotechnology based tree restoration. Even though we are developing the American chestnut in a not-for-profit way, there are spin-offs that may help establish an ESF tree restoration center (or “legacy tree center”). We are now finalizing a deal with Z’s Nutty Ridge LLC to produce tissue cultures of important agriculture chestnut trees such as “Colossal”. This is a small start but it could provide royalties to further our research and allow us to expand into helping other tree species. We currently have the expertise and leadership to do this. But if there is ever a gap in our support, we could lose this valuable opportunity to other universities.

All this benefits our students, department, and college by providing research opportunities for the students and enhanced visibility and prestige for the department and college.

Neil H. Ringler

Department: The aquatic program is supporting up to nine graduate students on grants and contracts with NOAA/Sea Grant, Honeywell, EPA; and NYDEC. One grad student completed her Master’s degree this year, and two more will finish in the summer of 2015. The courses EFB 385 (Comparative Vertebrate Anatomy) and EFB 554 (Aquatic Entomology) continued, with several professional positions recently connected to aquatic invertebrate expertise. Students continue to successfully gain admission to medical and veterinary programs with support from the CVA course. This was the first year to contribute to the Diversity of Life Course (EFB 210) with regard to aquatic insects: a 4-month topic in 55 minutes! Collaborative work on Onondaga Lake is to be summarized in two papers presented at a symposium at the American Fisheries Society Annual Meeting in Portland, Oregon in August 2015. Our Atlantic salmon studies utilizing field and CIRTAS facilities have gone exceptionally well, with high rates of growth and survival in tributaries of Oneida Lake, Lake Ontario and Onondaga Lake. This species, traditionally difficult to restore, may ultimately succeed in our region as the result of this work.

College: A major success in licensing of patented technology (Hot water extraction process: Dr. Thomas Amidon and colleagues, inventors) occurred this year, with able assistance from intellectual property colleagues at Binghamton University. Modest grants were won by several faculty members via the Hill Collaboration in Environmental Medicine (ESF, SU, VA, UMU). Significant funding to ESF faculty members will be awarded this summer in the 4E Network of Excellence. Successful symposia sponsored by the Institute for Environmental Health and Environmental Medicine (IEHEM) were held at ESF and OCC; another is scheduled at SUNY Oswego in September 2015.

SUNY/RF: Work at the SUNY and SUNY/RF level has emphasized development of a $1.9 M seed grand program in the 4E Network of Excellence (Energy, Environment, Economics, and Education). Research Vice Presidents/Vice Provosts from SUNY ESF, Stony Brook, Binghamton and Albany have created a strong working relationship in this 4E program that should be long-lasting and productive. This has become a true collaborative success, with faculty working together across at least 10 SUNY institutions throughout the State of New York; many of these faculty members had not previously met, even though they share research expertise and interests. Additional interactions at the SUNY level included participation in the proceedings of the Distinguished Academy, the Vice Presidents/Vice Provosts of Research planning meetings in Albany and NYC, and the SUNY/RF Research Council.

Rebecca J. Rundell

Students: My Invertebrate Zoology (EFB 355) course has gained in popularity and this year’s labs were over-full. Most rewarding has been the positive response I’ve gotten from students who didn’t realize they would be this excited about invertebrate animals, as well as the evidence of hard work I’ve seen in the lecture exams. I have seen consistent voluntary attendance in lecture, as well as enthusiasm about the hands-on components of the class, particularly the coldwater touch tank, the inverted “flip” classroom demos each student pair performs in class, and the emphasis on dissections and learning about the whole organism, from evolution to behavior to conservation. To ensure a high-quality experience for everyone in this lab-intensive course, I may need to turn away some students next year, so that there is
enough room for students to safely move in the lab room. This year it was difficult to turn seniors away, and next year I expect it to be just as difficult, if not more so. Students in Diversity of Life are also becoming increasingly interested in the course through my lectures and the coldwater tank demos we do for their labs, where they learn about and feed live sea urchins and anemones.

Despite (or perhaps because) of our land-locked campus I have discovered many of our EFB students are enthusiastic about marine biology and the new Marine Science Minor. EFB 355 allows students to engage with these interests, since marine invertebrates embody the greatest morphological, developmental, evolutionary and ecological disparity among animals. Coincidentally, marine invertebrates are central to some of the greatest emerging conservation threats of our time: ocean acidification, sea temperature rise, rising sea levels, coastal modifications and pressures, and collapse of fisheries (the most economically important fisheries in the U.S. are marine invertebrates, e.g. scallops, shrimp, lobster). Since I study rainforest invertebrates myself, I certainly do not ignore terrestrial inverts, but EFB 355 is also contributing to a baseline of courses our EFB students will need to help conserve our aquatic planet in the future. The addition of marine mammal skeletal material to ESF through RWLS this year will also help build excitement for emerging aquatic biology and conservation fields.

My Evolution course (EFB 311) has continued to be a large investment of time and energy, and I am starting to see some pay-off for this in the quality and depth of the Darwin Day posters that interpret this year’s evolutionary research, and students that approach me to work in my lab or who simply ask great questions in class. Other successes include the live Skype discussion with Dr. Jerry Coyne (author of Why Evolution is True) and the fossil field trips to two Middle Devonian sites and a special educational program with paleontologist and Stephen Jay Gould student Dr. Rob Ross at Ithaca’s Museum of the Earth. Through these experiences, our students have the opportunity to confront controversy (if they wish) and immerse themselves in evolutionary biology from modern findings to the distant past. They discover and take home with them physical evidence that life on Earth is 1) old, and 2) changing. This year I also brought additional hands-on specimens into the classroom, including a dinosaur bone, a set of owl specimens and skeletal materials (to teach about adaptation), and a whale vertebra from our recent donation of 3.5 whales (to teach about whale evolution). An otherwise large and unwieldy lecture is infused with energy by using these specimens as a jumping off point, and I plan to do more of this in the future as appropriate. I think it also helps students make the connection between an evolutionary way of thinking and their other courses.

This year I also led the Evolution Discussion Group as well as co-taught a seminar course in Invertebrate Conservation Biology with Dylan Parry. In the latter course it was especially interesting to introduce some marine conservation themes to our more terrestrially-oriented EFB grad students. Students also led discussions on captive breeding of endangered invertebrates and a broad range of other conservation topics (abstract to practical) both in and out of their comfort zones. This course is an important forum for our critical mass of EFB students entering this field.

I am also building my lab and mentorship of graduate students. I have one new Ph.D. student, two MS students, and one MPS student. I actively mentor students to focus on their ultimate career goals; to this end they have all presented in national or international meetings this year and/or submitted a paper or technical report for publication. I just completed a series of meetings with grad student Cody Gilbertson, where we interviewed everyone involved in Hawaiian endangered tree snail conservation and captive breeding, from state officials to university researchers to direct field managers who maintain remote exclosures and trap rat predators. The purpose of these meetings and field experiences was to both develop the endangered species captive breeding program in EFB but also to further develop Cody’s career in this conservation field. Acquiring such a deep understanding of the nuances, working relationships, roadblocks, successes and failures in invertebrate conservation through this intense series of meetings is an experience I would like all of our graduate students to have, and I hope to integrate this into my mentorship and perhaps future course development.

Department/College: I am serving the department and college as Head Curator of the Roosevelt Wild Life Collections, where I am involved in the development, planning and oversight of our collections, particularly the vertebrates. I have invested significant time, expertise and energy to not only basic
collections functions such as strategically acquiring specimen donations (e.g. 3.5 complete whale skeletons, 14 other marine mammal specimens, a Kemp’s Ridley sea turtle skeleton, northern gannet skeleton, and full musk ox mount) but also working with Gibbs, Frair, Leopold, Rentz and Heaphy in strategic planning for RWLS, presenting to the Honorary Advisory Council, and planning for renovated and modern collections, as well as exhibits, and space planning in Gateway and other Collections spaces. I have also represented Collections in meetings with Destiny USA and discussions about the potential for ESF traveling exhibits to promote ESF and our educational programs (e.g. wildlife, ecology, conservation). A big push in the next few years is collections safety, followed by increasing accessibility. To this end we submitted a half million dollar NSF CSBR grant to greatly augment our capacity to finish out the new lower level Gateway museum space and move some of our Collections there. In light of this new planned collections educational space, I worked with Ron Giegerich and Wendy Moore to produce a professional museum exhibit on the musk ox, which highlights ESF’s Wildlife Science, Conservation Biology and Natural History programs and helps build connections with visiting members of the public. I’ve engaged the communications department in developing stories on the baleen whale skeleton moves, musk ox, and importance of Collections in general. These big and charismatic specimens have both immediate teaching use and broader marketing possibilities for talking about ESF and the things we already do so well. I look forward to engaging more members of the faculty and staff with Collections in the coming year and will appreciate their input on securing and building the Collections that are so important to our teaching and research programs here.

On a national level, I represent ESF’s Collections interests and other small university Collections through my recent election to the Board of Directors for the Natural Science Collections Alliance (through AIBS), where I recently contributed to strategic planning and visioning.

Self: Some of the highlights of this year have included being invited to give a research seminar at the American Museum of Natural History and serving in an advisory role for some of Mexico’s most important natural history collections at INECOL in Xalapa, Mexico. I was the most junior member of a small group that advised and provided oversight for curatorial organizational structure, Collections Management Policies, planning for upcoming collections move, and mission, vision, and expansion. This year I was also named Research Associate at the Paleontological Research Institution (PRI) in Ithaca, New York, which not only helps to facilitate my own research collaborations at PRI but makes an important link to this institution for collaborations with ESF (e.g. outreach and exhibits through PRI’s Museum of the Earth and Cayuga Nature Center).

Overall my research program is focused on 1) the diversification and correlates of species diversity in species-rich and understudied invertebrate taxa; and 2) the conservation of imperiled Pacific and northeastern US land snails. Central to both of these goals is training the next generation of researchers in the systematics and biology of understudied invertebrate lineages e.g. Pacific endodontoid snails (Bullis, M.S.), narrow endemic northeastern snails (Gilbertson, M.S.) and Pacific ants and snails (Czekanski-Moir, Ph.D.). In order to support the lab’s research, as well as related departmental training opportunities, since I arrived at ESF I have submitted as PI or co-PI $3,810,492 in grants (USFWS, NSF AISL, NSRC, NSF CSBR, National Geographic Society Committee for Research and Exploration, ACECESU (US Army), ESF Seed Grant Program, and Snow Foundation).

I have continued to develop a new research program in northeastern United States land snail conservation and am making new connections to sustain this work. Although the majority of my research has been and continues to be based in the Pacific, the philosophy behind starting a new local arm for my research is to focus attention on the threatened yet poorly known North American land snail fauna (about half of remaining species are considered imperiled). Exacerbating this land snail biodiversity crisis is that, like in the Pacific, North America also lacks the taxonomic expertise that is a critical foundation for solid conservation work on our snails. We continue to put time into the new endangered species captive breeding program in our department for the Chittenango ovate amber snail (COAS) and a new field effort for these snails at Chittenango Falls, which leverages past work by Ringler, Frair, Gibbs and others (e.g. Campbell, Frair, Gibbs & Rundell, In Press) as well as collaborations with both Rochester and Syracuse
zoos. In order to implement this program I worked with USFWS Officers Robyn Niver and John Wiley to recruit an M.S. student Cody Gilbertson, who is funded in part through my USFWS grant. Cody has flourished in this role (technical report: Gilbertson & Rundell, 2014; talk at a national meeting: Gilbertson & Rundell, 2014).

I have continued my research in Belau (Republic of Palau) including forging a collaboration with three Japanese colleagues at the University of Tokyo (Yamazaki et al., In Review). I also was invited to submit a full National Geographic Society Committee for Research and Exploration grant with my Ph.D. student Jesse Czekanski-Moir as co-PI. Our full submission was rejected but we were invited for a second round submission. Jesse and I also expanded our biogeographic reach into broader Micronesia with our recent paper on the fauna of Kosrae (Rundell & Czekanski-Moir, In Press). No one had collected or reported on land snails from Kosrae since the 1930s, making our contribution a significant one for the future conservation and understanding of the Kosrae fauna and Micronesia’s terrestrial invertebrates more generally.

Kimberly L. Schulz

Students: During this year I continued to teach a large Limnology (424/624) course and a fully subscribed Limnology Practicum course. I added some film and internet activities to Limnology and these were generally well-received. I will continue to revise this class to include more hands-on activities and interactive components, despite its relatively large size for an upper division course (~80), based on the positive reception this year. As in the past 5 years, the Limnology Practicum involved a large component of student independent projects, with many students choosing to work with local lake associations on questions of interest to them. Although this requires extra co-ordination, it is rewarding for all involved, and I plan to continue and expand these efforts in the next year.

I am also happy to see interest in marine science increase on campus, as the marine science minor I established last year is now well-subscribed and many students are taking advantage of our affiliation with Sea Education Association and other off-campus marine opportunities that I continue to work to expand.

In addition, John Stella, Jessica Clemons and I developed a new graduate seminar, “Managing and Archiving Research Data” that was very well-received this spring. We will teach it again this coming spring and likely then propose it as a formal graduate-level course, as it fills a large need for graduate students in multiple departments.

I was happy to have one co-advised (with J. Stella) M.S. student (Stefan Karkuff) and one Ph.D. student (Adam Effler) defended their dissertations successfully during this year. Two of Adam’s chapters are already accepted for publication. A new M.P.S. student joined the lab, and two M.S. and one Ph.D. student are making good progress toward completion in this next academic year. In addition I continued to advise a number of honors students and students doing final capstone projects in Environmental Science. All of these students have continued on to graduate school or jobs in their fields, and that is rewarding for all. Two of them are continuing to work with me over the summer to prepare manuscripts for submission.

Department/College: I have continued to spend a tremendous amount of effort writing reports, overseeing final renovations, and planning for the formal opening of the CIRTS (Center for Integrated Research and Teaching in Aquatic Science) facility in Illick Hall, while working to make sure that current users have the facilities they need, and make sure that all equipment and services are functional. I am looking forward to a formal opening in late summer/early fall.

In addition, with Greg McGee, I have devoted a large amount of time working on the EFB assessment documents for both Middle States Commission and SUNY. We have established a number of new assessment plans, along with the major co-ordinators, and Greg and I are working to make the process more stream-lined and user-friendly in future. Although this has at times been a difficult process, I believe we are now better serving our students and I think our curriculum and internal communication have improved through this process.
Perhaps the most fun departmental service activity was participating in the well-organized Onondaga Lake bioblitz. Having time to muck around Onondaga Lake and identify plankton in the middle of the night was a pleasant reminder of why I love what I do.

Self: Although it was frustrating to have to move out of my lab due to the flood just a short time after things were recovering from two years of construction, I am extremely happy that this era of building chaos seems to be closing and the lab is getting back to a semblance of normalcy. During this time, I was happy to continue making progress with submission of a number of backlogged and current manuscripts, with 8 papers either published, in press, or in revision during this year.

Perhaps the most surprising (and surprisingly satisfying) event this year from a personal standpoint was being awarded the Best Advisor Award by the Undergraduate Student Association. I spend a lot of time trying to be a good teacher, mentor and advisor, but am not always certain that I am effective. I advise a large number of students in many majors, and really take this responsibility seriously. Our students are generally fantastic and motivated people, and many are the first in their families to go to college or consider graduate school, so I try to make sure they all are on equal footing when choosing courses and career paths. Sometimes being a good advisor means telling people things they might not to hear, so it was nice to know that I’d helped someone enough for her/him to nominate me for an award.

Donald J. Stewart
(no annual report submitted)

Stephen A. Teale

My research group currently includes a postdoc and four PhD, one MS, and six undergraduate students. Research projects being conducted by my group include laboratory and field work in the U.S., Ecuador (Galapagos) and China and address problems of concern to both biodiversity conservation and forestry. All of my current projects involve invasive insect pests. In Ecuador, the parasitic fly, Philornis downsi, is a serious threat to the endemic avifauna of the Galapagos Archipelago including the IUCN critically endangered mangrove finch. Our work with this parasite is supported by the Helmsley Trust and is focused on identifying pheromones and other attractants that can be used in support of environmentally harmless pest management strategies in this sensitive island ecosystem. Our work with longhorned beetles in China is focused on identifying pheromones and host odors that can be used to detect and monitor populations of the Asian longhorned beetle, which is established in the U.S., and several other damaging species that are considered to have high potential for future introduction to the U.S through international trade. Locally, a U.S. Forest Service funded project on Ibalia leucospoides, a parasitoid of the non-native, invasive Sirex woodwasp is investigating the chemical ecology of multi-trophic level interactions.

Since approximately 1999, I have been working with the ESF administration and Physical Plant toward the construction of an arthropod containment greenhouse. After a number of false starts and delays, this facility is now complete and the only remaining tasks to make it operational are regulatory in nature. This is a high-level containment facility that will enable our faculty and students to conduct timely research on a wide variety of non-native insects that pose a threat to regional and distant ecosystems.

J. Scott Turner

EFB 200 Physics of Life was offered for the sixth time. Its enrollment continues to be strong. Last June, I offered an online version of the course during Summer Session 2. Enrollment was modest.

EFB 462 was offered for the first time in Fall as a fully online course. The course itself was successful, but my planned supplemental recitation did not draw enough students to make it viable. Instead, I offered a weekly “Physiology Table” at Gateway Center, which drew a small, but faithful participation. Production for Animal Physiology Online continues.

Work continued on my research project funded by the Human Frontiers Science Program (HFSP), for which I am the Principal Investigator. We conducted a major research expedition to Namibia in April
2015, during which time we had as many as 16 members of our research team. We are currently in Year 3 of the project, and we intend to ask for a no-cost extension to carry the work on for a fourth year.

I am a subcontracting scientist on a newly funded grant from the National Institutes of Health awarded to Drs Justin Werfel and Radhika Nagpal of Harvard University. This proposal will bring in more than 4500k over the next five years. The project explores the behavioral interactions between termites and soils, with the goal of being able to program semi-autonomous robot swarms to do construction.

I am a subcontracting scientist on a newly funded grant from the National Science Foundation awarded to Dr Andrea Surovek of the South Dakota School of Mines. The project is concerned with mechanical engineering of termite inspired structures. My role is to serve as a scientific advisor and to aid in the development of international research experiences for undergraduates.

I was a facilitator for the October 2014 visit by several students in Landscape Architecture (under the direction of Drs Margaret Bryant and Matt Pottieger) to the Cheetah Conservation Fund (CCF) in northern Namibia. This was to further the ongoing Memorandum of Understanding between ESF, Ben Gurion University, the National Museum of Namibia and the Cheetah Conservation Fund in Namibia.

I continue filming and production of an online biophysical field methods course (shot on location in Namibia) with Prof Berry Pinshow of Ben Gurion University.

While in Namibia in April, I began negotiations with the Gobabeb Research and Training Centre (Namib desert), the Cheetah Conservation Fund (CCF) and the Polytechnic of Namibia for a research education consortium in cooperation with several international partners, including Harvard University, Ben Gurion University, Nottingham Trent University and the South Dakota School of Mines.

I have served as chair of the newly established standing Committee on Technology. We continue our work. This last year, we offered six Brown-Bag Workshops for ESF faculty and staff.

As part of my chairmanship of the Technology Committee, I serve as a member of the Executive Committee of Faculty Governance.

I served on the planning committee for the February 2015 Conversations in the Disciplines: Depolarizing the Environment. I was instrumental in recruiting our national speaker, Dr Steven Hayward.

Alexander Weir

Students: This year I contributed 6 lectures to the required EFB 210 Diversity of Life I and to both sections of the required EFB 202 Ecological Monitoring and Biodiversity Assessment at CLBS (8 full days of teaching). I taught my regular Mycology offering (55 students) and offered an International Field Experience trip to Ireland in May (7 students). I have continued to serve students in my capacity as Director of the Cranberry Lake Biological Station (until 11/14), answering many questions and queries throughout the year and dealing with programming, informational meetings, registration, budgeting, and day to day administration of the Station. I also had one Honors student complete requirements during this academic year.

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 2014, with similar enrollments expected for the summer 2015 program. Both the teaching and research programs were successful with almost 200 undergraduate students present at the Station during the summer of 2014, and research groups from Indiana State University, Cornell University as well as our own Grober Research Fellow (graduate) in residence. Since my departure as Director of CLBS in November 2014 I have worked hard to try to ensure a successful transition for the incoming Director. I have also served in an advisor capacity to the CLBS Advisory Committee. I have also continued to serve the department as Curator of the Herbaria and have (along with Rebecca Rundell) hired students to help re-mount some of the specimens damaged during the Illick Hall flood on 1st February 2014.

Self: Lauren Goldmann successfully defended her PhD thesis and we are expecting to send off 4 additional manuscripts (2 already published) from her thesis within the coming months. I have also continued my collaborative work with Professor Walter Rossi (Universita dell L’Aquila, Italy) on new
species of Laboulbeniales on Gerridae (Heteroptera) – a novel host group for Laboulbeniales. I am also continuing with working on a generic overview of all known Laboulbeniales (150 genera, 2000 species) and have had undergraduate, Alex Kuhn, photographing my collection in preparation for this. Alex was also employed in the lab to continue digitization of our macrofungal collection through our sub-award with the New York Botanic Garden. We have now completed digitization of more than 8,000 specimens in the ESF Fungal Herbarium. The corresponding microfungi digitization grant, also a sub-award through the New York Botanic Garden, has just been funded and I have a new graduate (PhD) student, Patty Kaishian, coming in this summer to start work on this. Alex Kuhn, graduated in May 2015, and has just accepted a position as a data curator (based at the Illinois Natural History Survey) funded through this microfungi grant. Both Matt DaRin and Tiffany Deater continue to make progress in their respective PhD studies. Tiffany was also awarded the Grober graduate award this year and will be working at the Cranberry Lake Biological Station. I was also invited to serve on the Biodiversity and Systematics panel at NSF this past spring (April 2015).

Christopher M. Whipps

Students: This year, I was pleased to help guide Will Helenbrook to the completion of his PhD (co-advised with Shields). Will landed a job as program coordinator for the School for Field Studies in Peru and is thriving there. He’s also had 2 more papers accepted in that time and continues to finish up publishing the work from his PhD. I helped to get support from the DEC to fund the work of my student Katrina on a virus of wild turkeys. Katrina can take credit for a lot of this effort, and the funding has allowed her to process >3000 samples and support her in her final semester this fall. Two students won awards at the Spotlight for Research this year: Carolyn Chang (1st place) and Kelly Huffman, co-advised with J. Farrell, (2nd place). I also serve on other graduate student committees and act as informal advisor to other students as needed. My door is always open to them. I advise >20 undergraduate students, many of which are pre-health, and from several majors (Biotech, Environmental Biology, Conservation Biology, Wildlife Biology). I help organize internships, research courses, and apprenticeships. Some of these students are working with me directly, but many are finding opportunities outside ESF and that still requires I coordinate with supervisors all over the map. For example, I had a student doing an internship in Thailand this last summer. I am a mentor in the CSTEP program with 2 advisees there as well (one is also my academic advisee). I am the faculty advisor for the Equestrian Club and have had several members of that group working in my lab over the years. I had one honors student this year (Brooke Clemons) who worked amazingly well on a challenging project this year. She is heading to a fully funded graduate program in laboratory sciences. Along with the direct mentoring and advising is helping these students in applying for internships, jobs, and graduate school. This year I wrote approximately 27 letters of recommendation. I didn’t teach my 2 main classes this year because I was on sabbatical, but I did lead a new seminar on fish health. I also spent part of my sabbatical developing new resources for my classes. In particular, I plan to incorporate more case studies into my teaching. I’ve tested this a few times and students tend to enjoy them.

Department/College: This past summer, I tried something new. I taught a week long biotechnology summer course to high school students. This was a great opportunity to highlight what kinds of things we do at ESF, and I was able to talk about the different research on campus as the students learned the basics of molecular biology. As part of this course, we had a zebrafish toxicology lab, which brings up another key contribution from this year, which was helping to get CIRTAS up and running. We spent a lot of time on helping with this and now have a fully operational zebrafish lab for use in my own research, but also has potential for teaching. As the Director of the Center for Applied Microbiology, I allocated funding to support faculty and student projects in a variety of areas. I also supported student travel awards to present on microbiology related projects. The Center purchased equipment to assist with the set up of Hyatt Green’s new laboratory, and for the microbiology teaching lab. At the college level, I chair the Institutional Animal Care and Use Committee which is currently overseeing 36 protocols on various vertebrate species (snakes, frogs, salamanders, birds, fish, mole, etc.). The diversity makes for an interesting challenge, but most of the time goes toward the initial review and continuing review of
every protocol which is required annually. In addition, the committee conducts facility inspections, oversees training, maintains records, reports to federal agencies, handles any concerns or requests, and so on. In my own evaluation, I believe this committee is running very well given the workload, and is helpful in providing recommendations to faculty so that their research maintains compliance with federal standards. In EFB, I serve on the departmental curriculum committee (CCAC) and have been involved in program assessment for the last several years. Working with members of the Biotechnology major, I took the lead on completing the BTC program assessment which included gathering data, data analysis, and writing the final report.

Self: In preparation for the Annual Fish Health meeting this summer in Ithaca, I have served on the local organizing committee for the meeting. It has been rewarding to work with colleagues in this process and strengthen connections between ESF and Cornell fish health researchers in the process. John Farrell and I have been collaborating on a Northern Pike genetics project and we recently connected with researchers at the University of Victoria who have been working on a similar problem. Their interest lies in the genetics and techniques, whereas we’re more focused only on sex determining genes and evaluating effects in the lab and wild. It turned out that we have the fish and a method to determine gender (as fish get older), and they have the genetics expertise. As such, we’ve planned a collaboration which could be very productive. I’m really looking forward to seeing how this works as we collect fish this summer. I was on sabbatical this Spring and one goal was to complete a taxonomic synopsis of a genus of myxosporean parasites which required scouring the literature as far back as the 1800’s and gathering some obscure papers that were potentially on the verge of being lost to science. I completed this paper, which has now been accepted with minor revisions. I’ve also focused on developing new resources for my classes and developing a new seminar on population genetics, which I’m excited to teach this fall.
Appendix C. Faculty Publications (published or in press; papers in review or accepted and waiting revision not included)

Books

Refereed Publications

John D. Castello

Stewart A.W. Diemont

Martin Dovciak

John M. Farrell


Danilo D. Fernando


Jacqueline L. Frair

James P. Gibbs

Thomas R. Horton

Donald J. Leopold

Karin E. Limburg

Mark V. Lomolino

Lee A. Newman

Dylan Parry

Gordon Paterson
William A. Powell

Neil H. Ringler

Rebecca J. Rundell

Kimberly L. Schulz

Stephen A. Teale

J. Scott Turner
Turner, J. S. 2015. Homeostasis is the key to the intelligent building. Intelligent Buildings International: 1-5.

Christopher M. Whipps

Book Chapters – refereed

Journal Articles - refereed
Appendix D. Papers Submitted, In Review, Accepted and Waiting Revision, and Pending Decision

Jonathan B. Cohen

Stewart A.W. Diemont

Martin Dovciak

Shannon L. Farrell
Danilo D. Fernando

Melissa Fierke

Elizabeth Folta

Hyatt C. Green

Donald J. Leopold

Karin E. Limburg
Lee A. Newman

Stacy A. McNulty

Dylan Parry

Gordon Paterson
McLeod AM., Paterson G., Drouillard KG. And Haffner GD. PCB food web dynamics quantify nutrient and energy flow in aquatic ecosystems. Environmental Science & Technology, in review.

Rebecca J. Rundell

Kimberly L. Schulz
Figary and K.L. Schulz. Surplus and spines: Impacts of Cercopagis pengoi, an invasive predatory zooplankton, may be due to a lack of limiting resources and pre-adaptation of a likely prey species. Hydrobiologia; in revision

J. Scott Turner
Alex Weir
Goldmann, L. and Weir, A. Molecular analysis of *Chantransiopsis* and *Tetrameronycha*, provides further evidence of asexuality, and potential recognition of a new order within the Laboulbeniomycetes. *Mycologia*, submitted.

Christopher M. Whipps

Foelker, C.J., Fierke, M.K., Standley, C.R., Parry, D., Whipps, C.M. Host tissue identification for cryptic hymenopteran parasitoids associated with *Sirex noctilio*, the non-native European woodwasp, in review.


Whipps, C. M., Zhao, Y. Synopsis of the species of the genus *Sphaeromyxa* Thélohan, 1892 (Myxosporea: Bivalvulida: Variisporina: Sphaeromyxidae). *Systematic Parasitology*, accepted with revisions.

Appendix E. Papers/Posters Presented at Science Meetings

Jonathan B. Cohen
Althouse MA, Cohen JB. November 2014. Effects of Disturbance on Staging Roseate Terns (*Sterna dougallii*) in the Cape Cod National Seashore. Paper. The 38th annual meeting of The Waterbird Society and the 13th Congress for the Study and Conservation of the Birds in Mexico (CECAM), La Paz, Baja California Sur, Mexico

**Stewart A.W. Diemont**


**Martin Dovciak**


**John M. Farrell**


Farrell, J. M. 2014. Getting fisheries off to a good start: Why there is a need to address early life processes in applied fisheries management. 38th Annual Larval Fish Conference (Plenary Presentation), American Fisheries Society 144th Annual Meeting, Quebec City, Quebec, Canada.


Foubert, A., M. Mingelbier, J. M. Farrell, and F. Lecomte. 2014. Estimating Connectivity Between Spawning and Nursery Habitats of Northern Pike to Identify the Most Rewarding Habitat to Protect (St. Lawrence River, Canada), American Fisheries Society 144th Annual Meeting, Quebec City, Quebec, Canada.


**Shannon L. Farrell**

**Danilo D. Fernando**

Melissa K. Fierke


Elizabeth Folta


Jacqueline L. Ffair
Documenting moose population size and distribution across public and private lands in the Adirondacks,
delivered by coauthor Paul Schuette:
Apr 2015, The Northeast Fish & Wildlife Conference, Newport, Rhode Island.
Deer impacts on forest regeneration at spatial scales relevant to management decisions (delivered by coauthor Mark Lesser), Apr 2015, The Northeast Fish & Wildlife Conference, Newport, Rhode Island.

James P. Gibbs

Thomas R. Horton

Donald J. Leopold

Karin E. Limburg
Limburg, K.E. Fish tales through fish heads. Poster presented at the 5th International Otolith Symposium, October, Mallorca, Spain.
Limburg, K.E., T. Evans, and A. Lochet. Shades of Sophie Dove? The potential of eye lens chemistry as a complementary archive of environmentally relevant information. Paper presented at the 5th International Otolith Symposium, October, Mallorca, Spain.
Limburg, K.E., and C. Olson. Paleo- and modern salinity and temperatures as recorded by Baltic Sea cod Gadus morhua over millennia. Poster presented at the 5th International Otolith Symposium, October, Mallorca, Spain.

Mark V. Lomolino
Gregory M. McGee
McGee, G., N. Abrams and E. Hogan. Integrating Laboratory Sciences, Communication Arts and Technology in the Introductory Post-Secondary Teaching Lab (10/24/14), Annual Meeting of the Upstate New York Science Librarians Association, Syracuse, NY.

Stacy A. McNulty

Lee A. Newman

Student Presentations


Dylan Parry
*Invited Oral*

Introduced tachinids explain decline of browntail moth in North America. Elkinton, J., D. Parry, G. Boettner, XXIV IUFRO World Congress 2014, Salt Lake City, UT, United States, 5-11 October 2014

Climate, adaptation, and the northward range expansion of gypsy moth. Parry, D., K. Dattelbaum, D. Johnson. XXIV IUFRO World Congress 2014, Salt Lake City, UT, United States, 5-11 October 2014

Other Submissions


Graduate Student Posters and Talks


Foelker CJ, Parry D, Whipps CM, Fierke MK. Spatial co-colonization of the European woodwasp (Sirex noctilio) and native mortality agents at a pine plantation in the Adirondacks. ESA annual meeting. Portland, OR. November 2014. (Oral)

Gordon Paterson

William A. Powell


Transgenic American chestnut trees for restoration to the forest (not field). 6/6/15. Meeting with the Environmental Protection Agency (EPA) Washington DC


Biotechnology Literacy Project. Gainesville, FL

Two invited presentations; “After 110 years of fighting the blight, plantable resistant American chestnut trees have been produced” and “Are we ready to move forward with a regulatory test case?” Forest Health Initiative Annual meeting. We hosted the meeting at SUNY-ESF and gave lab and field tours. Syracuse, NY

Transgenic American Chestnut, a New Paradigm for Restoration. Invited speaker by Ron Sederoff. Departmental seminar series. 9/24/14. Raleigh, NC


Return of the King: The development of a blight resistant American chestnut tree. 1/16/15. Keynote Speaker Invitation for DNR research symposium. Cornell University, Ithaca, NY

Transgenic American Chestnut, a New Paradigm for Restoration. 3/9/15. Teleconference with the USDA APHIS BRS, EPA, and the FDA. Preparation for submitting regulatory review dossier. Syracuse, NY


Where there be mountains, there be chestnuts. Invited Departmental Seminar speaker. SUNY New Paltz, NY

Neil H. Ringler


Rebecca J. Rundell


Kimberly L. Schulz


Stephen A. Teale


Hansen, L, J. Wickham, S. Pocock and S. Teale. Discrimination of Anoplophora glabripennis (Coleoptera: Cerambycidae) host and non-host tree species by antennally active volatiles. 26th USDA Interagency Research Forum on Invasive Species. Annapolis, MD, January, 2015


J. Scott Turner

Christopher M. Whipps

Student presentations

April 15-16, 2015. SUNY-ESF Spotlight on Student Research, Syracuse, NY. Epidemiology and Genetic Analysis of Lymphoproliferative Disease Virus (LPDV) in New York State. Alger, K., Bunting, E., Schuler, K., Whipps, C.M. [Poster]

April 15-16, 2015. SUNY-ESF Spotlight on Research, Syracuse, NY. Strain typing Mycobacterium marinum from outbreaks at zebrafish research facilities. Clemons, B.M., Chang, C.T., Whippers, C.M. [Poster]


December 13-18, 2014. 7th Aquatic Models of Human Disease Conference, Austin, TX. Investigating the effectiveness of disinfectant treatments for inhibiting the growth of Mycobacterium spp. isolated from laboratory zebrafish (Danio rerio). Chang, C.T., Whippers, C.M. [Poster]


Appendix F. Faculty Grants
(active during reporting period)

Jonathan B. Cohen

Stewart A.W. Diemont
Diemont, S.A.W. and L. Quackenbush. EAGER: Understanding the potential role of Mayan traditional ecological knowledge for ecological engineering of forest restoration in Mexico. National Science Foundation. $100,000 (current year $5,000), 5/1/12-12/31/15.
Klossner, R. (PI), S.A.W. Diemont S.A.W. City of Syracuse creekwalk landscaping design. Spanfelner Fund/Central New York Community Foundation. $50,000, 12/1/12-12/1/16.
Advisees working with me who have received research support directly:

Martín Dovčiak
NYSERDA; $200,000; 2015-2016. “Effects of acidic deposition and soil acidification on forest understory plant biodiversity in the Adirondack Mountains”. T. Sullivan (PI), M. Dovčiak, G. Lawrence, T. McDonnell ($87,001 to M. Dovčiak.
Northeastern States Research Cooperative. “Global change fingerprints in montane boreal forests: Implications for biodiversity and management of the northeastern protected areas”. M. Dovčiak (PI), C. Beier, G. Lawrence, J. Battles. $89,497. 8/2012-8/2015.
SUNY ESF Seed Grant Program. “Effects of mosses on the chemistry of tree seedlings and their impacts on forest regeneration” M. Dovčiak (PI), R. Kimermer, C. Driscoll. $6,800. 4/2014-12/2015.

John M. Farrell

Shannon L. Farrell

Danilo D. Fernando
Genetic, Reproductive and Habitat Analysis to Support American Hart’s-Tongue Fern Reintroduction and Restoration in the Great Lakes Region. USF&WS-GLRIP, $99,600. May 1, 2012 to June 30, 2014. PI: DD Fernando, Co-PI: DJ Leopold. This project has been extended to June 30, 2015 to cover the reintroduction aspect of the project.


Melissa K. Fierke

Elizabeth Folta
SUNY ESF Seed Grant, One Health for All Visitors? Exploring the Effects of One Health Messaging in a New York Park; $8,000; 6/2013-1/2015; Laura Rickard and Elizabeth Folta.

Jacqueline L. Frair
Grants as Lead PI
NY State Department of Environmental Conservation, “Wildlife research and management support”, $3,359,864 total 2013-2018, $832,761 for 2014-15. PI: J. Frair. Provides support to 8 different research projects (PI’s Dovciak, Cohen, Whipps and Frair), and I manage each as a sub-award under the main grant.
Grants directly supporting J. Frair listed below:

**Grants as co-PI**


**James P. Gibbs**


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

**Thomas R. Horton**


**Robin W. Kimmerer**


United States Department of Agriculture, Multicultural Scholarship Program, $200,000. Supports 5 undergraduates, May 2012-May 2016.
Tribes and Climate Change: engaging northeastern indigenous nations. US Forest Service $60,000 2011-2015
US Forest Service, Native Women’s Climate Change Summit, $30,000 May 2015-May 2018
National Science Foundation, participating partner with Dr. Jay Johnson at Kansas University, FIRST: Facilitating Indigenous Research, Science and Technology Research Coordination Network grant $800,000

Donald J. Leopold
Honeywell International Inc., Onondaga Lake watershed 1-8: Plant studies; $37,966; August 2014 to August 2015; D.J. Leopold.
Honeywell International Inc., Onondaga Lake and adjacent lands: Habitat assessment and restoration, vegetation issues; $14,956; January 2014 to December 2015; D.J. Leopold.
Anchor QEA, LLC, Grass River Habitat Assessment and Reconstruction – Vegetation Issues; $9,956; February to December 2014; D.J. Leopold.
Environmental Protection Agency, Improving vegetation indicators of wetland condition; $172,070; Oct. 2013 to September 2015; D.J. Evans and D.J. Leopold.
NYS-DEC, New York Natural Heritage Program; $3,273,393; July 2012 to June 2017; D.J. Leopold.
Environmental Protection Agency; Development of wetland assessment protocols; $499,847; Oct. 2012 to March 2015, D.J. Leopold, D.J. Evans, and A. Feldmann.
NYS Consolidated Funding, SUNY-ESF Gateway Building green roof; $413,000; January 2011 to December 2014; T. Toland, M. Kelleher, D. Daley, and D.J. Leopold.
Honeywell, Inc., Restoration of inland salt marsh, marl fen, and select woody species: Short-term goals of the native species component of the SWRS demonstration plan; $908,754; January 2008 to August 2014; D.J. Leopold.
National Science Foundation, Environmental scholars: A scholarship program in Environmental Chemistry, Biology, and Engineering; $600,000; March 2009 to February 2014; K. Donaghy, D.J. Leopold, J.P. Hassett, J.M. Hassett, and J.E. Turbeville.
NYS-DEC, Invasive plants program coordinator; $213,608; January 2010 to June 2016; D.J. Leopold.
USFWS (GLRI), Production of genetically diverse American hart’s-tongue fern for introduction or reintroduction in the Great Lakes Region, $99,682; July 2011 to September 2014; D.D. Fernando and D.J. Leopold.
USFWS (GLRI), Control of Japanese knotweed (Fallopia japonica var. japonica) on Leedy’s rosaroot (Rhodiola integrifolia subsp. leedyi), a federally-threatened plant; $69,902; August 2012 to May 2013; D.J. Leopold and J.P. Gibbs.
USFWS (GLRI), Restoring critical habitat, mitigating multiple threats, and evaluating population statuses for bog turtle, eastern massasauga rattlesnake, and Houghton's goldenrod co-occurring in a single..., August 2012 to May 2015, D.J. Leopold and J.P. Gibbs.
USDA Forest Service-NSRC, Genetic diversity, morphometrics, and habitat analysis of a rare fern in the Northern Forests: Implications for management and long-term survival; $82,876; September 2011 to August 2013, with one year extension. D.D. Fernando, D.J. Leopold and S.W. Bailey.
Karin E. Limburg

<table>
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<tr>
<th>Title</th>
<th>Sponsor</th>
<th>Start</th>
<th>End</th>
<th>Budget</th>
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<tr>
<td>Mohawk River Basin Action Agenda (w/Ringler)</td>
<td>NYSDEC</td>
<td>9/1/14</td>
<td>3/31/17</td>
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<td>Collaborative Research: Consequences of sub-lethal hypoxia exposure for fishes: a trans-Atlantic comparison</td>
<td>NSF</td>
<td>9/1/14</td>
<td>8/31/17</td>
<td>$191,682 (of total $283,564 to ESF)</td>
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<td>Determining if eye lenses can be used to understand the origin and life history of adult lamprey</td>
<td>GLFC</td>
<td>10/1/13</td>
<td>9/30/15</td>
<td>$10,000</td>
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<td>Natal origins of humpback chub aggregations determined by otolith chemistry</td>
<td>USGS</td>
<td>7/1/13</td>
<td>1/14/16</td>
<td>$112,670</td>
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<td>Assessing silver eels in Hudson River tributaries</td>
<td>HRF</td>
<td>6/1/13</td>
<td>2/29/16</td>
<td>$134,838</td>
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<td>Hudson River shad recovery plan</td>
<td>Riverkeeper</td>
<td>4/1/11</td>
<td>6/30/15</td>
<td>$99,395</td>
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<td>Temporal Changes in Spawning of the Signature Fishes of the Hudson River Estuary</td>
<td>WRI</td>
<td>5/01/15</td>
<td>4/30/16</td>
<td>$10,000</td>
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Mark V. Lomolino

PI - NSF – Of Mice and Mammoths: Toward a General Theory of Body Size Across Space and Time requested $420,681, received partial funding $100,000 for initial period of grant; August 2010 to 2015.

Gregory G. McGee

National Science Foundation, “Integrated Knowledge-Based Experiences for First-Year Biology and Chemistry Laboratories,” (with N. Abrams (PI), E. Hogan and V. Luzadis), $193,290 total, $64,430 current year, 6/12-5/15, extended to 5/16.


Grants obtained by my graduate students:
Geoffrey Griffiths, Garden Club of America, Ecological Restoration Fellowship, $8000
Geoffrey Griffiths, Edna Bailey Sussman Foundation, $6370

Stacy A. McNulty


Wetlands in the Adirondack Park: Phase II. $865,848, $340,000 (ESF portion $62,000). 1/1/12 – 12/31/15.

Beier, C., S. McNulty, P. Hirsch and A. Parker. New York State Department of Environmental Conservation, Application of GIS to Resource Inventory for Unit Management Planning, $1,300,000, $125,313, 6/1/03 – 8/31/15.


Relationship of native amphibians to the distribution and prevalence of the amphibian chytrid fungus (Batrachochytrium dendrobatidis) and recreation in Adirondack Park. $1,915. 4/24/15 – 9/1/16.


Lee A. Newman
US Department of Agriculture; Nanoparticle Contamination of Agricultural Crop Species; $1,498,080; Mar 2011 to Mar 2016; JC White, X. Ma, L Newman and B. Xing.

National Aeronautics and Space Administration: Development of Hyperspectral Imaging of Plants to Detect Contamination; $355,509; March 2011 to Dec 2015; current year $48,161; L Newman.

Gifford Foundation; Construction Funds for Horticultural Therapy; $1000; June 2013 to Sept 2015; L. Newman.

American Legion Ladies Auxillary; Funds for Horticultural Therapy; $2500; May 2013 to open ended; L. Newman.

USDA McIntire-Stennis Program through ESF; Understanding the Role of Select Endophytic Bacteria in Enhanced Growth and Disease Resistance; $53,847, current year $22,673; June 2014 to August 2016; L. Newman.

ESF Seed Grant; Isolation of Genetic Promoters to Increase Production of Plant-Based Biopharmaceuticals; $7,000; April 2015 to April 2016; L. Newman.

FMC; Elucidating the Mechanisms of Biopesticide Induced Plant Pathogen Resistance; $40,000; January 2015 to September 2015; L. Newman.

Dylan Parry


2015-2016 D.Parry and N. Schopmann. Initial Inventory of the Moths of Plum Island. NY NHP $6400.

2015 D. Parry and K. Wallin. Quantifying the Response of Forest Insect Communities and Their Natural Enemies to Simulated Ice Storm Damage. ESF Seed Grant $7750.


2012-2015. D. Parry and P.C. Tobin. Climate Controlled Reproductive Asynchrony and Mating Success in Gypsy Moth Populations. USDA Forest Service. $38,000
William A. Powell
SUNY-RF Seed grant program, Protecting Trees from Diseases with Bacillus amyloliquefaciens. $8,000 (5/13/13-12/31/14). PI with Dr. Maynard and Andy Newhouse Co-PIs.
The New York Chapter of The American Chestnut Foundation. Getting Events in the Ground and Tested. $210,000 (8/1/12-7/31/15). Co-PI with Dr. Maynard as PI.
USDA-Biotechnology Risk Assessment Grant program (BRAG), Evaluating Environmental Impacts Of Maturing Transgenic American Chestnut Trees Relative To Chestnut Trees Produced By Conventional Breeding. $500,000 (9/1/12-8/31/14 – no cost extension to 8/31/15). PI with co-PIs, Dr. Maynard, Dr. Parry, Dr. Briggs, Dr. Nowak, and Dr Tschaplinski (ORNL).
Forest Health Initiative. Phase II: Supplemental - Transgenic American Chestnut leaf assays. $30,000 (1/1/15 – 12/31/15) PI with Dr. Maynard Co-PI.
USDA IR-4 project. Regulatory studies for the transgenic American chestnut. $29,000 (5/1/15-4/30/16). PI.
Crowd Funding, 10,000 Chestnut Challenge. $113,000 to date with more donations possible. PI with Dr. Maynard as co-PI.
The American Chestnut Foundation, Stanback Grant The American chestnut research. $50,000 (7/1/14-6/30/15). PI with Dr. Maynard as co-PI. (possible renewals for 5 years, total $250,000).
New York State legislation line item. American chestnut research and restoration project. $100,000 (7/1/15 – 6/30/16, possibly refunded each year). PI with Dr. Maynard as co-PI.

Neil H. Ringler
National Science Foundation, Collaborative Research: Impacts of In-Stream Restoration on Hydrological, Chemical and Biological heterogeneity in the Hyporheic Zone, Co-PI; $275,335; 01/01/2010 – 12/31/2015.
National Science Foundation, Technology Enhancement of Hot Water Extraction, PI; $599,822; 09/01/2012 – 08/31/2015.
Honeywell, Inc., Onondaga Lake Biological Assessment and Monitoring, PI; $439,085; 07/01/2013 – 06/30/2015.
NYS Department of Environmental Conservation, Fish and Macroinvertebrate Concordance: Validation of a NYS Fish Index of Biotic Integrity and its Relationship to Macroinvertebrate Metrics, PI; $75,000; 09/01/2013 – 10/31/2015.
NYS Sea Grant, Atlantic Salmon Restoration in Great Lakes Tributaries: An Ecological and Bioenergetics Approach, PI; $250,000; 02/01/2014 – 01/31/2016.
US Geological Survey, Restoration of Lake Ontario Native Fish Species, PI; $117,409; 07/30/2014 – 08/31/2015.
NYS Department of Environmental Conservation, Determining the Provenance and Life Histories of Blueback Herring in the Mohawk River; $261,072; 04/01/2014 – 03/31/2017.
NYS Department of Environmental Conservation, Low Gradient Stream IBI, PI; $80,000; 05/16/2015 – 03/31/2016.
NYS Department of Environmental Conservation, Internship in Water and Stream Biomonitoring, PI; $7,000; 04/01/2015 – 12/31/2015

Rebecca J. Rundell

Kimberly L. Schulz
Research Foundation of SUNY ESF, SUNY Passport; Interactive Effects of Climate Change and Invasive Invertebrates on the Great Lakes; Schulz, K.L.; $4,500; 5/15/2015-8/31/2015

Graduate Student Led Grants (on which I am PI of record; other graduate student grants not listed)
NOAA; National Estuarine Research Reserve Fellowship (Estuarine Reserves Division, Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA; Andrew Brainard and K.L. Schulz; $60,000; May 2012-May 2015.

Stephen A. Teale
USDA APHIS “Development of chemical attractants and improved trap designs to facilitate detection of exotic Cerambycidae” PIs: Millar, J.G., L. Hanks & S. Teale $139,897 01-SEP-2013 To 31-AUG-2014 ($30,586 to SUNY-ESF).
Alphawood Foundation, PI: Teale, S. “Asian Longhorn Beetle Research at SUNY-ESF” $ 92,137; FEB-2014 To FEB-2016
Alphawood Foundation, PI: Teale, S. “Asian Longhorn Beetle Research at SUNY-ESF” $ 95,078; MAY-2015 To MAY-2017
Helmsley Trust/International Community Foundation, PI: C. Causton. ~$800,000/3 yr. $85,061 to ESF in year 1 (15-OCT-2013 To 14-SEP-2014).
Helmsley Trust/International Community Foundation, PI: C. Causton. ~$800,000/3 yr. $81,693 to ESF in year 1 (SEPT-2014 To NOV-2015).

J. Scott Turner

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<tr>
<th>Source</th>
<th>Title</th>
<th>Amount</th>
<th>Current year</th>
<th>Award period</th>
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<tr>
<td>Human Frontiers Science</td>
<td>From swarm intelligence to living buildings, Novel concepts of managing internal climates</td>
<td>$1,350,000</td>
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<td>New York State Energy Research &amp; Development Authority (through contract with Terrapin Bright Green)</td>
<td>Proof of concept: A termite-inspired “humidity sponge.”</td>
<td>$50,000</td>
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<td>May 2014 to November 2014 (ongoing)</td>
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<td>National Institutes of Health</td>
<td>Modeling termite construction behavior</td>
<td>$594,343</td>
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<td>September 2014 to August 2019</td>
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<td>National Science Foundation</td>
<td>Biomimicry in Structural Topology: Manifesting Adaptable and Integrated Structural Form through Agent Based Modeling of Macrotermes Mounds</td>
<td>$449,384</td>
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<td>August 2015 to August 2018</td>
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**Alexander Weir**
National Science Foundation - Macrafungi Collections Consortium - Grants to Advance Digitization of Biological Collections, Total Amount – Unknown, ESF Portion - $34,000

**Christopher M. Whipps**

Whipps CM, Fierke MK, Parry D. USDA-CREES/McIntire-Stennis Program (05/01/13-09/30/15) - $52,000. Development of Molecular Techniques to Inform Management of Sirex noctilio, an Introduced Woodwasp. (10% AY) Role: Lead development of molecular biology techniques in parasitoid insects.


Whipps CM. New York DEC (04/01/14-03/31/16) $132,222. Increasing Capacity for Genetic Analysis at SUNY ESF

Whipps CM, Beal, RE. Syracuse City School District – Smart Scholars Program (07/01/14-08/31/14). $6,214. Smart Scholars Biotechnology Camp Week.

Appendix G. Service to Department, College, and University

John D. Castello
Associate Chair
Chair, EFB Promotion/Tenure Committee 2010-2015.
Coordinator for Forest Health Major,
Supervisor for Joanne Rappleyea (EFB secretary).
Co-organized EFB spring awards ceremony with S. Polimino.

Jonathan B. Cohen
Faculty advisor for student chapter of The Wildlife Society
CCAC
GPAC, co-chair
IACUC
Committee on Curriculum
Reviewer for Sussman Internship Applications

Stewart A.W. Diemont
Assessment Committee, Environmental Biology Undergraduate Program
Graduate Program in Environmental Science, Ecosystem Restoration, Area Leader
Center for Native People and the Environment, Advisory Board
Faculty Governance Awards Committee
Faculty Governance Library Committee
Strategic Planning Committee, Relationships between Humans and the Environment
Adviser, Society for Ecological Restoration Club

Martin Dovciak
Robert Burgess Graduate Scholarship in Ecology, Chair
Graduate Program Advisory Committee, member
Scientist-in-Residence and Roosevelt Forest Ecologist, Roosevelt Wild Life Station
Ad hoc reviewer for the Fulbright Program at SUNY ESF
CSTEP program mentor
Graduate Program in Environmental Science–Ecosystem Restoration Program, member
Graduate Program in Environmental Science–Environmental Monitoring and Modeling Program, member
Beech Working Group, member
Center for Urban Environment, member

John M. Farrell
Director, TIBS
Served as supervisor for 25 employees working at TIBS over the summer including 5 staff, 9 undergraduates, 7 graduate students
Leadership for development at TIBS
Hosted Alumni event at TIBS
Served on Promotion and Tenure Committee
Mentored an Assistant Professor in EFB
Hosted EFB River Day retreat event
Advised an undergraduate student for an EFB Honors Thesis Project.
Assisted ESF Development Office with numerous visits for supporters of ESF
Shannon L. Farrell
CLBS committee
Dept awards:
  Baldassarre Award, coordinator 2014-2015
  Chamberlain Award, coordinator 2014-2015
  Roy Glahn Award, coordinator 2014-2015
  Burgess Award, committee member Spring 2014
Open House/ Accepted Student Reception June 6
Coordinated birding for the Lake Onondaga Bioblitz in Sept
Participated in Hammersley Bioblitz summer 2014
IQAS committee; and a side project of this committee included College-Wide Gen Ed Assessment for Middle States.
Fink Fellowship Committee Fall 2013-present.
Asked to serve on strategic planning Undergraduate Experience Committee
Birding Club faculty advisor
CSTEP Mentor
Worked with Frank Moses (while he was employed at ESF), Alumni Office, to get small grant from Audubon society for construction of Chimney Swift Tower for placement on campus and further fundraising campaign to fund signage and undergraduate research associated with tower. We were awarded funding to build tower ($1500) but fundraising campaign and construction and placement have been temporarily delayed but plans to move forward are in progress.

Danilo D. Fernando
Director, EFB Graduate Program
Member, Graduate Program Advisory Committee
Chair, Joseph and Ruth Hasenstab Memorial Fellowship Award Committee
EFB New Graduate Student Orientation, August 22, 2014
Open House & Accepted Student Reception, April 11, 2015
Member, Graduate Council
Northeast Graduate School Virtual Fair, EFB Representative, April 22, 2015

Melissa K. Fierke
Co-chair Graduate Program Advisory Committee
Scholarship committees:
  Roskin undergraduate award to outstanding female senior
  Chun Wang to outstanding female senior undergraduate award
  Outstanding PhD student award
  Lanier, Stegeman and Simeone Endowed Entomology Fellowships
Secretary, Faculty Governance
Faculty Governance Executive Committee
Chair, Bicycle Safety Committee – founded in January 2013 to engage stakeholders at ESF, SU and the City of Syracuse to increase cycling safety for ESF commuters
Sustainability Committee
Athletics Committee
First Year Experience – Meetings and participated in the Freshmen Learning Community Retreat in September 2014
Graduate Assistant Colloquium on Teaching and Learning Blackboard training
Development of a college biology course, in collaboration with Outreach and local high school teachers and administrators, now offered in 3 local high schools
December Senior Soiree
Science Fair Judge for ESF Outreach: Middle School and ESF in the High School
Conversations in the Discipline grant: P. Hirsch, M.K. Fierke, S. Turner, P. Vidon, S. Weiter. $5,000.
        Depolarizing the Environment: Thinking broadly about science, policy and politics.

Elizabeth Folta
Environmental Education & Interpretation Program Coordinator
EFB Course and Curriculum Assessment Committee Member
Help with departmental open house: fall
Finished redesigning the Natural History & Interpretation assessment strategy to make it easier for future assessments of the major.
Wrote assessment report for the Natural History and Interpretation major.
Faculty advisor to the INTERP club (student environmental interpretation club)
Curriculum group participant of Environmental Science area Environmental Communication and Participatory Processes.
EFB representative to the Recreation Resources and Protected Area Management minor.
Assisted with the data evaluation for the General Education assessment.
Recruited volunteers for the Presidential Inauguration Bioblitz at Onondaga Lake.

Jacqueline L. Frair
Associate Director, Roosevelt Wild Life Station
Led development of strategic plan for the station during fall semester, coordinated outside and internal input, helped organize strategic planning meeting with the Honorary Advisory Council, and was lead author on the plan.
Organized monthly meetings in the spring semester with Scientists-in-Residence to put the strategic plan into motion, and helped present the plan to ESF administration.
Worked with the ESF College Foundation to raise funds for Boone and Crockett Club endowment, $376,000 secured to date.
Delivered first externally-sponsored RWLS field course at the Lucky Star Ranch.
Assisted with other fundraising and outreach efforts.
Roosevelt Wildlife Collection
Supervised curator, Ron Giegerich.
Curriculum Coordinator for Wildlife Science major
Worked with Jonathan Cohen and Shannon Farrell to complete the first-ever full assessment of the wildlife major and to devise and deliver an exit exam to graduating seniors.
Science Advisor to NY State Fish and Wildlife Management Advisory Board (President’s representative)

James P. Gibbs
Director, Roosevelt Wild Life Station
Associate Chair
Member, Promotion and Tenure Committee

Hyatt C. Green
Poster Judge—Spotlight on Student Research
Faculty Committee Member, ESF Technology Committee
Thomas R. Horton
Faculty mentoring committees: Martin Dovciak, Rebecca Rundell, Gordon Paterson
Promotion and Tenure Committee
Environmental Microbiologist Search Committee (Hyatt Green hired June 2014)
Academic Research Building Committee
Strategic Planning: What are Earth’s Species and Dynamics committee

Robin W. Kimmerer
Chair, Cranberry Lake Advisory Committee
Peer classroom evaluation for Promotion and Tenure Committee
Mentor for junior faculty member
Coordinate Chun June Wang Award
Director, Center for Native Peoples and the Environment
Acting Director, Cranberry Lake Biological Station
College wide, Promotion and Tenure Review Committee
Promotion and Tenure Committee, outside member, Environmental Studies
College-wide Awards Committee
Assist Admissions Office with recruitment strategies for Native American students
ESF Representative to Great Law of Peace Educational Center
Presentation to New Visions Program, visiting students
Advisor to Primitive Pursuits student organization
Hiawatha Institute for Indigenous Knowledge, ESF liaison
CSTEP Mentor
SU Native Student Outreach Day
Gave invited remarks for Presidents Wheelers Inauguration, 9/12/15
Led Bryophyte Team for Inaugural Bioblitz at Onondaga Lake, September 13, 2015
Gave Invited “Earth” Lecture for First Year Experience Symposium

Donald J. Leopold
Chair, Department of Environmental and Forest Biology

General Summary of Regular Duties
Supervisor for about 35 faculty, two Secretary 1 positions (incl. my administrative assistant), two
Instructional Support Specialists and other staff
Related: promoting faculty and staff within and outside of the department and facilitating the many
good ideas that regularly emanate from faculty and staff
Manage allocation of state, Research Foundation (research incentives), and College Foundation
accounts
Manage allocation of 40 state graduate teaching assistantships
Convene regular department meetings
Represent department at biweekly Academic Council meetings
Work with Development Office for fundraising
Responsible for making sure that all regular and new undergraduate and graduate courses are offered
as listed in the College Catalog or webpage; main contact with Registrar for any course
changes.
Work with Physical Plant on all planned renovations and emergency repairs
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 2014
Organizer and Host, Dale L. Travis lectures, twice each year.
Participant in the Environmental Health undergraduate level curriculum group.
Presenter, Graduate Colloquium August 2014, “A Vision of Excellence in Teaching and Scholarship”
Presenter (twice, on campus trees and shrubs) for annual Alumni, Family, and Friends BBQ, October 2014
Member, Presidential Inaugural Committee; responsible for inaugural bioblitz
Member, Core Team for Academic Research Building
Member, ESF Executive Committee + 2 for College Strategic Planning
Roosevelt Field Ecologist, Roosevelt Wild Life Station, SUNY-ESF

**Karin E. Limburg**
Member, EFB Graduate Program Advisory Committee
Member, EFB Promotion and Tenure Committee
Member, mentoring committees for Jonathan Cohen, Stewart Diemont, and Rebecca Rundell
Member, Adirondack Ecological Center faculty advisory committee
Member, ESF strategic planning discussion group (Question 3 Committee Report: How can we meet human needs while conserving the environment?)
Participant in Presidential Inaugural Symposium, Foundations for a New American Environmentalism, 11 September 2014
Member, 4E Faculty Steering Committee, SUNY Research Foundation

**Gregory G. McGee**
EFB Undergraduate Curriculum Director
ENB Curriculum Coordinator
EFB Curriculum Coordination and Assessment Committee
CLBS Advisory Committee
Faculty Governance Committee on Student Life
ESF First-Year Experience Team
ESF Academic Standards Sub-Committee
CSTEP Advisory Board and Advising
advised 4 students
participated in group social outing (2/15)
led pre-orientation forest walk at Green Lakes State Park (8/18/14)
ESF New Graduate Student Colloquium – conducted two sessions on evaluating written work (8/21/14)
Conservation Biology Club Career Day Panel Discussion (3/26/15)
Served on SUNY Working Group for Transfer Plan in Biology.

**Stacy A. McNulty**
Associate Director, Adirondack Ecological Center
Search Committee member, Guest Services Manager
Search Committee chair, AEC Cook
Organizer, Huntington Lecture Series
Council for Geospatial Modeling and Analysis (CGMA)

**Lee A. Newman**
Course and Curriculum Assessment Committee member.
Core Team Member for the Academic Research Building.
Fall and Spring Transfer Student Advising
Point person for deionized water treatment system
Chair, Environmental Microbiologist Faculty Search Committee
Spoke at EFB and BTC orientation seminars
Pre-Med Advisor, Environmental Biology students
Chun Wang Award Committee, member
New member - Tenure and Promotion Committee
Co-Chair, Environmental Health Faculty Search Committee
Member, Committee on Research
Coordinator, Environmental Health major
Curriculum group participant of Environmental Science
Mentor for Undergraduate Honors and CSTEP programs
Spoke at Environmental Science Orientation seminar
Lead in developing MD/PhD program with Upstate Medical University
Advisor, 3 + 3 Doctor of Physical Therapy Program
Lead in developing NIEHS grant program
Curriculum group participant of Environmental Science Coupled Natural and Human Systems
Coordinator, Environmental Science Health and the Environment focus area
Member of Hill Collaboration Nervous System Group
Member of Hill Collaboration Cancer Group
Member of Hill Collaboration Wounded Warrior Group
Chair, Biotechnology Research Symposium organizing committee
Supervisor, Environmental Health/Environmental Medicine Biotechnology Core Facility
Member, committee to develop Food Security minor with Syracuse University
Lead, in developing 2+2 joint diploma programs with Mahidol University, Bangkok, Thailand, in the majors of Environmental Biology, Biotechnology and Environmental Health
COIL participant
Development of SUNY/BNL Research and education collaborations

Dylan Parry
Coordinator - Conservation Biology Major (165 students)
CCAC – committee member
GPAC – committee member
Leroy C. Stegeman Award in Invertebrate Ecology – Chair and award presenter
Outstanding PhD Award committee – member

Gordon Paterson
Cranberry Lake Biological Station Advisory Committee
Grober Graduate Research Fellowship (Candidate review and selection)
Robert Burgess Graduate Scholarship in Ecology (Candidate review and selection)
Ad-hoc Library Council (Committee)
Faculty position search, EFB representative, Environmental Health, Division of Environmental Science (Committee)
Spotlight on Student Research Conference April 15-16th (Judge)

William A. Powell
Coordinator for the undergraduate Biotechnology major
Awards Ceremony: Gave the Distinguished Scholar in Biotechnology and Joseph & Ruth Hasenstab Memorial Scholarship. Took photos of the event for the department.
Director of the Council on Biotechnology in Forestry
Roosevelt Wild Life Station Scientist in Residence
IBC (Institutional Biosafety Committee) member

Neil H. Ringler
Ex Officio Committee on Research
SUNY/RF Research Council
SUNY/RF Vice Presidents for Research/Officers
SUNY/RF Network of Excellence Co-leader with SUNY Stony Brook, Albany, Binghamton
SUNY Distinguished Academy
Co-Director Hill Collaboration Environmental Medicine with UMU, SU, ESF, VA
Advisory Council, Biotechnology Accelerator
Planning Team, Center of Excellence Biofuels Laboratory
Planning Team, Institute for Environmental Health and Environmental Medicine (2020 Challenge Grant)

Rebecca J. Rundell
GPAC
CLBS Advisory Committee (invited by Dr. Kimmerer)
Biotechnology Major Committee

Press in service of Department:
Informed general audiences about endangered species research in EFB:
On camera interview for Chittenango ovate amber snail project (16 June 2014):
Today's Going Green segment is about efforts to save an endangered snail living at Chittenango Falls. It is available on Time Warner Cable News in Syracuse (ch 10), Rochester (ch 8), Albany (ch 9), Kingston (ch 6) and Buffalo (ch 9) at 1:55pm, 4:55pm, 7:55pm, 10:55pm, 1:55am and 4:55am. It is also available at:
http://centralny.twcnews.com/content/lifestyles/745148/madison-county-waterfall-is-home-to-endangered-snail/
Graduate student Cody Gilbertson developed a story for the USFWS outreach site “Conserving the Nature of the Northeast” (29 Sept. 2014):
Head Curator, Roosevelt Wild Life Collections (development, planning and oversight of Collections);
includes service in Destiny, USA meetings at the college level and ESF travelling exhibit planning as well as planning and oversight of new lower level Gateway museum space
Leadership committee of RWLS, contributing to e.g. Visioning and Strategic Planning

Secured donation of musk ox full mount to ESF from the William D. Hutchens North American Wildlife Collection.
Produced and installed a professional musk ox exhibit (display case and museum interpretive panel) in Gateway Building at ESF, which highlights ESF’s Wildlife Science, Conservation Biology and Natural History Programs
Negotiated white-glove service move-in of display case and musk ox, as well as a second professional display case, both at no cost to ESF. Worked to facilitate damage claim process between Gaylord and FedEx (result of small crack in vitrine corner).

Applied and approved for NOAA/NMFS Marine Mammal Hard Parts Permit to acquire specimens through NMFS’ Greater Atlantic Region Marine Mammal Stranding Network for specimen use for research, deposition in a scientific collection and in public educational display as well as supervised “hands on” close-up study in our organismal and comparative biology courses, including Comparative Vertebrate Anatomy, Vertebrate Museum Techniques (Specimen/Skeleton/Skin Preparation), Marine Ecology, Conservation Biology, Evolution, Mammal Diversity, and Diversity of Life. Specimens approved for donation include northern Atlantic whales, dolphins, and seals as well as California sea lion.

Established connection with Massachusetts Division of Fisheries and Wildlife Assistant Director Dr. Tom French and secured the donation of 3.5 whale skeletons and data (federally endangered fin whale complete, adult minke complete, humpback juv. complete, humpback juv. partial); fin whale baleen (full rack), minke baleen (full rack), and blue whale baleen (and data). Also secured the donation of a Kemp’s Ridley sea turtle skeleton (the world’s most endangered sea turtle) and a northern gannet skeleton. Picked up and coordinated moves of specimens from Massachusetts in three separate move
events in Fall 2014 (phase I: frozen marine mammal pick up at Woods Hole Oceanographic Institution with Ron Giegerich; phase II: fin whale; phase III: minke, humpbacks, turtle, gannet, baleen)

Established connection with Misty Niemeyer, Necropsy Coordinator, Marine Mammal Rescue and Research at the International Fund for Animal Welfare (World Headquarters, Yarmouth Port, Massachusetts) and secured the donation of 14 complete marine mammal skeletons (dolphins, seals, and small toothed whales including a mother and baby) and level A necropsy data.

Judge, Graduate Student Association Elevator Pitch Competition. 27 March 2015

Presidential Inaugural Bioblitz at Onondaga Lake: Led land snail and meiofauna team and members of the public in searching for and identifying land snails and microscopic sand-dwelling invertebrates and unicellular eukaryotes. Coordinated acquisition of curatorial materials and deposition of specimens into collections with other EFB faculty.

Press in service of College
Informed general audiences about natural history educational programs and connection to the public at SUNY-ESF:

Interviewed on camera for musk ox exhibit in Gateway Building in order to develop the following video for the College with Communications staff member Dave White:

MuskOx-tjL8r_s7EO1Z9ZcN...

Interviewed on camera by Time Warner Cable about whale donation and use of specimens for ESF education programs (courses) and public outreach:


Interviewed on camera by Tara DeSantis (Reporter, NCC News) who is developed a longer story on the whales (3rd set of donations: minke, humpbacks), and our related programs at ESF for Improve Your World:

49IYWWhalesandGeese-3Xqk...

Interviewed by Syracuse.com about fin whale donation and contributed to story:


How we will use whales in EFB’s natural history courses; ESF coverage and Rundell & baleen video:

http://www.esf.edu/communications/view.asp?newsID=3140

Inaugural Bioblitz, snails and meiofauna:

http://www.esf.edu/communications/view.asp?newsID=2906

Kimberly L. Schulz
EFB Course and Curriculum Assessment Committee Chair
Faculty mentor for Greg McGee, Beth Folta
Occasional participant on GPAC
College bioblitz at Onondaga Lake – co-ordinated plankton, macrophyte sampling and identification; presented at public forum on 13 September 2014
Participated in Visioning workshop 8 January 2015

With G. McGee represented EFB at college assessment meetings with Middle States Commission (2 Sept 2014 forum, 3 Sept 2014 Middle States meeting, 14 May 2015 MS meeting). With G. McGee, co-ordinators of majors, and D. Leopold finalized the 2015 EFB assessment report for all 7 majors administered by the department

Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science

EFB representative to the Water Resources Minor

Faculty advisor to the NautiluS Club (student marine science club)

Marine Science Minor coordinator
Participated in three meetings on development of the Onondaga Lake Center
Member of AEC advisory board
Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
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 participating in efforts to further organize aquatics group in EFB

**Stephen A. Teale**
Promotion and Tenure Committee (member, Chair)

**J. Scott Turner**
Chair, Technology Committee.
Member, Executive Committee.
Member, Planning committee for Conversations in the Disciplines.

**Alex Weir**
Director, Cranberry Lake Biological Station 08/06-11/14 (see separate report for the Station)
Curator of the EFB Herbaria 09/03
Member, Field Programs Committee, EFB
Active Participant in EFB majors for Forest Health, Conservation Biology, Natural History and Interpretation, and Environmental Biology.
Member, Lowe-Wilcox Award Committee, Zabel Award Committee, Morrell Award Committee.

**Christopher M. Whipps**
ESF Institutional Animal Care and Use Committee (Aug 2011-present). Chair: Christopher Whipps
ESC Health and the Environment Curriculum Group Participant (Mar 2011-present)
ESF Academic Research Building Core Team (Apr 2010-present)
SUNY Center for Applied Microbiology (Feb 2013 – present) Director
Appendix H. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

Jonathan B. Cohen
Advisory board for the Goldenrod Foundation (private nonprofit)
Advisor to the U.S. Shorebird Conservation Plan (US Fish and Wildlife Service)
BioBlitz at Onondaga Lake, September 2014
Mentor to 1 student, Authentic Science Research Program, Byram Hills High School, Armonk, NY
Supervisor for 1 student, Advanced Science Research Program, Peddie School (High School), Hightstown, NJ

Stewart A.W. Diemont
Municipality of San Cristobal de Las Casas, Chiapas, Mexico. Natural wastewater treatment plant system design and siting, rain water capture, and wetland restoration.
Village of Lacanja Chansayab, Chiapas, Mexico. Biocultural restoration project: Creating a Lacandon Maya field guide for educating children about their own traditional ecological knowledge.

Martin Dovciak
Provided interviews to media that contributed to several articles written with SUNY ESF mentioned:
“When will we finally get relief from CNY's terrible allergy season?” by Glenn Coin, Syracuse.com-The Post-Standard, Syracuse Media Group, June 10, 2014.
U.S. National Park Service. Environmental monitoring and modeling support for science-based conservation of forest vegetation along the Appalachian Trail from Georgia to Maine (Vegetation team leader).
Sierra de Alamos-Rio Cuchujaqui Biosphere Reserve, Mexico. Ecological monitoring and conservation of an endangered forest cycad, Dioon sonorense (Advisor).
Shingle Shanty Preserve and Research Station, Adirondacks, NY. Vegetation monitoring (Advisor).

John M. Farrell
Thousand Islands Land Trust Zenda Farms Picnic, Provided live fish and poster displays as part of community event (June 2014; ~250 attendees)
Thousand Islands National Park | Parc national des Mille-Îles, Information and onsite meetings and field visits regarding wetlands restoration.

Shannon L. Farrell
Working with TNC Tug Hill personnel to assist with development of grant proposal, to develop collaborative forest management plan and wildlife monitoring (working also with Greg McGee and Ralph Nyland).
Summer 2014: Analysis of effects of proposed listing of the northern long-eared bat (NLEB) as federally Endangered on forestry, and drafting of comment letter to USFWS.
March 2015: Analysis of effects of threatened listing of northern long-eared bat (NLEB) and proposed 4-d rule implementation for forestry, and drafting of comment letter to USFWS.
Interviewed and quoted for Syracuse.com article on Turkey Vultures July 2014
Video interview on winter bird feeding for Going green segment. Feb 2015.
Interviewed for a story on WTVH/WSTM TV about mute swans in Manlius. May 2015

Danilo D. Fernando
National Science Foundation, Division of Integrative Organismal Systems: Panel Member (Oct 2014).

Melissa K. Fierke
Serve as a science advisor to NYDEC on emerald ash borer and other forest invasives and attend meetings in Albany as needed.
Serve as co-director, along with Mark Whitmore (Cornell Natural Resources Dept), for the New York Forest Health Advisory Council. In this position I organize & facilitate annual/semi-annual meetings at ESF.
I serve on the City of Syracuse Emerald Ash Borer Task Force attending monthly meetings with other collaborators, e.g., Steve Harris, the Syracuse City Arborist, Jesse Lyons, Cornell Cooperative Extension, David Coburn, Onondaga Director of the Environment. I am a member of several sub-committees where we work on developing and implementing an emerald ash borer preparedness plan for the City of Syracuse and Onondaga County.
Answered questions from the public on insects/arthropods throughout the reporting period.
Organized the entomology portion of the Presidential Bioblitz on Onondaga Lake, 8/14.
Quoted in New York Times for ESF bike sharing program, 10/14:
http://www.nytimes.com/2014/10/06/nyregion/facing-many-obstacles-bike-sharing-slowly-gains-traction-upstate.html?_r=0

Elizabeth Folta
Rosamond Gifford Zoo, Education Committee 12/2010 – current
Friends of Beaver Lake, Board Member 1/2011 – current
Education Task Force Member 8/2011 – current
Future Planning Committee 4/2011 – current
Project Learning Tree Steering Committee (NY) 7/2011 – current
Leopold Education Project State Co-Coordinator 2011 (unofficial) – current (official)

Jacqueline L. Frair
NY State Fish and Wildlife Management Advisory Board, SUNY ESF Science Advisor
Two-day meetings Sep 2014 and Mar 2015.

James P. Gibbs
Member of the General Assembly, Charles Darwin Foundation (elected)
Adjunct Scientist, Galapagos Conservancy
Board member, The Wetland Trust
Board member, Altai Assistance Project
Board member, Nine Mile Creek Conservation Council
“COmMON” Foundation Holland: External Science Advisor for 5 year, $2M project focused on application of Groasis / Waterboxx Technology for ecosystem restoration and enhancing agricultural production in the Galapagos Islands
Hyatt C. Green
Onondaga Lake Watershed Bacterial Trackdown Working Group

Thomas R. Horton
Scientific advisor – Central New York Mycological Society
Scientific advisory board – Mianus River Gorge Preserve
Interviewed for an SU iBook project due out this summer: Ethnobotany.

Robin W. Kimmerer
Orion Society, Board of Directors
Oregon Museum of Science and Industry, advisor to Generations of Knowledge Project
Fabius Pompey School District
Neighbors of the Onondaga Nation
Great Law of Peace Education Center Initiative, Steering Committee
Haudenosaunee Environmental Task Force
Spring Creek Project for Nature, Philosophy and the Written Word (Senior Fellow)
USDA Panel Review for TCUP Proposals

Donald J. Leopold
Co-tour leader of potential Onondaga Lake NRD projects, to NRD board of trustees, May 2015
Member, Board of Trustees, The Wetland Trust, Inc.
National Technical Committee for Wetland Vegetation, northeastern U.S. representative from academia to this US Army Corp of Engineers advisory committee, January 2007 to present.
Upper Susquehanna Coalition, consulting on various wetland issues
Frequent contributor, upon request, to the Syracuse Post-Standard
Frequently answer questions from city of Syracuse employees regarding city trees, park plantings, and green infrastructure projects
Numerous local and national TV and radio interviews including interviews on fall color, Gateway Building green roof, drought, invasive species, allergy season, and native plant species.

Karin E. Limburg
Technical working group on River Herring (for NOAA and the Atlantic States Marine Fisheries Commission); includes serving on Habitat and Climate Change sub-committees
Scientific advisor, Mohawk River Basin Program (NYSDEC)
Scientific advisor, Hudson River Estuary Program (habitat restoration)
Member, Conseil Scientifique (Science Advisory Board) for “LabEx COTE – Evolution, Adaptation and Governance of Continental-to-Coastal Ecosystems” – Bordeaux, France
Member, Continental Margins Working Group (IMBER-LOICZ); assumed co-chairmanship, Jan. 2015 (3-year term)
External reviewer for P&T decision, UMass Amherst (for Asst. → Assoc.)
External reviewer for P&T decision, UMass Dartmouth (for Assoc. → Full Prof.)

Gregory G. McGee
The Nature Conservancy, Tug Hill Preserve Advisory Committee
Experiential Learning Charter School at Orenda Springs, Board of Trustees
NY DEC Great Lakes Basin Riparian Opportunity Assessment, Steering Committee
Stacy A. McNulty
BioBlitz – facilitated USGS (Patuxent, MD) survey of regional pollinators via the Adirondack Biodiversity Project (All-Taxa Biodiversity Project)
Northeastern Partners in Amphibian and Reptile Conservation – co-led vernal pool working group
Mentor, High School research on white tailed deer (Ryon Bellamy, Scotia High School)
Began developing a special avian issue of Adirondack Journal of Environmental Studies which includes approximately 20 articles by ornithological scholars in the region
Helped organize OBFS in Science Today program, 22 July 2014 - Nantucket, MA (PBS Science Correspondent Miles O’Brien, special guest)
Hudson River Foundation fall meeting organization and presentation

Lee A. Newman
Judge for International Genius Olympiad, SUNY Oswego, 18 June 2013
Multiple Roles for Clear Path for Veterans, Chittenango, NY
- Strategic Planning Committee
- Property Committee
- Kitchen garden design, installation and maintenance
- Natural Play area design
Director of Horticultural Therapy Program, Syracuse Veterans Administration Hospital
Director of Horticultural Therapy Program, Clare Bridge of Manlius, an Alzheimer care facility
Development of CERES program to bring food and nutritional information to veterans dealing with cancer

Dylan Parry
NY State Invasive Species Advisory Council

William A. Powell
Advisor to the NY chapter of The American Chestnut Foundation
Science advisory board member of the national American Chestnut Foundation

Interviews leading to 31 (or possibly more) popular press articles, blogs, radio and TV shows:
The Chestnut Project in the News (6/1/14 – 5/13/15)
- GenomeWeb: A little help from the chestnut's friends
GenomeWeb reports on ESF's American Chestnut Project. 5/12/15 READ MORE
SciTech Now: Discover how genetic engineering is saving the American Chestnut from blight
PBS's SciTech Now reported on the American Chestnut Project this week. 5/10/15 READ MORE
Smithsonian SmartNews 5/10/15:
"Turning the American Chestnut into a GMO Might be the Only Way to Save it"
Scientific American 60 second science 5/6/15:
"Wheat Genes Could Bring Back Chestnut"
Lake Placid News: A threat to hemlocks
The ESF Chestnut Project is mentioned in this article on the woolly adelgid threat to Adirondacks hemlocks. 4/8/15 READ MORE
Dr. Powell: Return of the king: The development of a blight-resistant American chestnut tree"
Dr. Powell will speak on the American Chestnut Project at SUNY New Paltz as part of the college's Earth Day celebration. 4/15 READ MORE
Skaneateles Journal: Skaneateles High School Environmental Club to host biotechnologist William Powell
(Bill Powell will talk on the American Chestnut Project in Skaneateles tonight. 3/25/15) READ MORE

NPCA Magazine: Cracking the Nut
(ESF’s American Chestnut Project is discussed in this article on attempts to restore the American chestnut. 3/15) READ MORE

Delaware Online: Did You Know: Delaware's lost trees
(ESF’s American Chestnut Project is mentioned in this article taking a look at the trees that once dominated Delaware's lands. 3/10/15) READ MORE

American Chestnut Project in Oregon State U Forestry Blog
(A recent blog article on genetic modification in forestry included a mention of the American Chestnut Project. 12/19/14) READ MORE

Oak Ridge Natl Lab: blight-resistance of transgenic American chestnuts confirmed
(ORNL announced they had verified the blight-resistance of the transgenic trees, as well as near-identical chemical composition to unaltered American chestnuts. 12/14) READ MORE

Tests Show Wheat Gene Increases Blight Resistance of Chestnut Trees
- Design & Trend: Scientists Modify Chestnut Tree's DNA To Cope With Blight
  (As the American Chestnut Project garners awareness, it meets resistance from anti-GMO groups. 12/28/14) READ MORE
- Popular Science: Genetically Modified Chestnuts Roasting on an Open Fire
  ("A project to save the American chestnut is gaining momentum-and opponents." 12/24/14) READ MORE

TWC News: ESF develops a blight-resistant chestnut tree
(TWC's weekly Going Green segment reported on the development of a blight-resistant American chestnut at ESF. 12/8/14) READ MORE

Biology Fortified: The Return of a King
(Biology Fortified posted a video interview with Dr. Powell and Dr. Maynard on the development of a blight-resistant American chestnut and plans to return it to the wild. 12/2/14) READ MORE

Action Institute Blog: A GMO Thanksgiving
(The Action Institute blog featured the American Chestnut Project among other Thanksgiving-related genetic modification research projects. 11/25/14) READ MORE

Daily Orange: Professors use crowdfunding to help restore American chestnut trees
("After 25 years of work, two SUNY-ESF professors have developed a way to restore the American chestnut tree back to its former glory and are receiving funding from the community to help the cause." 11/17/14) READ MORE

Chestnut Project on CBC Quirks & Quarks
(CBC's Quirks & Quarks radio show interviewed Dr. Powell about the American Chestnut Project. 11/20/14) READ MORE

ESF American Chestnut Project in Washington Post
(Washington Post: Unearthed article series covered the Chestnut Project and the benefits of returning the American chestnut to eastern forests. 11/20/14) READ MORE

WRVO: SUNY-ESF finds success with fungus resistant American chestnut trees
(WRVO hosted an interview with Dr. Powell on the American Chestnut Project. 11/17/14) READ MORE

American Chestnut Project in Genetic Literacy Project
("Scientists are planning the return of an American icon in a genetically modified form." 11/14/14) READ MORE

Ars Technica: GMO trees could rescue American chestnut from invasive fungus
(The online science magazine Ars Technica shared an in-depth story on the success of the American Chestnut Project and the science behind the trees. 11/12/14) READ MORE

ScienceDaily: Blight-resistant american chestnut trees take root
(ESF scientists are growing the first American chestnut trees that can withstand the blight that virtually eliminated the tree from the eastern United States. 11/6/14) READ MORE

EcoRazzi: Threatened American Chestnut May be Saved by Genetic Engineering
("25 years after beginning their research, two professors at SUNY College of Environmental Science and Forestry have used genetic engineering to create a new strain of the threatened American chestnut tree." 11/6/14) READ MORE

LiveScience: Iconic US Tree May Be Saved by Genetic Engineering
(ESF researchers hope to produce thousands of the genetically modified chestnut trees to restore the plant to North America. 11/7/14) READ MORE

Science Codex: Blight-resistant American chestnut trees take root at SUNY-ESF
("Continuing research by ESF and collaborators from other institutions indicates that the transgenic trees do not affect the composition of leaf litter, the feeding habits of insects or the growth of ecologically important fungi." 11/6/14) READ MORE

Genetic Literacy covers Chestnut Project crowdfunder
("Save blight stricken American Chestnut? Crowd funding launches for GMO rescue" 11/7/14) READ MORE

Blight-Resistant American Chestnut Trees Take Root at ESF
American Chestnut Project in Get to Know GMOs Month
(The American Chestnut Research & Restoration Project was mentioned in an article as part of BIOtechNOW's month-long GMO feature. 10/22/14) READ MORE

Popular Science: GMOs-Beyond Pesticides
There are uses for GMO tech beyond pesticides and herbicides, that could have benefits for consumers, the environment, and human health. 07/28/14 READ MORE

Rebecca J. Rundell
Elected Representative-at-Large, Board of Directors. Natural Science Collections Alliance (part of the American Institute of Biological Sciences (AIBS)) (Term: 3 years beginning Fall 2014). [The NSC Alliance is a national organization that influences policies and resources for institutions that house collections (e.g. connecting to congress, NSF and other agencies.] Participated in Board of Directors meetings at national headquarters in Washington, D.C. 17-20 December 2014, and remotely at the Society for the Preservation of Natural History Collections (SPNHC) at the Florida Museum of Natural History in Gainesville, Florida on May 18, 2015. Contributed to visioning, mission statement and strategic planning for the organization and represented small university Collections.
Invited Collections Expert: External Review Commission for Collections at INECOL (Xalapa, Veracruz, Mexico). INECOL holds diverse, large, and nationally important natural history Collections and is preparing a move to a new integrated Collections facility. Advised and provided oversight for curatorial organizational structure, Collections Management Policies, planning for upcoming collections move, and mission, vision, and expansion. 16-19 June meeting in Xalapa, Veracruz, Mexico and discussions from 19 June through 17 July 2014.

Kimberly L. Schulz
Upstate Freshwater Institute Board Member October 2011-current
Onondaga County Water Protection Scientific Advisory Board 2012-current
Skaneateles foam meetings (23 June 2014, meeting and follow up conversations by phone and with R. Abbott in person)
Scientific advisory panel member on New York Climate Change Science Clearinghouse – Inland Natural Resources and Water Resources

J. Scott Turner
Alex Weir
National Science Foundation – Grant Application Reviewer and Panelist – Systematics and Biodiversity Science Panel, 04/15
Continued Liaison with Central New York Mycological Society
Appendix I. Unfunded Service to Professional Societies and Organizations

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

Stewart A.W. Diemont
Executive Committee, Past-President, American Ecological Engineering Society

Martin Dovciak
International Association for Vegetation Science (IAVS)- Editorial Board Member
New York Climate Change Science Clearinghouse (NYCCSC)- Sector Expert: Agriculture and Forestry
Mountain Research Initiative- Expert Database Member
New York Invasive Species Research Institute- Expert Database Member

John M. Farrell
American Fisheries Society (AFS), NY Chapter AFS, International Association of Great Lakes Researchers

Shannon L. Farrell
Member of Special Recognition and Honorary Membership Committee, The Wildlife Society National Chapter
Member of Early Career Professionals working group, The Wildlife Society National Chapter
Planned symposium for early career professionals for 2015 Annual Meeting.
Service on Shale Development Technical Committee, The Wildlife Society National Chapter

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

Thomas R. Horton

Karin E. Limburg
Hudson River Environmental Society – Board Member
American Fisheries Society – President-elect, Estuaries Section
Member, scientific program committee of the 5th International Otolith Symposium
Co-organizer for a symposium and oral session at the 100th Meeting of the Ecological Society of America
Co-organizer for a symposium at the American Fisheries Society
Co-organizer for theme session at the International Council for the Exploration of the Sea (ICES) Annual Science Conference

Stacy A. McNulty
Secretary, Organization of Biological Field Stations
Board Member, Adirondack Research Consortium
Board Member, Northern New York Audubon

Lee A. Newman
Association of Environmental Health Sciences – Scientific Advisory Board, organizer for Annual Conference in Amherst, MA
International Phytotechnology Society – Founding President; Chair of Gordon Award Committee, Chair of Educational Committee, Chair of Outstanding Professional Member Committee, Member of Organizing Committee for Annual Conference in Manhattan Kansas; Chair, Organizing Committee for Annual Conference held in Crete, Greece, 2014
Chair of Organizing Committee for Biotechnology Research Symposium in May 2015 held at Brookhaven National Laboratory
Chair of Organizing Committee for Biotechnology Research Symposium to be held in May 2016 in Syracuse, NY

Dylan Parry
Member, New York State Invasive Species Advisory Council
Member, New York Forest Health Advisory Group. Share information, collaborate and coordinate activities of academic and government agencies involving major threats to the health of New York’s forests.

Rebecca J. Rundell
Member and Specialist, IUCN (International Union for Conservation of Nature) Species Survival Commission, Molluscs
Participated in Women in Science (AMNH chapter) event at the American Museum of Natural History, New York City, New York. 28 October 2014.
Appendix J. Funded Service to Governmental Agencies, Industrial and Commercial Groups, Public Interest Groups, etc.

Martin Dovciak
New York State DEC, Cornell Cooperative Extension. Contributing to the development of public outreach and citizen science component of the project on the impacts of deer on forests of New York State (ongoing).

John M. Farrell
Led poster session and informational session for Region 5 Federal Agencies as part of their annual meeting

Shannon L. Farrell
Lesser Prairie Chicken conservation planning: Lead on science committee drafting of CCAA/HCP and Habitat Exchange. Partially funded; funding from multiple entities including USFWS, Environmental Defense Fund, and Oil and Gas Industry partners.

Melissa K. Fierke
Reviewed Pearson’s Tough Topics modules

James P. Gibbs
General Electric Corporation (on-going consultation regarding wildlife research on Upper Hudson River) Janice Parker Landscape Architects (on-going consultation regarding property restoration, Southampton, Long Island) Galapagos Conservancy (on-going consultation as co-leader of Galapagos Conservancy’s Giant Tortoise Restoration Initiative and as Galapagos Conservancy’s Adjunct Scientist)

Thomas R. Horton
Ongoing project at the Albany Pine Bush Preserve to help with pine restoration effort.

Robin W. Kimmerer
Consultant/Collaborator: Salish Kootenai Tribal College NASA Grant: Living Landscapes."

Donald J. Leopold
In June 2014, Dr. James Gibbs and I led a bioblitz on a private estate near Pawling, NY, which generated funds for the RWLS, and gave a group of EFB graduate students and alumni an unique, paid, professional opportunity.
Project (with Dr. James Gibbs) on Long Island for Janice Parker Landscape Architects, on restoring a degraded parcel of land after we made a biological assessment.

Lee A. Newman
Department of Energy at Hanford, consultation about wastewater management

Rebecca J. Rundell
Sotheby’s. Consult on conservation status (CITES, etc.) for art objects and artifacts that include invertebrates
Kimberly L. Schulz  
NSF Panel June 10-13, 2014

J. Scott Turner  
Consultant on project “Proof of concept: A termite-inspired “humidity sponge.”” Terrapin Bright Green and Freeform Construction, with NYSERDA.
Appendix K. Presentations to the Public

Jonathan B. Cohen
Althouse MA, Cohen JB. July 2014. Effects of Disturbance on Staging Roseate Terns (Sterna dougallii). Mass Audubon Coastal Waterbird Program, biweekly staff meeting. Longpasture Wildlife Sanctuary, Cummaquid, MA ∼20 in attendance
Stantial ML, Cohen JB. June 2014. Something to Crow About: How Researchers are Tracking Bird Movements on Cape Cod and Beyond Goldenrod Foundation Plymouth, Massachusetts ∼40ppl

Stewart A.W. Diemont

Martin Dovciak
Understanding, conserving, and managing forest ecosystems and forest edges in fragmented human-dominated landscapes. Invited lecture at University of Connecticut, Storrs. May 19, 2015 (∼25 in attendance)

John M. Farrell
Thousand Islands Land Trust, Ichthyologist for a Day – led children ages 5-12 and adults through a series of modules on fish and river ecology on the St. Lawrence River (40 participants)
EFB River Day – Interpretive tour and presentation to the EFB faculty and staff on the Thousand Islands Biological Station research program and facilities
Clayton Yacht Club – visit and tour on Thousand Islands Biological Station programs and St. Lawrence River research for club members (15 participants)
Region 5 Federal Conservation Partnership Meeting - Poster Session and Thousand Islands Biological Station Tour (40 participants)

Shannon L. Farrell
Danilo D. Fernando
Genetics and Reintroduction of American Hart’s-Tongue Fern, 9 April 2015. AHTF Meeting @ SUNY-ESF

Melissa K. Fierke
Careers in Biology, Ed Smith AVID middle school students, 6th, 7th, 8th grades (100 students + teachers).
10/2014 Emerald Ash Borer National Research and Technology Development Meeting. Wooster, OH.

Jacqueline L. Frair
Top Dog? The ecological role of coyotes in the Northeastern US
The NYS DEC Indian Nations meeting, Syracuse, NY (Apr 2015; ~15 people)
Cayuga County Federation of Conservation Clubs, Auburn, NY (Mar 15, ~70 people)
New York State Fish and Wildlife Management Advisory Board, Pulaski, NY (Sep 2014, ~45 people)
American Wildlife Conservation Foundation, Smyrna, NY (Sep 2014, ~15 people)
New York State Conservation Council, Utica, NY (Sep 2014, ~50 people)
Monitoring moose populations in New York State
New York State Fish and Wildlife Management Advisory Board, Pulaski, NY (Mar 2015, ~45 people)

James P. Gibbs
“On the Brink: Saving Russia’s Last Snow Leopards,” Nov 16-20, 2014, Michigan Technological University Distinguished Ecologist Seminar, 60 in attendance
“Integrating Science and Management to Advance Giant Tortoise Conservation in Galapagos, Ecuador,”
Featured Darwin Day speaker, Feb 25, 2015, SUNY-Cortland, 70 in attendance
“Endangered species conservation in Altai Russia: Starting from scratch,” April 24, 2015, University of Maine Distinguished Wildlife Alumnus Lecture, 45 in attendance

Hyatt C. Green
ESF Adaptive Peaks Seminar, Departmental Seminar Series, Oct 23rd, 2014, ~60 attended

Thomas R. Horton
Horton TR. SUNY Geneseo Biology Seminar Series. Primary succession on coastal salt marshes:
interactions involving Pinus contorta, suilloid fungi and deer. October 31 2014. ~75+
Quentin Wheeler Inaugural Bioblitz at Onondaga Lake Park. 9/12/2014. 1 (A photographer from the Syracuse Post Standard tagged along with my group taking photos of fungi we found, many of which wound up on the web site covering the event for the paper).
Horton TR. Charles Horton Peck Foray. Ectomycorrhizal fungi: How do the spores get around? A summary of 20+ years of research. 9/13/14. ~ 20+
Horton TR. Vince O’Neil Mushroom Festival at Beaver Lake Nature Center with Central New York Mycological Society and Mid-York Mycological Society. 9/28/2014. 100+ (mushroom walk had about 20)

Robin W. Kimmerer
SUNY ESF, New American Environmentalism, Panelist, September 2015
Hamilton County Reads Program, “Braiding Sweetgrass. Indian Lake Theatre, September 21, 2015 Audience =75
Blue Mountain Center for the Arts, The Miniature World of Mosses, field walk and talk. Audience=6 September 22, 2015
Keynote, Sigurd Olson Nature Writing Award Ceremony, Sigurd Olson Environmental Institute, Northland College, Ashland, WI Audience= 120 October 24 2015
“Indigenous Plant Knowledge” Northland College, Ashland, WI. Audience = 35 October 25, 2015
Keynote, Youth Climate Summit, Adirondack Wild Center, Nov 12, 2015 Audience= 150
Keynote, Ithaca Native Plants Symposium, Ithaca, NY March 6, 2015. Audience=150
Keynote, Geography of Hope Conference, “Learning a New Language” March 14, 2015 Pt Reyes CA Audience=300
Keynote, McDevitt Lecture in Science and Religion, LeMoyne College March 23, 2014 Audience= 60
Keynote, Northern Michigan University, Marquette, MI. Braiding Sweetgrass.: Campus Common Reader Program. March 31, 2015 Audience:=300
Environmental Movements Class, Northern Michigan University, April 1, 2015
Environmental Literature Class, Northern Michigan University, April 1, 2015
Keynote, Longwood Gardens, PA. April 12, 2015 Community Reads Program Braiding Sweetgrass.
Longwood Gardens, PA. “Book Chat” Audience=30 ( 2 events)
Keynote, Nova Institute “Indigenous Values and Education” Washington, DC. April 18, 2015
Audience=60
Keynote, Indiana University, April 21, 2015 Earth Day Keynote,
Coalition of Kettle Lakes Associations, Arts and Ecology Symposium, Homer Center for the Arts, May 17, 2015
Birchbark Books, An evening with Robin Wall Kimmerer, Minneapolis MN, audience=90 May 20, 2015
Commencement Address, Northland College, Ashland, WI. May 23, 2015 Audience=500

Donald J. Leopold
Tree identification, ecology, and natural history, Cornell Cooperative Extension of Onondaga County, Syracuse, June 2014, about 30 people in attendance (Onondaga Park, Syracuse).
Father’s Day nature walk, Clark Reservation State Park, June, about 40 people in attendance
Terrestrial orchids of NYS, Syracuse Men’s Garden Club, Syracuse, September, about 50 people in attendance.
Best trees for the home landscape, Skaneateles Garden Club, September, Skaneateles, about 80 people in attendance.
Native plants for gardens in New York State, VI District FGCNYS fall meeting, Binghamton, NY, October, about 150 people in attendance.
Restoration projects around Onondaga Lake, Syracuse Botanical Club, Syracuse, December, about 20 people in attendance.
Native plants for sustainable landscapes, Habitat Gardening Club of CNY, Liverpool, NY, January 2015, about 125 people in attendance.
Native plants alternatives to species on the NYS prohibited and regulated list of plants, Capital/Mohawk PRISM, Halfmoon, NY, January, about 125 people in attendance.
Native plants for difficult sites, STNLA Region 8 Education Day, Owego, NY, about 125 people in attendance.
Restoration projects on Onondaga Lake and adjacent wastebeds, SU’s Institute for Retired People, Syracuse, March, about 100 people in attendance.
Terrestrial orchids of the Northeast, Hardy Plant Symposium, Hartford, CT, March, about 80 people in attendance.
Native plants for difficult garden and landscape settings, Brockway Farms Garden Club, Fayetteville, NY, April, about 20 people in attendance.
Truly rare and other protected plant species of NYS with an emphasis on orchids, Niagara Frontier Botanical Society annual meeting, Buffalo, NY, April, about 50 people in attendance.

Karin E. Limburg
The ‘other’ biogeochemistry: Otoliths and their use to reconstruct the lives of fishes. 26 March 2015, East Carolina University; attendance ca. 30.
Also, two more presentations of essentially the same seminar, at School of Marine and Atmospheric Sciences, Stony Brook University, 8 May 2015. Attendance: ca. 60.
University of Tartu, Estonia, 14 May 2015. Attendance: ca. 30

Mark V. Lomolino
Body Size Evolution and the Island Rule – Florida Atlantic University, November 2014.

Stacy A. McNulty
Native Plant Ecology Hike, Teddy Roosevelt Days, Sept. 7, HWF - 11
Wetland Detective training (EPA project) – February 28, Adk Interpretive Center – 6
Wetland Detective training (EPA project) – March 21, Adk Interpretive Center – 10
Wetland Detective training (EPA project) – May 30, Adk Interpretive Center – 12
Lee A. Newman

William A. Powell
The American Chestnut Research & Restoration project display table and answering questions. New York State Fair. 8/24/14. Syracuse, NY (100’s passed by)
25 years to become an overnight success, The development of a blight resistant American chestnut tree.
9/18/15. Exemplary Researcher Award Seminar, Adaptive Peaks series, with Dr. Maynard. Syracuse, NY (estimated 50 - 60 attended)
Update on the transgenic American Chestnut Project. 10/16/15 – 10/18/15. The American Chestnut Foundation (National) semi-annual board meeting. Abington, VA. ~ 40 attending.
Where there be mountains, there be chestnuts, 10/23/15. Invited speaker. SUNY Cobleskill 7th Generation Lecture series. Cobleskill, NY. ~80 attended.
American chestnut project. 11/5/15. radio interview - Jim Donovan WSYR (many listeners), Syracuse, NY
Determining chestnut blight resistance with leaf assays workshop. 11/24/15. With Andy Newhouse leading. 5 participants. Syracuse, NY
American chestnut project at SUNY-ESF. 1/22/15. Emeriti Lunch and Seminar with Dr. Maynard. ~ 20 attendees. Syracuse, NY
The Return of the King: Developing a blight resistant American Chestnut tree. 3/26/15. Invited speaker. Skaneateles High School sponsored talk. ~ 50 attendees. Skaneateles, NY
Return of the American Chestnut. 4/16/15. Spotlight on research Keynote Presentation with Dr. Maynard. ~15 attendance. Syracuse, NY
Synergies between breeding and transgenic American chestnut programs. 4/24/15. Meeting, presentation, and lab tours with new national TACF president/CEO Lisa Thomson and TACF geneticist Jared Westbrook and chestnut team. 10 attending. Syracuse, NY
Return of the American Chestnut Restoration in New York State. 4/29/15. NYSDEC Indian Nations Meeting. ~20 attending. Syracuse, NY
Where there be mountains, there be chestnuts. 5/4/15. Cornell lecture course Issues in Social Biology – Diet to Disease DNA to Deforestation. ~ 40 students
Blight resistant American chestnut planting and presentation. 5/15/15. Camp Fire Club Association’s Youth Conservation Day. (40 attended)
The Return of the King: Developing a blight resistant American Chestnut tree. 5/21/15. NY Metro ESF Alumni dinner. (numbers to be determined)

Neil H. Ringler
WSYR “Insight” TV interview Onondaga Lake. Televised May 22, 2015

Rebecca J. Rundell
Informed members of the Camp Fire Club and Roosevelt Wild Life Station Honorary Advisory Council about the importance of Collections in understanding and conserving wild life:
Kimberly L. Schulz
17 July 2014 – WSYR radio interview shark in Great Lakes
22 July 2014 – WSYR radio interview microbeads in Great Lakes

J. Scott Turner
Homeostasis and the physiological dimension of evolution. Kenyon College. 26 March 2015
Appendix L. Miscellaneous Publications and Outreach Activities and Materials

Stewart A.W. Diemont

Martin Dovciak

Melissa K. Fierke

Jacqueline L. Frair

Robin W. Kimmerer

Karin E. Limburg

Lee A. Newman

Rebecca J. Rundell
Appendix M. Foreign Travel

Jonathan Cohen
Tokyo, Japan. July 2014. Presented poster and supported graduate students posters and presentations at International Ornithological Congress.
La Paz, Mexico. November 2015. Presented talk and supported graduate student presentations at The Waterbird Society annual meeting.

Stewart A.W. Diemont
Chiapas and Oaxaca states in Mexico, various locations, June 29 – August 24, 2014. NSF-supported research on traditional ecological knowledge (TEK) of the Maya, working with doctoral students Tomek Falkowski and Isaías Martínez and undergraduate student Wyatt Wesner. Worked with Martínez on Zapotec TEK in Oaxaca. Taught ESF course EFB 496/796 Restoring Ecosystems: Principles and Practice August 14 – 24, 2014/14 (9 undergraduate students and 2 graduate students), Chiapas, Mexico.

Martin Dovciak
Technical University in Zvolen, Slovakia (Aug. 5-19, 2014). Collaborative Research: Forest and forest-grassland ecotone dynamics (1 manuscript published, 1 manuscript currently in revision for PLOS One).

John M. Farrell
Quebec City, QC Canada – gave invited presentation

Elizabeth Folta
Ottawa, Canada, October 8-9, 2014, NAEE Conference. Graduate student presented her master’s thesis results at the conference.
Panama (multiple locations), March 6-15, 2015, Ecotourism and Nature Tourism course that worked with Azuero Earth Project (non-profit based out of NY and Panama). We toured ecotourism sites and conducted service learning projects for three of the locations.
Montreal, Canada, May 3-7, 2015, International Conference on Interpretation. Presented the NY State Parks augmented reality project.

Jacqueline L. Frair
University of Alberta, Edmonton, Alberta, 21-29 November 2014, collaboration with research colleagues on elk study.

James P. Gibbs
Ecuador, Galapagos Islands, May/June 2014, Advance work on NSF project, Galapagos Tortoise Restoration Initiative, and Groasis project (Espanola, Plazas, and Santa Fe Islands)
Brazil, Amapa State, Macapa (Universidade Federal do Amapá, Oct 2014, hosted by Drs. Fernanda Michalski and Darren Norris), to develop proposals, teach short course, and mentor students
Ecuador, Guayaquil, July 2014, Advance work on Galapagos Tortoise Restoration Initiative
Ecuador, Galapagos Islands, Dec 2014, Advance work on Galapagos Tortoise Restoration Initiative (Pinzon Island and Volcan Wolf)
Ecuador, Galapagos Islands, May/June 2015, Advance work on Galapagos Tortoise Restoration Initiative Advance work on NSF project, Galapagos Tortoise Restoration Initiative, and Groasis project (Baltra, Plazas, Santa Fe and Espanola Islands)
Karin E. Limburg
Sweden, June 2014 – work with colleagues at Stockholm University and Lund University; hosted by the Baltic Sea Centre
Reykjavik, Iceland, 12-15 August 2014; attended International Society for Ecological Economics conference
Quebec City, PQ, Canada, 17-22 August 2014; attended American Fisheries Society Annual Meeting
Mallorca, Spain, 20-24 October 2014; 5th International Otolith Symposium
Bordeaux, France, 2-8 December 2014; advisory board for Labex-COTE (University of Bordeaux, center of transdisciplinary excellence)

Lee A. Newman
Heraklion, Crete, Greece, 30 Sept to 3 Oct 2014 To attend and participate in the 11th International Phytotechnology Conference

Dylan Parry
Quebec and Ontario, Canada – August 2014: research collections

Gordon Paterson
Commonwealth of Dominica, May 13 – 24th, 2015, co-teach Tropical Ecology (EFB523) field course with Dr. Donald Stewart.

Rebecca J. Rundell
Xalapa, MEXICO; 16-19 June 2014; INECOL External Review Commission
Mexico City, MEXICO; 22-27 June 2014; Mollusca 2014: Meeting of the Americas

Stephen A. Teale
Charles Darwin Research Station, Puerto Ayora, Galapagos, Ecuador, 8 Feb. – 1 March, 2015 for field work and a meeting.

J. Scott Turner
Manchester, UK. September 2014. To confer with research partners.
Namibia. April 2015. To conduct field research

Alex Weir
Ireland, May 2014 – Overseas Field Trip with 7 EFB students
UK, March 2015 – Visit to Royal Botanic Gardens, Kew
Appendix N. Theses and Dissertations completed
(i.e., all requirements met and degree awarded)

M.S. Theses
Avis, Michelle. Flight behavior of breeding piping plovers (Charadrius melodus): Implications for risk of collision with wind turbines (Cohen)
Beguin, Samouel. Adirondack soundscapes: Land use and noise effects on boreal wetland avian communities (McNulty)
Burns, Elaina. A non-invasive approach to river otter (Lontra canadensis) monitoring in the Finger Lakes (Underwood)
Denhoff, Lindsay. Microhabitat occupancy, distribution, and selection by Cordulegaster diastatops (Odonata: Cordulegastridae) in seeps and springs of Madison County, New York (Shields and Hager)
Fuda, Rebecca K. A park under pressure: the impacts of human disturbance in Murchison Falls Conservation Area, Uganda. (Ryan and Frair)
Garmendia, Miguel. The influence of environmental variation on epiphytic bryophyte communities of sugar maple (Acer saccharum Marsh.) in northern and central New York (McGee)
Gunderson, Matt. Habitat-assemblage relations of aquatic macrophytes in the upper Niagara River (J. Farrell and Kapuscinski)
Hassett, Molly. Habitat characteristics and sugar resources of emerald ash borer parasitoid release sites in New York (McGee)
Hurley, Danielle. Differences in population characteristics of Largemouth Bass, Micropterus salmoides, due to varying habitat quality and degradation in Onondaga Lake, NY (Ringler)
Karkuff, Stefan. Quantifying forest subsidies to food webs in woodland pools (Stella and Schulz)
Keene, Georgia. Spatial ecology and phenology of the inland barrens buck moth, Hemileuca maia (Drury) at the Albany Pine Bush Preserve (Parry)
Langdon, Stephen. Vegetation structure of a black spruce peatland in the Adirondacks of New York State (Dovciak)
LaPan, Stewart. Avifauna and herpetofauna response to coastal wetland enhancement in the upper St. Lawrence River (Gibbs and J. Farrell)
Parisio, Michael. Biological control parasitoids of emerald ash borer: assessment and applications of current monitoring methods (Fierke)
Potrikus, Jennifer R. Ecological and genetic analyses of Actinidia arguta (hardy kiwi) in the Northeast United States (Fernando)
Rachmansah, Angga. Life history traits, latitude, and sustainable harvesting in freshwater turtles (Gibbs)
Saldívar Bellessai, Silvia. Status and threats to persistence of the chacoan peccary (Catagonus wagneri) in the Defensores del Chaco National Park, Paraguay (Fair)
Sveiven, Scott J. Linking environmental correlates to floristic assemblages: Discerning patterns across a mosaic of wetlands in Great Sand Dunes National Park & Preserve, Colorado (Leopold)
Thomen, Andrea. Bird communities in Dominican chocolate farms: Management and conservation (Ryan and S. Farrell)

Ph.D. Dissertations
Cale, Jonathan. New insights on beech bark disease in aftermath forests (Castello)
Hajek, Karyn L. Conserving biological diversity in agrarian landscapes: A multiscale analysis of fen plant diversity patterns and investigation of livestock grazing in fen plant communities (Leopold)
Helenbrook, William. Effects of ecological disturbance on parasite communities in both people and mantled howler monkeys (Alouatta palliata aequatorialis) living in Ecuador (Shields and Whipps)
Appendix O. MPS students who completed degree requirements

Amos, Benjamin. Project title: Spatial scale and natal influence on spawning site fidelity in northern pike (*Esox lucius* L.) (J. Farrell)

Brown, Laura. Peace Corp internship: Promoting conservation in rural Jamaica: A Peace Corps volunteer experience (Leopold)

Chille, Joelle. Project title: New biological and cultural control methods of the non native nursery pest *Xylosandrus germanus* (Fierke and Whipps)

Di Salvo, Paul (Leopold)

Iriyama, Rie. Project title: Expression pattern correlation between miRNAs and their target transcripts (Fernando)

Leopold, Mark. Project title: Possible causes of skewed sex ratios of northern pike (*Esox lucius* L.) on the St. Lawrence River (J. Farrell)

McCoy, Timothy. Project title: Diet of the American marten (*Martes americana*) and relationship to small mammal population fluctuations in the Adirondack Mountains of New York (McNulty)

Schlueter, Scott. Project title: Restoration of Lake Sturgeon in the Oswegatchie River (J. Farrell)

Stewart, Kristen (Powell)

Teufel, Kyle (Folta)

Van Ness, Emily. Project title: The wildflower restoration project: Developing a citizen science study. (Folta)
Appendix P. Faculty and Student Awards

FACULTY – DEPARTMENT, COLLEGE, AND SUNY RECOGNITION
Justin Fiene  
SUNY-ESF Undergraduate Student Association Best Teacher Award
Melissa Fierke  
2014 SUNY ESF Presidential Award for Public Service/Outreach
Lee A. Newman  
SUNY-ESF President’s Award for Community Service
Kimberly L. Schulz  
SUNY-ESF Undergraduate Student Association Best Advisor Award

FACULTY – REGIONAL, NATIONAL AND INTERNATIONAL RECOGNITION
Jonathan Cohen  
Jacqueline L. Frair  
Inducted as “Fellow” to The Wildlife Society
James P. Gibbs  
Michigan Tech Distinguished Ecologist Lecturer
James P. Gibbs  
University of Maine 2015 “Distinguished Wildlife Alumna/Alumnus” Award
Robin W. Kimmerer  
Sigurd Olson Nature Writing Award
Robin W. Kimmerer  
Orion Book Award Finalist
Robin W. Kimmerer  
Midwest Booksellers Award for Braiding Sweetgrass
Robin W. Kimmerer  
Honorary Doctorate, Northland College
Karin E. Limburg  
Became a Visiting Professor, 10% time, Department of Aquatic Resources, Swedish University of Agricultural Sciences, 1 May 2014 (3-year appointment)
Karin E. Limburg  
Nominated for Lise Meitner Visiting Professorship, Department of Physics, Lund University (have not yet heard the outcome)
Rebecca Rundell  
Research Associate, Paleontological Research Institution, Ithaca, New York (3-yr term beginning January 2015)

GRADUATE STUDENTS – DEPARTMENT AND COLLEGE RECOGNITION
Grete L. Bader  
Edwin H. Ketchledge Scholarship
Grete L. Bader  
Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Carolyn Chang  
SUNY ESF Spotlight on Research poster session, 1st place
Tiffany L. Deater  
Dr. Samuel Grober ’38 Graduate Fellowship
Christopher J. Foelker  
EFB Outstanding Doctoral Student
Kelly Huffman  
SUNY ESF Spotlight on Research poster session, 2nd place
Michael I. Jones  
Gerald Lanier Memorial
Patricia J. Kaishian  
Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Wendy M. Leuenberger  
John and Etta Simeone Scholarship
Wendy M. Leuenberger  
Leroy C. Stegeman Endowment in Invertebrate Ecology
Amanda L. Pachomski  
Maurice and Annette Alexander Wetlands Research Award
Mikhail Y. Paltsyn  
Robert L. Burgess Graduate Scholarship in Ecology
Michael S. Parisio  
Michael I. Jones  Gerald Lanier Memorial
Taylor R. Patterson  
Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Charles W. Robinson, Jr.  
Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Michelle Avis Stantial  
Betty Moore Chamberlaine Memorial Award
Andrew L. Tomes  
Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Jay W. Wason III  
Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship

GRADUATE STUDENTS – REGIONAL AND NATIONAL RECOGNITION
Katrina Alger  
Donald H. Rusch Memorial Game Bird Research Scholarship
Melissa Althouse  
The Waterbird Society travel award to attend annual conference
Grete Bader  
Phi Kappa Phi Honor Society support of research grant
Grete Bader  
American Orchid Society research grant
Grete Bader  
NYS Wetlands Forum research grant
Grete Bader  
Edna Bailey Sussman Foundation Fellowship
Amanda Cheeseman  
American Society of Mammalogists meeting best poster award
Amanda Cheeseman  World Lagomorph Society travel grant
Robert Curry  Edna Bailey Sussman Foundation Fellowship
Jesse Czekanski-Moir  MBL Woods Hole Molecular Evolution Workshop acceptance
Maureen Durkin  The Waterbird Society travel award to attend annual conference
Thomas Evans  Hudson River Foundation Mark B. Bain Graduate Fellowship
Tomek Falkowski  National Geographic Young Explorers grant
Geoffrey Griffiths  Edna Bailey Sussman Foundation Fellowship
Geoffrey Griffiths  Garden Club of America Fellowship in Ecological Restoration
Daniel Gurdak  US EPA STAR Graduate Fellowship
Daniel Gurdak  Explorer Club’s Flag for Amazon expedition
Kristen Haynes  ADK Highpeaks Foundation
Chellby Kilheffer  American Wildlife Conservation Foundation Grant
Alison Kocek  The Waterbird Society travel award to attend annual conference
Kali Mattingly  Edna Bailey Sussman Foundation Fellowship + outstanding proposal award
Andrew Miano  Best oral presentation award, NYS American Fisheries Society annual meeting
Stephen Pecylak  Edna Bailey Sussman Foundation Fellowship
C.J. Robinson  T. Uurling and Mabel Walker Research Fellowship
Michael Serviss  Edna Bailey Sussman Foundation Fellowship
Robert Smith  Edna Bailey Sussman Foundation Fellowship
Michelle Stantial  The Waterbird Society travel award to attend annual conference
Andrea Thomen  Smithsonian Mason School of Conservation scholarship
Camille Warner  Society of Wetland Scientists student grant award
Justine Weber  Edna Bailey Sussman Foundation Fellowship + outstanding proposal award

UNDERGRADUATE STUDENTS – DEPARTMENT, COLLEGE, AND SUNY RECOGNITION

Elizabeth E. Bourguet  Chun-Juan K. Wang Honor Award
Maja Brzezicki  Distinguished Biology Scholar Award – Forest Health
Brian Busby  Distinguished Biology Scholar Award – Conservation Biology
Cortney M. D’Angelo  Robert A. Zabel Endowed Scholarship
Emily P. Dengler  Distinguished Biology Scholar Award – Natural History & Interpretation
Christopher J. Esworthy II  Distinguished Biology Scholar Award – Biotechnology
Lindsay L. Feraco  Distinguished Biology Scholar Award – Wildlife Science
Margaret Foley  Alumni Association Memorial Scholarship – Junior
Samantha Hollister  Alumni Association Memorial Scholarship – Sophomore
Alex L. Kuhn  Patricia ’78 and Jeff ’77 Morrell Scholarship
Emily S. Landers  Phyllis Roskin Memorial Award
Russell J. Moore  Distinguished Biology Scholar Award – Aquatic & Fisheries Science
Molly A. Nugent  Ralph T. King Memorial Award
Gabriel Smith  Patricia ’78 and Jeff ’77 Morrell Scholarship
Andrew N. Stillman  Guy Baldassarre Memorial Scholarship
Andrew N. Stillman  Distinguished Biology Scholar Award – Environmental Biology
Andrew N. Stillman  Distinguished Biology Scholar Award – All Majors
Joshua R. Weber-Townsend  Joseph & Ruth Hasenstab Memorial Scholarship
Eli F. Wildey  Ralph T. King Memorial Award

UNDERGRADUATE STUDENTS – REGIONAL & NATIONAL RECOGNITION

ESF Chapter TWS  Third Place, National Quiz Bowl at TWS annual meeting in Pittsburgh, PA.
Members: Peter Iacono, Russell Winter, Kim Savides, and Thea Cooper
Ben Bussmann  Third place, bird ID, TWS Northeastern Student Conclave at Paul Smith’s
Rosa (Thea) Cooper  First place, mammal ID, TWS Northeastern Student Conclave at Paul Smith’s
Gavin Greco  Second place, tree ID, TWS Northeastern Student Conclave at Paul Smith’s
Emily Hall  Best poster, Society for Integrative and Comparative Biology annual meeting, Division of Invertebrate Zoology
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<thead>
<tr>
<th>Name</th>
<th>Accomplishment</th>
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<tbody>
<tr>
<td>Kim Savides</td>
<td>Second place, bird ID, TWS Northeastern Student Conclave at Paul Smith’s</td>
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<tr>
<td>Alison Smith</td>
<td>First place, bird ID, TWS Northeastern Student Conclave at Paul Smith’s</td>
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<td>Gabriel Smith</td>
<td>US Fulbright Student Award in Sweden, 2015-2016</td>
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Appendix Q. New York Natural Heritage Program
2014-15 Summary, Publications, Presentations and Service
(submitted by D.J. Evans, Director)

To fulfill our role as member of the NatureServe Network, in 2014-15 we finalized a Memorandum of Agreement with NatureServe (a Washington D.C. based non-profit that coordinates an international network of biodiversity data centers in all 50 states, all provinces of Canada, and several Latin American countries). This MOA enables us to exchange data and receive funds from NatureServe for assembling data and sharing information for New York species or ecosystems on projects that are national or international in scope. Through membership in the NatureServe Network, Heritage Programs work together to maintain compatible standards for biodiversity data management, and provide information about rare species and natural communities that is consistent across many geographic scales – state, national and global. Among other things, in 2014-15 our work with NatureServe included applying NatureServe’s Climate Change Vulnerability Index (CCVI) to about 30 Northeastern species (both plants and animals). This was part of a larger project that assessed the vulnerability of hundreds of species of concern for the Appalachian Landscape Conservation Cooperative.

The New York Natural Heritage Program (NYNHP) databases are the primary source of information on biodiversity used in environmental review and land management planning by state agencies in New York and one of the important inputs in setting priorities for conservation organizations. We currently manage 13,300 records of rare species and natural communities in our primary Biotics database. These records are an accumulation of 30 years of field work and data processing by our program, NYS DEC biologists, other agency biologists, NGO scientists, researchers and their students, and naturalists across the state. Our primary or “core” agreement with DEC Division of Fish, Wildlife and Marine Resources gives us the funding to manage data in Biotics, use the data for environmental review, and share it other agencies and conservation partners. Keeping these 13,300 Biotics records current when we can only revisit populations opportunistically, where additional government grants and contracts take us, is an ongoing challenge, but we do have a couple of “keeping data current” success stories from recent years! In 2013-14 we applied for and received $150,000 from the Sarah K. de Coizart Charitable Trust for bringing hundreds of rare animal records current through field assessments and data processing. We are continuing to work on this project and over the past year or so have handled 70-80 backlog records and updated 40 records based on new field surveys!

In the fall of 2014 we also received $50,000 from the Hudson River Estuary Program (HREP) to process a substantial backlog of rare species and natural community records for the Hudson Valley that had been accumulating in our files for several years with no funding to get them into our databases. Under this project we handled unprocessed data for 267 locations of rare species and natural communities in the Hudson Valley, which will help support the work of the HREP and dozens of municipalities and NGOs they engage in biodiversity conservation across Southeastern NY. Raising funds solely to keep data current in our databases is challenging, but we continually look for ways to do this through both existing and new partnerships.

Though our primary mission is to inventory and manage data on hundreds of rare species and natural communities across the state, our collaboration with DEC and NatureServe on an invasive species database, iMapInvasives (iMapInvasives.org), or “iMap,” now serves nearly 5000 users across New York and has been adopted by natural heritage programs in nine states
and one province of Canada. The scope of work in our DEC contract to manage invasive species data includes providing data collection tools and training to database users. This year, users requested and we released an Android platform field data collection tool designed for use on tablet computers (we use a similar set up for field data collection on rare species). Our five dedicated iMap staff also continue to train new database users across the state. We trained 470 new users this past year, 140 of which were trained as part of an annual spring “blitz” when our team travels to all corners of the state to train new users in iMap data entry and management.

Other database work we’ve received funding for this past year includes providing a statewide, comprehensive database of conservation lands to state, federal and NGO partners. Last year, we released our first iteration of the New York Protected Areas Database (NYPAD). NYPAD is a spatial geodatabase of lands protected, designated, or functioning as open space, natural areas, conservation lands, or recreation areas. Over six million acres of land is managed as open space in New York State, approximately 20% of state! We use the term ‘protected’ broadly, in that NYPAD lands may be public or private, open or closed to public use, permanently protected from development or subject to future changes in management (see NYPAD.org). This year, we received a $25,000 grant from the US Geological Service to bring NYPAD up to the U.S. Protected Areas Database (US-PAD) standards so that it can be uploaded to US-PAD and made more widely available to government agencies and the conservation community.

Research and inventory highlights on rare species and natural communities over the past year include surveys at a newly established state forest, Hemlock-Canadice Lakes State Forest, where we surveyed a large silver maple-ash swamp in the inlet and outlet of Hemlock Lake. We also documented an occurrence of Arrow Spiketail (Cordulegaster obliqua) in Canadice Hollow. We were unable to locate a population of false hop sedge (Carex lupuliformis) that had been documented in the Hemlock Lake inlet in 1980, but we will survey the area at least one more time before declaring this population gone. In addition to our work in Western NY, a new and exciting find from surveys on recently acquired Forest Preserve Land in the Adirondacks (former Finch-Pruyn property) included a population of Appalachian Tiger Beetle (Cicindela anocisconensis). This Tiger Beetle was found in a riverside ice meadow, a natural community that is unique to the Upper Hudson River.

Our work on state lands also includes a long term contract with New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to monitor rare species and natural communities across New York’s state park system and provide assistance in natural resource planning and stewardship. Since 2008, we have had a full-time ecologist, a full-time botanist, and about 20% of a zoologist’s time working to keep our 950+ records of rare species and natural communities in the state parks system current and to participate in state parks planning. We’ve been discussing adding capacity to the project over the past several months and are happy to report that this coming fiscal year, parks is adding funding to our agreement that will allow us to increase our zoological support to one full time equivalent and to also add some GIS support to the project!

Highlights of survey work in state parks this past year included the detection of several large-crowned trees in a wetland in Sampson State Park, which turned out to be an interesting area with some very old trees and a new record for the rare (in NY) shellbark hickory (Carya laciniosa). Old-growth forests in state parks have turned up some interesting finds as well. Among them was a rare species of peat moss, Sphagnum angermanicum (S1, state endangered) collected in boggy habitat at the bottom of Palmaghatt Ravine in Minnewaska State Park.
Preserve. The population is surrounded by old-growth hemlock-northern hardwood and is the only confirmed location of this endangered moss in New York.

It’s been another very engaged and productive year for our State Parks Partnership and we’re pleased to report that OPRHP is providing us additional funding for two special projects. First, a project called “Ranking State Parks for Conservation Planning and Action” will re-examine which state lands support unique aspects of New York’s biodiversity, and how our state agency partners, such as OPRHP, can leverage this biodiversity to support their goals. Partially modeled after our Natural Heritage Areas Project of 2006, this new assessment will include all of New York’s landscape (the 2006 project addressed only state-owned land). Performing the biodiversity assessment state-wide and at a finer resolution allows us to look at the contribution of very small parcels of land and has the added advantage of allowing us to roll up the data into larger units of comparison such as Parks, Wildlife Management Areas, or all state-owned land. The expanded geographic scope will allow OPRHP and other agencies and land stewardship organizations to put their property, and their biodiversity, in an appropriate context.

In a second OPRHP-funded project, we are examining the floristic structure and composition of rocky summits in the Hudson Highlands. The “Rocky Summit Grassland Natural Resource Stewardship Project” will increase the survey effort for rare plants on the summits and provide more information on how to protect and manage these unusual and fragile places that were historically maintained by fire. Over the years, many of these summits have been negatively impacted by active fire suppression and recreational activity. We’ve hired an ESF student for the summer, Trinity Boisvert, who is assisting with botanical surveys on Hudson Highland summits and with other state parks ecological surveys as needed.

Two additional field projects taken on in the past year are allowing us to get a look at both Federal and County land that we’ve had only limited opportunity to visit in the past. The first is an inventory of plants, animals and natural communities on Plum Island, an 840-acre island and one of a small archipelago of peninsulas and islands stretching from Long Island’s North Fork to Fishers Island and then to Connecticut and Rhode Island. The island is currently owned by the U.S. Department of Homeland Security, but decisions are soon to be made on the fate of this island, which, since 1952, has been home to a biological laboratory, the Plum Island Animal Disease Center, operated jointly by the US Departments of Agriculture and Homeland Security. We are conducting a comprehensive, four-season inventory of rare plants and animals on Plum Island and will develop a seamless map of the island’s natural communities, documenting communities of statewide significance. We have several NYNHP staff working on this project and we have engaged one of Dr. Dylan Parry’s graduate students, Neil Schoppmann, to assist with invertebrate work on Plum Island.

The second public land project that we’re pretty excited about involves targeted inventory for a state endangered plant and an occurrence of marl fen (a state rare natural community – S1), both documented nearly 30 years ago by Carol Reschke at Glens Falls Regional Airport. The county has proposed to lengthen the airport runway, which will require filling part of a wetland, and DEC is requiring survey work in the area. They have asked us to re-survey the extent and quality of the marl fen and to look for the state endangered elk sedge (Carex garberi), suspected to occur in the marl fen. Our surveys in June confirmed that the marl fen and the elk sedge are both still there -- we are completing our work on this project in July. In addition to our targeted surveys, we observed a northern white cedar swamp lying adjacent to the airport (also on county land) that appears to be in pretty good shape. We had limited time to spend in the swamp, but we
hope to do more work there in the future searching for a historical record of small white ladyslipper (*Cypripedium candidum*).

Additional, rare species inventory projects we’ve taken on this year involve working with our neighbor to the south, the New Jersey Natural Heritage Program. We are currently conducting rare plant surveys on two properties managed by the State of New Jersey -- Double Trouble State Park in central NJ, not far from the coast; and Bearfort Mountain Natural Area, on the northern NJ border, west of NY’s Sterling Forest State Park. We’ve already had a number of significant finds, in particular, at Bearfort Mountain. These include populations of Nantucket Juneberry (*Amelanchier nantucketensis*), which is new to NJ and listed as endangered in NY, and clustered sedge (*Carex cumulata*), which NJ Natural Heritage Program had listed as known historically from the state!

While the majority of our work on rare species with our state agency partners involves managing extensive amounts of data on rare species and conducting surveys on public land, we’re sometimes presented with opportunities to collaborate on new initiatives. Last year, we helped DEC develop a plan to address baseline migratory trends for whale Species of Greatest Conservation Need (SGCN), to delineate areas of conservation importance, and to provide a basis for long-term monitoring of whales in the New York City Bight. This year, we will hire a marine zoologist who will work with DEC on mapping and monitoring several species of endangered whales highlighted in NYS Comprehensive Wildlife Conservation Strategy as SGCN: Blue, Fin, Humpback, Northern Right, Sei, and Sperm whales.

We are also working with DEC to add marine zoological and geospatial expertise to our core agreement so that we can be of greater assistance to DEC and partners in marine conservation and marine endangered species management. In the next year, we expect to be adding 2 full time positions that will focus on marine species mapping and ranking and on offshore marine ecology.

This past winter we also added a position to address capacity gaps we’ve had in ecological modeling. We brought on a spatial ecologist, Dr. Amy Conley, to work with our lead scientist Dr. Tim Howard on two new projects and to help fulfill ongoing modeling needs. We’re especially excited about funding we’ve received from the US Fish and Wildlife Service (USFWS) that will allow us to produce regional species distribution models for several federally listed animals and plants that occur in USFWS Region 5. We will work in collaboration with the Virginia Natural Heritage Program and the Pennsylvania Natural Heritage Program on this project. We plan to develop regional distribution models for 5-10 selected species and create screening layers for use in USFWS environmental review and species recovery efforts.

Past annual reports have described how we are engaging with DEC’s wetland program and wetland protection efforts by developing a statewide wetland monitoring program using EPA Wetland Program Development Grants. We are currently working on five different EPA-funded wetland projects and have just hired a wetland ecologist, Laura Shappell, a Ph.D. candidate at Rutgers, who is currently splitting her time between completing her dissertation work and working for NYNHP. Laura will be with us on a full time basis later in the fall and we are expecting big things for our wetland program under Laura’s leadership. She will not only help us develop and prioritize our future wetland work, but will immediately take on project management responsibilities for two of our five current wetland projects:

1. APA Adirondack Wetland Monitoring (Project Manager: Langdon & Edinger)
2. GLRI Lake Ontario Adaptive Management Wetland Monitoring (Project Manager: Howard)
3) Development of Wetland Assessment Protocols in NY (Project Manager: Shappell)
4) Improving Vegetation Indicators of Wetland Condition (Project Manager: Ring)
5) Supporting actionable decision-making for wetland permitting in New York from urban to rural environments (Project Manager: Shappell)

Last, but not least (!), we just finished up two, big collaborative projects with The Nature Conservancy (TNC). The first, is a decision support tool we have worked on for over two years. It provides the New York State Energy Research and Development Authority (NYSERDA) and the wind energy industry information to help protect New York State’s biodiversity while still advancing statewide energy development and policy goals. An online application created by TNC presents a number of models and products that we created by combining our rare species data with existing environmental data. The tool contains maps and information on habitats for at-risk species; animal migration routes, stopovers, and breeding locations; unfragmented forest and wildlife travel corridors; land-use patterns; estimated wind speeds; and distance to roads and electric transmission lines (http://www.ebd.mapny.info).

The second project, another NYSERDA-funded initiative, collected, synthesized and packaged information that managers need to make climate-smart decisions. Information on the distribution of habitats and species, the condition of these habitats and identified threats, connectivity among habitats that will allow for species relocation, and the provision of ecosystem services are all integrated into a single toolkit that supports the identification of climate adaptation strategies for conservation objectives. Our particular role in the project was to provide expertise in species science and spatial modeling to predict shifts in selected species distributions due to projected climate and land use change, and to develop a spatial Climate Change vulnerability Index for selected species. We are working with TNC to publish the results of this project online very soon!

Publications

Papers Submitted, In Review, Pending Decision

Papers/Posters Presented at Science Meetings


Dean, J.M. 2015 (Presentation). Invasive species data in context with rare species work. iMapInvasives Executive Committee meeting. Traverse City, MI.


Unfunded Service to Professional Societies and Organizations
Conrad, N. 2010-present. President of the Board of Directors, Rensselaer Land Trust.

Conrad, N. 2005-present. Secretary, Board of Directors, Friends of the Dyken Pond Center.


Funded Service to Governmental Agencies, Public Interest Groups, etc.
Chaloux, A. 2012-present. Member, Northeast Partners in Amphibian and Reptile Conservation (NEPARC) Steering Committee.


Evans, D.J. 2007 – present. Member, New York State Invasive Species Advisory Committee.

Evans, D.J. 2013 - present. Member, NatureServe Board of Directors.

Howard, T. 2013-present. Member, Braddock Bay Interagency Technical Committee.


Schlesinger, M. D. 2014 – present. Member, NYC Natural Areas Conservancy Advisory Board.


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

White, E. 2007-present. Member, Dragonfly Society of the Americas.

Young, S.M. 2014-present. Advised Town of Huntington environmental committee and parks department on various invasive species projects.

Young, S.M. 2014-present. Member, Suffolk County Invasives Advisory Board.


 JamalPInvasives Training Sessions presented by various NYNHP Staff:


ISAW - Capital Mohawk PRISM. Ballston Spa. 2014.


APIPP Lake Monitoring Volunteers. online. 2014.


Lower Hudson PRISM SRN Block-Buster Survey Training. Online. 2015.

Presentations to the Public
Schlesinger, M. D. 2014. Tiger beetles and leopard frogs: Rare animals and the New York Natural Heritage Program. Invited presentation to the public at Adirondack Interpretive Center, Newcomb, NY, August 7, 2014.

Miscellaneous Publications and Outreach Activities and Materials
Dean, J.M. 2015 (Lecture). Invasive Species Efforts in NY. SUNY ESF EFB course: Invasive Species Management (Dr. Dylan Parry). Syracuse, NY.
P. Harper, E. White, and J. Lundgren. 2014. Bioblitz Results!
Appendix R. Annual Report for the Thousand Islands Biological Station
(submitted by John M. Farrell, Director)

Thousand Islands Biological Station
Annual Report 2014-15

The TIBS mission is to conserve aquatic resources using ecosystem-based science and monitoring to inform decision makers and society while providing exceptional educational experiences for students and the community.

The SUNY-ESF Thousand Islands Biological Station (TIBS), located on Governor’s Island, hosts a research program focusing on the aquatic ecology of the St. Lawrence River with an emphasis on fisheries, wetlands, limnology, invasive species, and ecological perturbations. The TIBS research program continues to advance scientific inquiry to guide management activities and understand impacts affecting the ecosystem. Many faculty, staff and students from a variety of institutions are attracted to the unique nature of this immense river that is the natural outlet to the Laurentian Great Lakes. Graduate and undergraduate student projects, with the support of a variety of faculty, provide a diverse research portfolio with many related studies supported by extramural grants. Many local outreach activities maintain a strong ESF connection to the St. Lawrence River community and provide students and staff opportunities for information exchange. We are excited about our progress and achievements and look forward a sustained commitment to aquatic research and conservation in the face of significant and evolving environmental challenges.

Highlights for 2014-2015 include significant research accomplishments including three Master’s students graduating, 11 published papers, and attendance at several regional and international conferences. The much anticipated completion of the Cean Aquatic Researcher building at TIBS was another important milestone for the year.

Administration
Dr. John M. Farrell, Director, TIBS
Dr. Donald J. Leopold, Chair, Department of Environmental and Forest Biology
Dr. Bruce Bongarten, Provost, SUNY ESF
Dr. Quentin Wheeler, President, SUNY ESF
Staff (all supported on extramural funding)
Jacob Runner, Senior Research Support Specialist and Laboratory Manager
Brandy Brown, Senior Research Support Specialist, Fish Habitat Conservation Strategy
Gillian Avruskin, Senior Research Support Specialist, Fish Habitat Conservation Strategy
Eric Johns – Field Technician
Ericka Augustyn – Field Technician (and TIBS MS student Fall 2016)

Graduate students
Andrew Miano (MS – Advisor, Dr. Farrell)
Ben Amos (MPS – Advisor, Dr. Farrell – GRADUATED in May 2015)
Kelly Huffman (MS – Advisors, Dr. Farrell & Dr. Whipps)
Ceili Bachman (MS – Advisors, Dr. Mitchell & Dr. Schulz)
Matt Regan (MS – Advisor, Dr. Leopold)
Alex Looi (MS – Advisor, Dr. Schulz)
Stewart LaPan ( MS – Advisors, Dr. Gibbs & Dr. Farrell GRADUATED IN May 2015)
Mark Leopold (MS – Advisor, Dr. Farrell – GRADUATED IN DECEMBER 2014)
Geof Eckerlin (PhD – Advisor, Dr. Farrell)

Undergraduate students
Ryan Robinson–Field Technician and SUNY Morrisville Intern
Austin Demarest– Federal Work-Study Student (funded through EFB)
Katelyn Barhite – Federal Work-Study Student (funded through EFB)
Avriel Diaz – NOAA Field Technician
Emily Landers– Federal Work-Study Student (funded through EFB)
Peter Zimmer – Field Technician

Faculty involvement
Dr. Julie Clausen, University of Illinois- Smallmouth Bass nesting study
Dr. Emily Cromwell, Cornell University Veterinary College – NY SeaGrant VHSV study
Dr. Rodman Getchell, Cornell University Veterinary College – NY SeaGrant VHSV study
Dr. James Gibbs, ESF, NOAA wetlands restoration project – avian and herpetofauna
Dr. Frederick Lecomte, INRS Quebec & University of Chicoutimi, Quebec – larval fish ecology
Dr. Donald Leopold, NOAA wetlands restoration project – plant ecology
Dr. Kevin Kapuscinski , ESF, FA project – esocid diet study
Dr. Marc Mingelbier, INRS Quebec – larval fish ecology project
Dr. Myron Mitchell, NOAA wetlands restoration project – biogeochemistry
Dr. Gordon Paterson, ESF, FA project – sex ratio study
Dr. David Phillip, University of Illinois – Smallmouth Bass nesting study
Dr. Kimberly Schulz, NOAA wetlands restoration project – lower trophic levels and nutrients
Dr. Mark Teece, ESF, Round Goby diet study
Dr. Chris Whipps, ESF, FA project Northern Pike sex ratio study
TIBS Muskellunge Research was highlighted in the 2016 New York State Department of Environmental Conservation Fishing Regulations Guide

Research (active grants listed)


Hanchin, P., B.L. Sloss, L. Miller, C. Wilson, K.L. Kapuscinski, K. Schribner, and J.M. Farrell. Delineation of Natural Boundaries of Muskellunge in the Great Lakes and the effects of Supplementation on Genetic Integrity of Native Stocks. Great Lakes Fisheries Commission, $42,721; ESF share $4,705


*TIBS researchers helped design and evaluate a walleye spawning enhancement project constructed by the US Fish and Wildlife Service Partners for Fish and Wildlife Program during spring 2015*
http://dx.doi.org/10.1016/j.jglr.2013.11.003


http://dx.doi.org/10.1016/j.jglr.2012.11.006

http://dx.doi.org/10.1016/j.jglr.2012.11.007.

Published reports


Presentations (scientific)


Farrell, J.M. 2014. Getting fisheries off to a good start: Why there is a need to address early life processes in applied fisheries management. 38th Annual Larval Fish Conference (Plenary Presentation), American Fisheries Society 144th Annual Meeting, Quebec City, Quebec, Canada.


TIBS researchers attended the 2014 American Fisheries Society Annual Meeting in Quebec City and visited a tidal fishing trap on the lower St. Lawrence River. Pictured are: Dr. Marc Mingelbier and Director, Dr. John Farrell (upper left); Ben Amos and Dr. Karin Limburg (upper right); Aline Foubert, Sarah, Andrew Miano, Kim Farrell, Kelly Huffman and Brandy Brown (from lower left to right)
Habitat to Protect (St. Lawrence River, Canada), American Fisheries Society 144th Annual Meeting, Quebec City, Quebec, Canada.


**Outreach**

- Thousand Islands Land Trust, Zenda Farm Picnic – Provided display of fish and other aquatic life and information regarding TIBS programs as a TILT Conservation Partner for major community event (~300 participants)
- Thousand Islands Land Trust, Kids Trek “Ichthyologist for a Day” – led children ages 5-12 and adults through a series of modules on fish and river ecology on the St. Lawrence River (25 participants) [http://www.tilandtrust.org/Treks-Events/FullCalendarofTreksEvents.aspx](http://www.tilandtrust.org/Treks-Events/FullCalendarofTreksEvents.aspx)
- EFB River Day – Interpretive tour and presentation to the EFB faculty and staff on the Thousand Islands Biological Station research program and facilities
- Clayton Yacht Club – visit and tour on Thousand Islands Biological Station programs and St. Lawrence River research for club members (15 participants)
- Region 5 Federal Conservation Partnership Meeting - Poster Session and Thousand Islands Biological Station Tour (40 participants)
- Thousand Islands National Park | Parc national des Mille-Îles, Information and onsite meetings and field visits regarding wetlands restoration.


**Teaching**

EFB 388 Adirondack Fish Ecology – SUMMER 2014 - two day field trip to TIBS to learn about the aquatic ecosystems and fishes of the St. Lawrence River (14 students)

EFB 488 Fisheries Practicum – FALL 2014 - field trip to assist with study on juvenile muskellunge population estimate in nursery areas

EFB 496 Wildlife Field Techniques - SPRING 2015 - 1 day field tour to wetland restoration sites, St. Lawrence River fish sampling experience, and program presentation

**Facility upgrades**

The Cean Researcher Building was finally opened in June 2015. Contractors from Greene Structures worked through much of the winter accessing Governors Island by ice boat. Students and staff are now using the residential space, kitchen facilities and meeting and office spaces. A ribbon cutting ceremony in appreciation of donors and friends is upcoming and supported by the ESF College Foundation. The drilled well passed the drinking water inspection and is now the water source for all buildings including a line to the wet lab. Wet lab upgrades were completed in spring 2015 completed with assistance by ESF Physical Plant that allows use of well water for lab use and fish culture. Work is still ongoing to install video conferencing and research camera systems with real time connections to the EFB Center for Integrated Research and Teaching in Aquatic Sciences (CIRTAS) facility in Illick Hall.

The Cean Aquatic Researcher Building at TIBS was primarily financed with public donations and ESF College Foundation Support and was completed in June 2015. The building will serves as a residence for students, staff and visiting scientists, and includes office, computing facilities, video conferencing and meeting space. A ribbon-cutting ceremony is planned for summer 2015 with the ESF College Foundation to honor friends and donors.
Appendix S. Annual Report for the Cranberry Lake Biological Station  
(submitted by Alex Weir, Director)

The on-going strategic plan for CLBS has the following main thrusts: 1) strengthening the academic program to provide core field biology courses for our students and visitors; 2) increasing the diversity and numbers of students enrolling at the Station; 3) strengthening the research capabilities and scientist use of the Station; and, 4) increasing the synergy between teaching and research at the Station.

Teaching
Each summer CLBS offers a ten-week undergraduate and graduate academic program. The 2014 summer program at CLBS attracted 223 students for a total of 589 student weeks representing our highest usage rate to date.

Overall student evaluations for all of these classes were very high. In addition to our own undergraduate/graduate program we also ran an additional one-week program for high school students through OCM BOCES (36 students)

The ESF Systems Ecology class used the station over one weekend in fall 2014.

Research
The Station has hosted both internal (ESF) and external (outside universities) research projects for many years. The longest-running of these involves studies of white-throated sparrow genetics and behavior, led by Dr. Elaina Tuttle (Indiana State University) which have been on-going for 28 years, and have been supported during those years by the NSF, NIH and other grants. During summer 2014 we hosted 3 graduate and 2 undergraduate students along with PI Tuttle from late April to early August. We have also hosted a research group from Cornell University for 24 years, led by Dr. Tom Seeley, and focused on honey-bee behavior and ecology, with 2 students and PI Seeley in residence during June/July 2014. A joint SUNY-ESF and SUNY Albany Atmospheric Sciences (and other universities) project also used the Station during the latter part of August and early September. Our other resident researcher during summer 2014 was Miguel Zapata, winner of the Grober graduate student award, who studied bryophyte ecology and taught at Cranberry Lake.

Administration
During summer 2014 I supervised 1 graduate student (Business Manager) and 9 Federal work-study students at CLBS, along with overall responsibility for the 223 students on a 24/7 basis. I continued with ongoing fundraising efforts involving visitors and alumni. I developed and oversaw the annual budget for the Station, helped develop academic programming, taught portions of EFB 202, welcomed guests and visitors to the station, held informational meetings for EFB students, handled registration issues and process, and was the contact point for all CLBS-related inquiries. Both on and off-season I worked closely with Physical Plant, Boat Pilots and Food Service operations at the Station to ensure as smooth an operation as possible. Since November 2014 I have worked closely with our new Director, and the CLBS Advisory Committee to ensure a smooth transition for summer 2015.