

Front Cover: Collage of images provided by EFB faculty, staff, and students

Department of Environmental and Forest Biology

Annual Report

**Summer 2009
Academic Year 2009-2010**

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Introduction

The topics and format of this annual report generally follow instructions from Provost Bongarten. Additional, brief material is included for readers external to ESF. Individual faculty annual reports, from which much of the information within the EFB Annual Report is directly taken, are available at: <http://www.esf.edu/efb/annualreports.htm>.

People

Many of the over 750 undergraduate and graduate students in the department received a variety of awards this past year (see Appendix O), but some of the awards were highly significant. Graduating seniors Lynne Beaty and Kelly Klingler received the SUNY Chancellor's Award for Student Excellence, the only two students in the graduating class of all departments to be recognized with this honor. Lynne was also selected as the Department's Scholar for the Class of 2010, and was one of only three undergraduates in the graduating class to represent ESF at the joint SU/ESF Commencement in May. EFB sophomore Katherine McKissick, Kelly Klingler, and EFB Ph.D. student Keith Bowman received Alumni Association Memorial Scholarships. Ph.D. student, Megan Kirchgessner, was the 2010 recipient of the Dorothy Bertine Sussman Internship award, given to the graduate student who submitted the best Sussman internship proposals from the eight participating universities. Ph.D. student, Anna Stewart, was awarded a Fulbright Fellowship to fully fund her research for ten months in Ecuador. M.S student Chris Nack and Ph.D. student Cheryl Whritenour received National Estuarine Research Reserve Graduate Fellowships.

Appendix A lists EFB faculty during the 2008-2009 Academic Year, including their rank, education, and scholarly interests. Numerous contributions by, and highlights of, the faculty follow throughout this report. Each faculty member's summary (unedited) of their most significant accomplishments this past year is in Appendix B. Of the many faculty highlights this past year, only a few are included in this section.

The faculty had many significant accomplishments and recognition this past year. Dr. Guy Baldassarre received a number of prestigious awards; he was elected to Fellow status in the American Ornithologists Union, received the Outstanding Alumnus Award from the Department of Wildlife Ecology, University of Maine, and was recognized by Outdoor Life Magazine with their "Outdoor 25" award which is given annually by Outdoor Life Magazine to 25 people influencing hunting and fishing. Drs. John Castello and Steve Teale have nearly completed their edited textbook on Forest Health for Cambridge University Press in July, with most contributions coming from EFB and FNRM faculty; both continue to collaborate on beech bark disease research and co-teach "Peoples, Plagues and Pests". Building on his work in montane environments throughout North America and Europe, Dr. Martin Dovciak joined scientists from the USGS, National Park Service, and elsewhere on the Appalachian Trail MEGA-transect study.

Dr. John Farrell was a co-editor of a special issue of *Hydrobiologia* based on an earlier symposium "Ecosystem Studies of the St. Lawrence River" held at the St. Lawrence Institute in Cornwall, Ontario. Dr. Danny Fernando was Guest Editor for a Special Issue on Plant Development and Evolution by the *International Journal of Plant Developmental Biology* and served for his third year as the Director of EFB's graduate programs. Dr. Melissa Fierke taught General Biology for the second year to about 300 students and developed two new courses, Insect Diversity, which was taught at the graduate level this spring, and Forest Health

Monitoring, which was taught as a two-week field course out of Heiberg for Forest Health majors. Besides a variety of teaching, advising, and research activities, Dr. Jacqui Frair served as the chair of the ESF Faculty Governance Committee on Research (COR) and Vice-President of the NYS Chapter of The Wildlife Society (TWS).

Along with his many campus obligations, Dr. James Gibbs launched a major constructed small wetlands project at Heiberg Forest, managed a large Guyana-based NSF “biocomplexity” grant, actively served as an adjunct scientist with the Charles Darwin Foundation in the Galapagos and secured funding for two projects there that focus on reintroduction of giant tortoises, was involved with conservation of the Kihansi spray toad in Tanzania, and served as Vice Chair on the Altai Assistance Project to generate support for conserving the biological and cultural riches of the Altai region of Russia. Dr. Charles Hall will be featured on the Discovery Channel special four part series on “Energy” this summer; his biophysical economics approach to energy issues garnered significant coverage including an article in the New York Times and the publication of papers in “The Corporate Examiner”.

Dr. Tom Horton co-organized a symposium on Conservation of Fungi at last summer’s MSA/BSA annual meeting that led to a special issue in Fungal Ecology and received a \$240,000 award from NSF award for research on the determinants of ectomycorrhizal fungal spread and its relation to Pinaceae invasion. While teaching 12 distinct courses this past year and serving as Director of the USDA Multicultural Scholars program and the NSF Undergraduate Mentoring in Environmental Biology Program, Dr. Robin Kimmerer completed her manuscript for a new book entitled “Braiding Sweetgrass”(accepted by Milkweed Press with an anticipated publication in fall 2011). Dr. Don Leopold agreed to serve a second, three year term as Chair of the Department, and will lead the department’s planning efforts to design and construct a new biology building.

In addition to ongoing research in the Hudson River estuary, Baltic Sea, and Grand Canyon and record enrollment in her Fisheries course, Dr. Karin Limburg’s research program continues to expand to include the restoration of ecosystems for diadromous (land-sea migrating) fishes, identification and management of marine bycatch of river herring, and the joint interaction of watershed nutrient loadings and fisheries on the generation and persistence of marine hypoxia. Dr. Mark Lomolino (with B.R. Riddle, R.J. Whittaker, and J.H. Brown) published the 4th Edition of *Biogeography*, which should continue to be the leading text in the field of biogeography. Dr. Greg McGee continued to convene the freshman seminar, develop the laboratories associated with General Biology both semesters, and through his involvement in EFB 202 at the Cranberry Lake Biological Station has implemented or coordinated student learning outcome assessments to be used for EFB’s Middle States accreditation.

Dr. Myron Mitchell continued to maintain a vigorous research program with more than \$1.8 million in grants, coauthoring ten peer reviewed papers (one, a culmination of a multiyear effort and including 20 co-authors), and one book chapter. Dr. Jim Nakas devoted a considerable amount of time to corporate entities (Welch Allyn, Tessa Plastics, Blue Highway, Auburn Biodiesel, Northern Biodiesel, Sunoco, R₃Biofuels, and others) trying to understand ways to assist them. Dr. Tsutomu Nakatsugawa made good progress on revising his book manuscript, written for the lay person, that summarizes toxins in the environment. In addition to serving as the Undergraduate Curriculum Director for EFB and Coordinator for the ENB major, Dr. Roy Norton published 10 papers and book chapters on systematics, evolutionary biology, molecular biology, paleobiology, ecology, reproductive biology, functional anatomy and embryology,

involving 17 coauthors from 6 other institutions in the US, Poland, Germany, Brazil and the Philippines.

Dr. Dylan Parry taught his Ecology and Management of Invasive Species course last fall and developed a new course, Forensic Entomology. Dr. Bill Porter's co-edited book (with J. Erickson and R. Whaley), *The Great Experiment in Conservation. Voices from Adirondack Park*, was published by Syracuse University Press. Dr. Bill Powell, with FNRM colleague Dr. Chuck Maynard, became a co-PI on a \$5.2 million, multi-institutional research project to use American chestnut as a model for the use of biotechnology tools for improving the health of our forests. Dr. Neil Ringler, besides serving as ESF Dean of Research and teaching courses in aquatic entomology and comparative vertebrate anatomy, chaired a college-wide faculty search that led to three hires in the area of Global Environment, Health, and Sustainability, through SUNY's Empire Innovation Program.

Professor Andy Saunders' courses contributed approximately 664 hours in community products and programs including the completion of *The Morningside Science and Multidisciplinary Trail*. At the invitation by the National Science Foundation, Dr. Kim Schulz submitted a proposal, "Eco-evolutionary feedback on community assembly", that NSF's EAGER program funded for \$300,000 for two years. Dr. Bill Shields taught Animal Behavior, led both the freshmen and sophomore honors seminars, and published two papers related to forensic DNA, including one in *Science* with a group of prominent researchers to change the way the FBI handles scientific information. Dr. Steve Teale taught six courses to 266 students including Chemical Ecology which had not been taught since 2003.

Dr. Scott Turner launched a new EFB core course, "Physics of Life", was promoted to Professor, and was awarded a grant from the John C. Templeton Foundation to fund his spring sabbatical leave at Cambridge University, where he worked on his third book. Dr. Alex Weir spent much time on the coordination and execution of international field experiences for students including ten going to Russia in June/July 2009, the largest participation ever in this program, and which facilitated an increased number of Russian students in attendance at Cranberry Lake Biological Station in August. Besides teaching nearly 200 students in the second semester of General Biology, Dr. Chris Whipps received an NIH subcontract to continue his research on mycobacteriosis in laboratory zebrafish and in an investigation of diseases in NYS fishes identified three new species of fish parasite including a new genus.

EFB faculty received a variety of professional awards this past year. In mid May, Dr. Robin Kimmerer was awarded the title of SUNY Distinguished Teaching Professor. This designation is SUNY's highest teaching award and is held by fewer than five percent of SUNY faculty. It recognizes Robin's outstanding contributions to the intellectual growth of our students through instruction, mentorship and scholarship. Dr. Karin Limburg was notified that early in the next academic year, she will receive ESF's Exemplary Researcher award, which recognizes a currently active faculty member at ESF with exemplary research activity, publication record, and graduate/undergraduate student research program. Dr. Don Leopold received the New York State Nursery and Landscape Association 2009 George L. Good Gold Medal of Horticulture Award.

The ESF properties directed by EFB faculty continue to thrive. Dr. Bill Porter's efforts toward *Building for the Future* at the Adirondack Ecological Center resulted in near-completion of a \$350,000 restoration of Huntington Lodge with all furnishings being provided by Stickley-Audi Furniture through discounts and a matching donation from the company. As co-PI of the large NSF infrastructure grant to ESF, Dr. John Farrell will be enhancing the connection between

the Thousand Islands Biological Station that he directs and the main campus. Dr. Alex Weir, as Director of the Cranberry Lake Biological Station, experienced enrollments at almost full capacity for the summer of 2009, with almost 200 undergraduate students present at the Station, and research groups from Indiana State University, two Cranberry Lake Fellowship awardees, and four UMEB participants. Drs. Ringler, Schulz, Farrell, Brunner, and Leopold were notified by NSF that they have been selected to receive \$1,757,801 for the proposal "Renovation of wet labs and cyber-infrastructure to enhance integrated research and teaching in aquatic sciences". This grant will transform the old Illick Animal Care facility into a significant research space especially suited for controlled environment experiments in aquatic and fisheries science, conservation biology, and other areas.

EFB will be losing four faculty for this next academic year. Dr. Jesse Brunner has accepted a position at Washington State University beginning January 2011 and will spend this fall semester with his wife, and newborn son (Henry) at Vassar College. Dr. Martin Schlaepfer has resigned to move back to Europe, where he will continue his research on the conservation and evolution of amphibians. Dr. William Porter will be retiring from SUNY-ESF in August to accept the Boone and Crockett Club Professorship in Wildlife Conservation at Michigan State University in Lansing. Early in the next academic year Professor Andy Saunders will retire from ESF.

With these losses, EFB has been able to make significant new hires for the next academic year. Elizabeth Folta will join EFB in mid August as an Assistant Professor. Ms. Folta has been hired in the Informal Biology Education area replacing Professor Saunders. She comes to ESF from North Carolina State where she is finishing her Ph.D. work. Beth will be teaching Principles of Environmental Interpretation and other courses required by EFB's major in Natural History and Interpretation. Dr. Lee Newman will join the department this August as an Assistant Professor. Lee comes to ESF from the Brookhaven National Laboratory and specializes in phytoremediation. She will be teaching Cell Biology and Molecular Techniques. We soon hope to hire a wildlife ecologist to replace the teaching and research programs vacated by the retirement of Dr. Porter. Additionally, we hope to soon hire another faculty member to help launch programs in Environmental Health.

EFB's Instructional Support Specialists served the department in many important ways this past semester. For example, Kim Adams taught the lab for a new graduate course with Dr. Fierke, Insect Diversity, and published a paper in the Northern Journal of Applied Forestry with R. Hanavan and D. Allen on peach bark beetle damage to black cherry. Terry Ettinger (greenhouse manager for EFB) taught Plant Propagation this past spring to an enthusiastic group of undergraduate and graduate students, many who propagated native species needed for research projects. Additionally, Terry was co-chair of the ESF 09-10 United Way campaign and continued to host SUNY ESF "Going Green" franchise cablecast on Time Warner YNN stations across all of upstate New York, western Massachusetts, and northern Pennsylvania. Ron Giegerich gave 40 presentations this past year as part of his duties as curator of the Roosevelt Wildlife Collection and continues enhancing 12 Illick with specimens that he has prepared or has received through donations. Pat McHale continues to maintain biogeochemistry equipment and instrumentation at the Huntington Wildlife Forest and at two Syracuse Tower sites, related to research conducted by Dr. Myron Mitchell. Bridget McMaster provided key assistance to a large number of courses, including General Biology labs, Genetics, Forest Pathology, Diversity of Plants, Environmental Microbiology, and courses at the Cranberry Lake Biological Station.

In April we hired Dawn Thomas as our new Undergraduate Student Support Secretary (Keyboard Specialist 2). Previously, Dawn worked at University Police for seven years.

Building(s)

After years of substantial improvements in Illick spaces there were generally few new changes this past year. The most significant improvement was an outdoor storage shed that was made available to faculty and staff at the end of the spring semester. The storage area is on the Illick loading dock. Planned renovations to key teaching (e.g., Illick 5) and seminar rooms were not initiated.

Teaching

There was one highly significant change in EFB course offerings this past academic year with Dr. Scott Turner's offering of EFB 200, *Physics of Life* during the fall '09 semester. Nearly 130 students were enrolled in this alternative to physics courses taught at Syracuse University, freeing up a substantial number of accessory instruction credit hours for ESF and EFB undergraduates to use at Syracuse University for other courses. Part of this launch involved delivering electronic course materials through a variety of media. Dr. Turner produced, along with the staff at ESF's Instructional Technology Service, 35 short instructional videos, which are available to students on iTunesU and the ESF channel on YouTube.

The *General Biology* lecture and lab courses, which replaced *General Botany* and *Zoology* during the '08-'09 academic year, were very successful this past year. Dr. Melissa Fierke taught the lecture for the first semester (Organismal Biology and Ecology), Dr. Chris Whipps the lecture for the second semester (Cell Biology and Genetics), and Dr. Greg McGee taught the laboratory for both semesters. Enrollment for Drs. John Castello and Steve Teale new General Education course, *Peoples, Plagues, and Pests* increased this past spring from about 100 students the previous year to 167. In June '09, Dr. Alex Weir took ten students to the White Sea Biological Station (Russia) as part of the exchange program between ESF and Moscow State University.

At the graduate level, Drs. John Farrell and Kim Schulz convened a weekly seminar both semesters for new EFB graduate students. This seminar served as an orientation (what to find where, etc.), and introduced important elements of grad school (e.g., proposal writing; forming a committee; developing research ideas) and aspects of professional life (e.g., examples of research by faculty and advanced grad students; how to go through a job interview; how to be peer-reviewed). Additionally, participants in the course coalesced into a cohort, bridging across the diverse sub-disciplines within the EFB graduate program.

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)

<u>Faculty</u>	<u>Course #</u>	<u>Course Name</u>	<u>Enrollment</u>
Baldassarre	390	Principles of Wildlife Management	115
	482	Ornithology	20
Brunner	311	Principles of Evolution	157
	496/796 (0.5)	Emerging Diseases of Fish and Wildlife	4

	797 (0.5)	Tools of the Ecological Detective	9
	797	Ecological Models	1
Castello	217 (0.5)	Peoples, Plagues, & Pests	167
	303 (0.5)	Intro Environmental Microbiology	52
	340	Forest and Shade Tree Pathology	47
	345 (0.5)	Forest Health	10
	494	Senior Synthesis in Forest Health	4
Dovciak	445/645	Plant Ecology	33
	535	Flowering Plants: Diversity, Evol., & Syst.	12
	797 (0.5)	Adaptive Peaks Seminar	27
Farrell	388 (0.5)	Ecology of Adirondack Fishes	14
	681	Aquatic Restoration & Management	12
	797 (0.5)	EFB Graduate Core Seminar	50
Fernando	132	Orientation Seminar in Biotechnology	18
	326	Diversity of Plants	79
	427/627	Plant Developmental Biology	19
Fierke	101	General Biology Lecture I	309
	439	Forest Health Monitoring	14
	796 (0.5)	Insect Diversity	6
	797 (0.5)	Adaptive Peaks Seminar	29
	797	Non-native Forest Insects	4
Frair	491	Applied Wildlife Science	31
	496	Wildlife Field Techniques	15
	797 (0.5)	Tools of the Ecological Detective	9
Gibbs	384	Field Herpetology	18
	413	Intro to Conservation Biology	103
	419	Problem Solving in Cons. Biology	41
	485	Herpetology	79
Hall	120	Global Environment	116
	(ESC) 325/525 (0.5)	Energy	28
	496/796	Odum Seminar	4
	516	Ecosystems	29
	518	Systems Ecology	18
	522	Biophysical Economics	17
Horton	320	General Ecology	249
Kimmerer	296	USDA Multicultural Scholar Seminar	14
	305/605	Land & Culture: Indigenous Issues/Envnt.	28
	337	Field Ethnobotany	15
	446/646	Ecology of Mosses	28
	496	Plants and Culture	24
	497	UMEB Seminars	29

	(EST) 497/797	Onondaga Land Rights & Our Common Fut.	22
Leopold	327 (0.5)	Adirondack Flora	10
	336	Dendrology I	125
Limburg	487/687	Fisheries Science and Management	30
	500	The Hudson River Watershed	8
	796	Quantitative Modeling and Analysis	8
Lomolino	483	Mammal Diversity	73
	796	Biodiversity of Mammals	2
	797	Ecology and Conservation of Island Life	10
McGee	102	General Biology Lab I	284
	104	General Biology Lab II	183
	132	Orientation Seminar: EFB	115
	202	Ecological Monitor. Biodiversity Assess.	147
McGrath	497	Aquatic Senior Synthesis Seminar	5
Mitchell	415	Ecological Biogeochemistry	14
	497	Ecology Seminar	3
	610	Ecological Biogeochemistry	10
	797	Hydrology/Biogeochemistry Seminar	7
Nakas	301	Latin for Scientists	65
	303 (0.5)	Intro. Environmental Microbiology	52
	403/796	Microbiol. Diseases of Fish and Wildlife	20
	505	Microbial Ecology	17
Nakatsugawa	400/600	Toxic Health Hazards	39
	611	Topics in Environmental Toxicology	6
Norton	355	Invertebrate Zoology	41
Parry	496/796	Plant-Herbivore Interactions	13
	496/796	Forensic Entomology	14
	502	Ecology & Mgt. Invasive Species	33
	796	Advances in Insect Ecology	10
Porter	484/684	Winter Mammalian Ecology	21
	493/693	Wildlife Habitats and Populations	44
	513 (0.5)	Adirondack Forest Ecology & Mgt.	11
Powell	307	Principles of Genetics	214
	308	Principles of Genetics Lab	198
	401/601	Molecular Biology Techniques	23
	(BTC) 497	Research Design & Prof. Develop.	20
Ringler	385	Comparative Vertebrate Anatomy	51
	388	Ecology of Adirondack Fishes	12

	554	Aquatic Entomology	16
Saunders	215	Interpret. Science Through Art	84
	404	Nat. Hist. Museums and Modern Science	28
	405	Literature of Natural History	27
	406	Great Naturalist Seminar	15
	416/616	Intro/Environ. Interpretation	54
	417/617	Adv. Perspectives of Interpretation	56
	797	Readings/Field of Environ. Inter.	8
Schulz	424/624	Limnology: Study of Inland Waters	36
	524	Limnology Practicum	14
	423/623	Marine Ecology	78
	796 (0.5)	EFB Graduate Core Seminar	48
Shields	(ESF) 109	Freshmen Honors Seminar	26
	296	Sophomore Honors Seminar	14
	480	Animal Behavior	45
Stewart	486	Ichthyology	53
	523 (0.5)	Tropical Ecology	16
Teale	217 (0.5)	Peoples, Plaques, and Pests	167
	345 (0.5)	Forest Health	10
	352/552	Entomology	71
	412/612	Intro. Chemical Ecology	18
Turner	200	Physics of Life	129
	462/662	Animal Physiology: Environ. & Ecol.	78
Weir	440/640	Mycology	52
	500	Forest Biology Fieldtrip - Russia	10
Whipps	103	General Biology Lecture II	192
	496/796	Emerging Diseases of Fish & Wildlife	8
	797	Population Genetics and Molecular Biol.	12
	797	Topics in Applied Microbiology	5

Courses by Instructional Support Specialists & Visiting Instructors

Adams (0.5)	796	Insect Diversity	6
Bachand	325	Cell Physiology	96
Ettinger	496	Plant Propagation	5
Giegerich	381	Vertebrate Museum Techniques	10
Hager	496	Ecology Adirondack Insects	6

Hocutt	496	Issues in Mgt. & Conflict Resolut.	21
Klitgaard (0.5)	522	Ecology, Resources, and Development	15
Quinn	414	Senior Synthesis in Con. Biol.	24

Course teaching load summary by faculty members

The following data are from the Faculty “Workload” Report (3/10) 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.

Dr. Horton had the highest teaching workload (1093 total credit hours), followed by Drs. McGee (1051), Fierke (1014), Professor Saunders (890) and Dr. Powell (825). EFB faculty were responsible for 15,269 credit hours (versus 12,488 last reporting period) of campus instruction. Another 544 credit hours were delivered by Visiting Instructors and others (versus 1017 in last reporting period).

Teaching Load Summary by Faculty Member

<u>Faculty</u>	<u>Research CH</u>	<u>Prob./Sem. CH</u>	<u>Class CH</u>	<u>Total (U/G)</u>
Horton (1*)	11/36	10/9	996/31	1093 (1017/76)
McGee (2)	-	25/0	1020/0	1051 (1045/6)
Fierke (3)	5/41	9/16	933/10	1014 (947/67)
Saunders (4)	23/14	52/50	679/72	890 (754/136)
Powell (5)	11/28	38/5	728/15	825 (777/48)
Gibbs (6)	4/59	55/0	705/0	823 (764/59)
Hall (7)	16/71	29/0	490/114	720 (535/185)
Whipps (8)	14/7	27/15	576/24	663 (617/46)
Baldassarre (9)	11/14	17/0	606/2	650 (634/16)
Turner ^a (10)	0/7	3/0	609/15	634 (612/22)
Teale (11)	3/44	5/0	507/27	586 (515/71)
Brunner (12)	3/11	8/1	510/32	565 (521/44)
Castello (13)	3/8	6/0	523/0	540 (532/8)
Leopold (14)	12/82	32/0	407/0	533 (451/82)
Schulz (15)	16/17	-	399/14	476 (415/61)
Kimmerer (16)	21/31	37/15	244/27	375 (302/73)
Fernando (17)	8/33	8/0	315/6	370 (331/39)
Ringler (18)	9/47	5/0	257/18	336 (271/65)
Lomolino (19)	0/4	0/10	300/8	322 (300/22)
Porter (20)	1/50	0/8	196/57	312 (197/115)
Shields (21)	8/52	18/0	232/0	310 (258/52)
Stewart (22)	3/18	29/0	214/33	297 (246/51)
Nakas (23)	11/38	4/0	218/11	282 (233/49)
Weir (24)	10/15	46/0	156/12	239 (212/27)

Frair (25)	21/33	20/0	138/15	227 (179/48)
Dovciak (26)	7/26	2/17	96/47	195 (105/90)
Norton (27)	5/0	5/0	179/1	190 (189/1)
Parry (28)	0/10	5/0	87/70	172 (92/80)
Nakatsugawa (29)	9/2	5/2	120/18	156 (134/22)
Farrell (30)	3/43	-	33/61	140 (36/104)
Mitchell (31)	7/27	4/17	48/27	130 (59/71)
Limburg (32)	0/16	0/6	66/39	127 (66/61)
McGrath (33)	0/9	4/0	-	13 (4/9)
McNulty (34)	0/13	-	-	13 (0/13)
Abrahamson (35)	-	-	-	0

*rank out of all faculty; 1 highest, 35 lowest

^a on sabbatical leave for one semester

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

Adams	-	-	0/7	7 (0/7)
Allen	0/6	-	-	6 (0/6)
Bachand	-	-	288/0	288 (288/0)
Ettinger	3/0	-	24/12	39 (27/12)
Giegerich	4/0	-	22/0	26 (26/0)
Hager	-	-	33/0	33 (33/0)
Hocutt	-	-	18/2	20 (18/2)
Klitgaard	-	-	21/5	26 (21/5)
Quinn	-	-	99/0	99 (99/0)

Undergraduate Student Advising Loads

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

Abrahamson 0	McNulty 0
Baldassarre* 33	Mitchell 12
Brunner 20	Nakas 12
Castello* 25	Nakatsugawa 17
Dovciak 19	Norton** 28
Farrell 9	Parry 24
Fernando 14	Porter 30
Fierke 18	Powell* 20
Frair 29	Ringler 0
Gibbs* 38	Saunders* 37
Hall 25	Schulz 18
Horton 21	Shields 26
Kimmerer 24	Stewart* ?
Leopold 12	Teale 15
Limburg 9	Turner 27 (includes Environmental Science)
Lomolino 25	Weir 24
McGee 16	Whipps 24
McGrath 2	

*Also coordinator for one of EFB's majors

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

Curriculum changes

The most significant change in curricula for most EFB undergraduate majors was the offering of *Physics of Life* by Dr. Scott Turner, to satisfy the Physics requirement of all EFB majors except Aquatic and Fisheries Science and Biotechnology.

There were other changes in three EFB majors, i.e., Forest Health, Wildlife Science, and Aquatic and Fisheries Science. The Forest Health major eliminated Cell Physiology (EFB 325) and Survey of Calculus I (APM 105) as required courses and added Forest Health Monitoring (EFB 439) and Senior Synthesis (EFB 494) as required courses. Additionally, the Forest Health major now requires three credits of Internship (EFB 420) or Research Experience (EFB 498). The main change in the Wildlife Science major was the new requirement of Elements of Organic Chemistry (FCH 210). Additionally, the two hour Wildlife Practicum course (EFB 491) was modified into a three hour Applied Wildlife Science course. Limnology (renumbered as EFB 424) is now required of all undergraduates in the Aquatic and Fisheries Science majors. Senior Synthesis in Aquatic and Fisheries Science has also been added to the requirements of this major.

Undergraduate students enrolled in each EFB major

Enrollment numbers change throughout the year, especially after December and May graduations, e.g., there were 603 EFB undergraduate students enrolled in classes during the fall '09 semester and 583 registered for the spring '10 semester. The total number of undergraduates in EFB represented over 40% of all full-time undergraduates (1505) at ESF in the fall. Fall '09 undergraduate enrollments (and percent of total) in each major were:

Environmental Biology:	174 (29%)
Wildlife Science:	156 (26%)
Conservation Biology:	128 (21%)
Biotechnology:	50 (8%)
Aquatic and Fisheries Science:	46 (8%)
Natural History and Interpretation:	29 (5%)
Forest Health:	20 (3%)
Total	603 undergraduates in EFB

Listing of awards and recognition

Research/Scholarship

Summary of publications/presentations

Appendix C lists books and refereed publications of the EFB faculty; papers submitted, in review, or pending decision are shown in Appendix D. Presentations by EFB faculty at science meetings are shown in Appendix E.

EFB faculty published an average of 2.15 (vs. 2.25 and 2.50, previous two years) refereed journal papers per person this past year (range of 0 to 9), and have an additional 1.36 (vs. 1.31 and 1.25, previous two years) refereed publications in press.

EFB faculty published three books: (1) by Dr. William Porter (co-author; *The Great Experiment in Conservation: Voices from the Adirondack Park*. Syracuse University Press. Syracuse, NY. 622 pp.); (2) by Dr. Scott Turner (Japanese language edition of *The Tinkerer's Accomplice. How Design Emerges from Life Itself*. Seidosha); and, (3) by Dr. Mark Lomolino (co-author; *Biogeography*, 4th Edition. Sinauer Associates).

The “impact” of one’s overall publication record can be objectively assessed by a variety of citation indices. The following table shows the science citation index for each faculty member, using the Web of Science for columns 1, 3, and 5; and, Scopus for columns 2, 4, and 6. Using the number of citations for 2000 to 2009 as determined by Scopus, Dr. Karin Limburg had the highest number of citations followed by Drs. Myron Mitchell, James Gibbs, Mark Lomolino, and Tom Horton. Using this same data base for only last year, Dr. Karin Limburg had the highest number of citations followed by Drs. Myron Mitchell, James Gibbs, Mark Lomolino, and Tom Horton. Dr. Myron Mitchell had the highest h-index, followed by Drs. James Gibbs, Mark Lomolino, Karin Limburg, and Tom Horton.

**Science Citation Indices for EFB Faculty from the Web of Science
(columns 1, 3 and 5) and Scopus (columns 2, 4, and 6) Searches
for the Time Periods Indicated (data gathered by L. Galloway)**

	#Citations 05-06*	#Citations 09**	#Citations 01-05*	#Citations 05-09**	#Citations 96-05*	#Citations 00-09**	h Index**
Abrahamson, Larry	29	49	84	252	125	266	12
Baldassarre, Guy	24	38	133	179	246	339	6
Brunner, Jesse		46		136		142	6
Castello, John	23	33	65	126	126	199	7
Dovciak, Martin		29		75		87	5
Farrell, John	0	5	3	37	10	45	5
Fernando, Danilo	13	21	40	89	65	140	9
Fierke, Melissa		16		57		57	5
Frair, Jacqueline		72		276		279	8
Gibbs, James	151	218	451	949	666	1373	21
Hall, Charles	65	118	267	428	549	751	10
Horton, Thomas	113	161	301	829	345	1218	14
Kimmerer, Robin	19	26	73	149	99	247	8
Leopold, Donald	51	60	185	270	308	453	9
Limburg, Karin	68	407	187	1640	277	2499	15
Lomolino, Mark	178	176	510	774	670	1263	18
McGrath, Kathleen		4		5		5	2
McGee, Gregory		41		171		217	8
McNulty, Stacy		1		9		24	1
Mitchell, Myron	183	390	564	1627	878	2487	26
Nakas, James	29	34	117	184	288	337	6
Nakatsugawa, Tsutomu	1	2	11	9	35	20	na
Norton, Roy	44	136	136	466	263	568	11
Parry, Dylan	17	28	61	110	76	181	7

Porter, William	35	46	145	222	230	403	11
Powell, William	26	32	91	163	160	268	6
Ringler, Neil		12		82		142	5
Schulz, Kimberly	56	68	161	269	176	451	5
Shields, William	38	18	154	66	399	107	2
Stewart, Donald	49	34	138	198	240	298	9
Teale, Stephen	20	12	68	113	110	225	7
Turner, Scott	22	12	72	53	112	87	6
Weir, Alexander	12	95	31	193	51	228	6
Whipps, Christopher		92		317		348	12

*Data collected in 6/2006 using Web of Science Citation Indices. Web of Science is a citation index to 8700 authoritative, high impact journals including 200 open access. Full coverage begins in 1985 but these data also represent citations to older materials.

**Data collected in 7/2010 using Scopus database. Its coverage of scientific, technical, medical and social sciences literature includes 15,000 peer-reviewed journals, 1,200 open-access journals, 500 conference proceedings, over 600 trade publications, and 200 book series. Scopus also cover 360 million quality web sources including 22 million patents

Summary of grant activity

From July 1, 2009 to June 30, 2010, EFB submitted 32.0% of all proposals (of 268 total) submitted by all departments (and the AEC) at ESF, versus 26.2% during the previous reporting period. These EFB proposals represent 21.5% of the \$79,458,124 amount for all proposals submitted by academic units to the ESF Office of Research Programs, which is an increase of \$6,625,425 for all EFB proposals submitted during the previous reporting period. The average amount per EFB proposal was \$198,848 (versus \$235,418 the previous reporting period).

The proposal submission activity of each faculty member for the 12 month period ending June 30, 2010 follows. Dr. Leopold had the highest credited number of proposals submitted, followed by M. Fierke, S. McNulty, J. Gibbs, and S. Teale. Dr. Gibbs has the highest credited dollar amount of proposals submitted, followed by Drs. Farrell, Leopold, Mitchell, and Whipps.

Proposal Activity Summary by PI/CoPI (12-Month Period ending 6/30/10)

<u>Name</u>	<u>Credited* Number</u>	<u>Credited Amount</u>
Abrahamson, Lawrence	0.60	\$135,308 (27**)
Baier, Kathleen	0.33	\$4,667 (35)
Baldassarre, Guy	1.00	\$14,999 (33)
Brunner, Jesse	0.17	\$235,117 (19)
Castello, John	0.33	\$13,333 (34)
Dovciak, Martin	1.60	\$222,047 (20)
Farrell, John	3.81	\$1,541,829 (2)
Fernando, Danilo	2.00	\$186,325 (22)
Fierke, Melissa	7.18	\$766,779 (11)
Frair, Jacqueline	3.33	\$215,690 (21)
Gibbs, James	6.91	\$1,827,073 (1)
Hai, Paul	0.67	\$99,999 (29)

Hall, Charles	1.67	\$165,009 (24)
Hayden, Todd	0.33	\$23,586 (31)
Horton, Thomas	2.33	\$446,967 (15)
Kimmerer, Robin	0.82	\$569,929 (12)
Leopold, Donald	7.70	\$1,430,821 (3)
Limburg, Karin	4.68	\$806,735 (8)
Lomolino, Mark	3.00	\$1,019,179 (6)
McGee, Gregory	0.14	\$27,492 (30)
McNulty, Stacy	7.03	\$396,389 (16)
Mitchell, Myron	0.81	\$1,213,704 (4)
Nakas, James	1.67	\$160,256 (25)
Newman, Lee	1.67	\$461,109 (14)
Norton, Roy	0.00	\$0 (36)
Parry, Dylan	1.67	\$284,896 (26)
Porter, William (includes AEC)	1.33	\$284,896 (17)
Powell, William	4.33	\$778,927 (9)
Ringler, Neil	1.00	\$175,119 (23)
Saunders, Andrew	0.00	\$ 0 (36)
Schulz, Kimberly	3.73	\$860,622 (7)
Shields, William	0.00	\$0 (36)
Stewart, Donald	0.67	\$128,571 (28)
Teale, Stephen	5.92	\$776,048 (10)
Tierney, Geraldine	0.33	\$16,663 (32)
Turner, Scott	1.00	\$438,318 (13)
Weir, Alexander	1.33	\$262,696 (18)
Whipps, Christopher	4.64	\$1,159,689 (5)
Total for EFB	85.73	\$17,047,211

* 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 1/4=25% credit, for all sponsored program activities. This procedure generally results in fractional numbers of proposal/awards credited to each faculty member and his/her respective college Department, as well as the respective fractional portion of the total proposal, award or expenditure amount.

****rank by credited amount; 1 highest, 36 lowest**

Appendix F lists all active grants of each EFB faculty. For the 12-month period ending 6/30/10, EFB accounted for 30.8% of all active sponsored research projects at ESF (of 411 total, all academic departments plus AEC) and 33.9% of the \$14,602,733 of all sponsored program expenditures by academic departments (and the AEC) at ESF. These numbers are an increase of 10 projects and \$434,926 in expenditures since last reporting period. The average amount of expenditure per project was \$39,139 versus \$36,079 in the last reporting period.

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

Sponsored Program Expenditure Activity Summary by PI/CoPI
(12-Month Period ending 6/30/10)

<u>Name</u>	<u>Credited Number</u>	<u>Credited Amount</u>
Abrahamson, Lawrence	3.49	\$148,421 (14)
Allen, Douglas	2.70	\$35,392 (22)
Baldassarre, Guy	2.00	\$16,962 (25)
Brunner, Jesse	2.00	\$92,380 (18)
Castello, John	0.25	\$0 (38)
Dovciak, Martin	0.17	\$4,585 (30)
Farrell, John	6.20	\$403,737 (2)
Fernando, Danilo	0.67	\$2,782 (31)
Fierke, Melissa	0.83	\$12,333 (27)
Frair, Jacqueline	3.53	\$153,993(13)
Gibbs, James	12.43	\$545,096 (1)
Hai, Paul	0.33	\$20,148 (24)
Hall, Charles	5.17	\$80,827 (20)
Hong, Bongghi	0.45	\$7,209 (28)
Horton, Thomas	4.50	\$76,346 (21)
Kimmerer, Robin	6.00	\$237,118 (9)
Leopold, Donald	9.43	\$341,138 (4)
Limburg, Karin	6.10	\$338,871 (5)
Lomolino, Mark	0.00	\$0 (38)
McGee, Gregory	0.00	\$0 (38)
McGrath, Kathy	2.17	\$109,671 (17)
McNulty, Stacy	4.00	\$112,181 (16)
Mitchell, Myron	9.00	\$265,337 (8)
Nakas, James	7.08	\$284,374 (7)
Nakatsugawa, Tsutomu	0.00	\$0 (38)
Norton, Roy	0.00	\$0 (38)
Parry, Dylan	1.87	\$29,942 (23)
Porter, William (includes AEC)	8.17	\$293,801 (6)
Powell, William	6.67	\$233,206 (10)
Ringler, Neil	1.78	\$363,830 (3)
Saunders, Andrew	0.00	\$0 (38)
Schulz, Kimberly	3.13	\$211,396 (11)
Shields, William	0.00	\$0 (38)
Stewart, Donald	0.00	\$0 (38)
Teale, Stephen	6.58	\$166,109 (12)
Tierney, Geraldine	0.33	\$16,053 (26)
Turner, Scott	2.00	\$83,398 (19)
Weir, Alexander	1.00	\$122,388 (15)
Whipps, Christopher	1.33	\$6,472 (29)
Total for EFB	126.38	\$4,946,430

*rank by credited amount; 1 highest, 38 lowest

Patents and Patent Applications

Larry Abrahamson: Invention No. 1649-550, “Ornamental Varieties of Willow”. Submitted for plant patent (10/2008) willow varieties ‘Sunny Twist’ and ‘Green Sparkle’ with co-inventors Richard Kopp, Kimberly Cameron, and Lawrence Smart.

Listing of Awards and Recognition

Baldassarre, G.: Elected, Fellow in the American Ornithologists Union

Baldassarre, G.: Outstanding Alumnus, Department of Wildlife Ecology, University of Maine

Baldassarre, G.: “Outdoor 25” given annually by Outdoor Life Magazine to 25 people influencing hunting and fishing

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 received more than 300 requests for information, resulting in 94 identifications, 88 written responses and 16 onsite visits; additionally, her office was contacted by The Post-Standard, News Channel 9, WSYR and Newhouse students. Terry Ettinger assisted in the development and delivery of 52 episodes of the ESF/Time Warner Cable “Going Green” collaboration which is broadcast weekly across all of upstate New York, western Massachusetts, and northern Pennsylvania and available on the web. Ron Giegerich coordinates EFB’s day at the NYS Fair each August which attracts hundreds of visitors.

One example of how EFB graduate and undergraduate students contribute significantly to EFB’s outreach is the work by M.S. student Sam Quinn and the seniors in his Conservation Biology Senior Synthesis course (EFB 414) this past spring. Students developed a comprehensive conservation and Management plan for a significant property northwest of Watertown, NY (more details below).

Although there are no data to support this claim, no other department or office at ESF nor at Syracuse University during this past or recent previous years appears to have generated the public media attention that does the Department of Environmental and Forest Biology. Most of the dozens of local newspaper articles of this past year are posted in the main foyer of Illick. This media attention comes from beyond central New York.

Unfunded service to professional societies and organizations is summarized in Appendix I. Appendix J summarizes the funded service by EFB faculty to government agencies, public

interest groups, etc. Appendix K lists the presentations made to the public by EFB faculty and Appendix L includes miscellaneous publications and outreach materials.

Summary of grant panel service (by agency)

Mitchell, M.: EPA-Star Fellowship Program

Schulz, K.: NSF

Summary of journal editorial board service

Acarina (Moscow): R. Norton

Acarologia (Paris): R. Norton

Acta Zoologica Hungarica: R. Norton

Adirondack Journal of Environmental Science: W. Porter

Bio-Complexity : S. Turner

Biomass and Bioenergy: L. Abrahamson

Ecological Economics: C. Hall

Ecological Economics Review: K. Limburg

Ecology and Society: K. Limburg

Ecology of Freshwater Fish: N. Ringler

Experimental & Applied Acarology: R. Norton

Folia Entomologica Mexicana: R. Norton

Folia Entomologica Hungarica: R. Norton

Forests and Shade Trees: L. Abrahamson

Herpetological Review: J. Brunner

Hydrobiologia (Guest Editor, Special Issue): J. Farrell

International Journal of Acarology: R. Norton

International Journal of Plant Developmental Biology: D. Fernando

Mycorrhiza: T. Horton

Northeastern Naturalist: D. Leopold

Stone Canoe: R. Kimmerer

Systematic & Applied Acarology (China): R. Norton

The Bryologist: R. Kimmerer

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

Abrahamson, L.: 1/4

Brunner, J.: 5/5

Castello, J.: 1/1

Dovciak, M.: 4/6

Farrell, J.: 4/5

Fernando, D.: 3/12

Fierke, M.: 2/3

Frair, J.: 3/3

Gibbs, J.: ?

Hall, C.: 4/8

Horton, T.: 4/8

Leopold, D.: 2/3

Limburg, K.: 12/17

Lomolino, M.: "approx. 20..."

McGrath, K.: 1/1

McNulty, S.: 1/2

Mitchell, M.: 2/3

Nakas, J.: 2/2

Nakatsugawa, T.: 1/1

Norton, R.: 11/28

Parry, D.: 3/3

Porter, W.: 1/2

Powell, W.: 2/2
 Ringler, N.: 3/3
 Schulz, K.: 1/1
 Shields, W.: 1/2

Teale, S.: 1/1
 Turner, S.: 4/4
 Weir, A.: 1/3
 Whipps, C.: 9/18

Listing of Awards and Recognition

Leopold, D.: New York State Nursery and Landscape Association 2009 George L. Good Gold Medal of Horticulture Award

Service Learning

Besides the engagement of students in classes listed below, EFB students were also very involved through independent studies (EFB 498) and internships (EFB 420) assisting Onondaga County with daily operations of the Carpenter Brook Fish Hatchery. Dr. Don Stewart, coordinator of the Aquatic and Fisheries Science major, supervised the majority of these students who gained outstanding professional experience while having key roles in operating this fish hatchery. Without this student assistance, the Hatchery was scheduled to close due to county budget shortfalls.

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

EFB 388 Adirondack Fish Ecology (J. Farrell and N. Ringler; 3 credit hours; 14 students)

This course contained a two-day service-learning component where students worked alongside and collected data for the NYS Brook Trout Study for NYSDEC Region 6. Remote ponds were sampled and fish processed by students under the supervision of Region Biologist Chris Van Marren.

EFB 446/646 Ecology of Mosses (R. Kimmerer; 3 credit hrs; 28 students)

Students designed and implemented educational programming and public education pamphlets to bring public awareness of the ecological importance of bryophytes and their conservation. These programs and materials were distributed on Earth Day 2010.

EFB 496 Plants and Culture (R. Kimmerer; three credit hrs; 24 students)

Students hosted the "Native American Feast and Film" event in November 2009, in cooperation with the Baobab Society. The students prepared traditional indigenous foods and presented an educational program about indigenous subsistence foods.

EFB 414 Senior Synthesis in Conservation Biology (S. Quinn and D. Leopold; 3 credit hrs; 32 students)

All students developed a conservation and management plan for a 2000 acre, unique property northwest of Watertown, NY. This property has been managed for a variety of interesting wildlife species and nearly half of the property is rare alvar plant communities. The property owners hosted the students for a weekend in late March, during which the students collected baseline data for their plans. In late April, the students presented drafts of their plans to one owner, and in early June we presented the final plans. The landowners seem very pleased and offered a paid summer internship to one of the students to begin to carry out some of the key recommendations. Additionally, they have asked us to return with the seniors in Conservation Biology next spring for a follow up.

EFB 416/616 Introduction to Environmental Interpretation (A. Saunders; 3 credit hrs; 54 students)

Students were involved in the following projects: Creating Thornden Park Community Gardens (5 students, @ 3 hrs.); Developing Morningside Science Trail (25 students @ 8 hrs. & 30 students @ 4 hrs); School Programs for Green Lakes Conservation Field Days (3 students @ 6 hrs).

Total Hours = 353

EFB 417/617 Perspectives of Interpretive Design (A. Saunders; 3 credit hrs; 56 students)

Students were involved in the following projects: Brochures for Meadowbrook Homeowners Watershed (6 students, @5 hrs); *Party for the Planet* for Gifford Zoo (31 students @ 7 hrs); St. Alban's *Go Green Festival* 8 students, @8 hrs). Total Hours = 311

Graduate Students

By the end of this reporting year, 31 (22 previous year) graduate students (Appendices M and N) completed all degree requirements for the Ph.D., M.S., or M.P.S. degree.

Number of students by degree objectives

At the beginning of this past academic year, there were 149 (versus 134 previous year) graduate students officially enrolled in our department. Of these, about 54% (54% previous year) were in our M.S., 8% (10%) M.P.S., and 38% (36%) Ph.D. programs. The approximate percentage of students in each of our nine graduate areas of study is as follows (with percentages of previous year in parentheses):

Ecology	33% (38%)
Conservation Biology	23% (22%)
Fish and Wildlife Biology and Management	19% (16%)
Plant Science and Biotechnology	7% (7%)
Entomology	5% (5%)
Environmental Interpretation	3% (4%)
Forest Pathology and Mycology	3% (3%)
Chemical Ecology	3% (2%)
Environmental Physiology	2% (2%)
Undeclared	<1% (1%)

Graduate student national fellowships/awards (new awards only)

Anna Stewart, Fulbright Fellowship (Ecuador)

Chris Nack, National Estuarine Research Reserve Graduate Fellowship

Cheryl Whritenour, National Estuarine Research Reserve Graduate Fellowship

Graduate recruitment efforts

There were 155 graduate applications to EFB for spring '10 and fall '10 matriculation, versus 150 in the last reporting period. As of July 26, 2010, at least 17 new graduate students (i.e., "accepted/coming" applicants) will matriculate this fall '10 semester (versus 38 for fall semester 2009). Three additional students have been accepted but have not yet indicated whether they will matriculate this fall. Four applicants were accepted but have deferred their matriculation for one or two semesters. Another 13 applicants are still being considered for matriculation this fall. Nine new graduate students matriculated in January 2010 and one in the summer. In total, EFB recruited at least 27 new graduate students for this coming academic year.

This substantial decrease in number of new graduate students, despite a similar number of applications, is likely due primarily to the loss of four faculty (Drs. Brunner, Porter, Schlaepfer and Professor Saunders) for the fall 2010, who collectively would have likely recruited about another ten new graduate students. Prior to fall 2009, the previous highest number of

accepted/coming graduate applicants since 2003 was 22, with an average number of accepted/coming graduate applicants of slightly more than 19 from 2003 to 2008.

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 40.5 graduate teaching assistantships (GTAs); our graduate enrollment at the beginning of each AY generally has been about 130 graduate students (nearly 150 last fall). Although we have over 40% of the full-time graduate students at ESF, we receive about 30% of the 132 state-funded graduate assistantships. GRAs are critical for maintaining and expanding our graduate support. These GRAs can provide a larger stipend than that provided by TAs and include support for the full calendar year. Teaching assistantships only provide academic year support. A robust graduate program can only be sustained by recruiting graduate students who are competitive for GTAs and national fellowships, and having an active research program that provides GRAs.

Graduate student advising

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

Abrahamson 0	McNulty 3.5
Baldassarre 2	Mitchell 3.5
Brunner 2	Nakas 4
Castello 2.5	Nakatsugawa 0.5
Dovciak 4.5	Norton 0
Farrell 6.5	Parry 5.5
Fernando 3	Porter 10.5
Fierke 4	Powell 5.5
Frair 6	Raynal 1
Gibbs 10	Ringler 8.5
Hall 10	Saunders 5
Horton 6	Schulz 4.5
Kimmerer 8.5	Shields 7
Leopold 12	Stewart?
Limburg 6	Teale 6.5
Lomolino 2	Turner 2
McGee 0.5	Weir 4
McGrath 2	Whipps 1

Courses having TA support and enrollment in each

<u>Course #</u>	<u>Course Name</u>	<u># of Students</u>	<u># of GTAs</u>
101	General Biology Lecture I	309	2
102	General Biology Lab I	284	7

103	General Biology Lecture II	192	3
104	General Biology Lab II	183	7
120	Global Environment (fall, partial; spring)	116+	4
132	Orientation Seminar	115	0.5
200	Physics of Life	129	0.25
215	Interpret. Science Through Art	84	1
217	Peoples, Plagues, & Pests	167	0.5
220	Urban Ecology	?	0.5
300 (ESF)	Intro to Geospatial Information Systems	?	1
303	Intro Environ. Microbiology	44	2
307/308	Principles of Genetics	200	5
311	Principles of Evolution	157	1.5
320	General Ecology	249	5
325	Cell Physiology	?	0.5
326	Diversity of Plants	79	2
336	Dendrology I	125	2.5
340	Forest & Shade Tree Pathology	47	0.5
352	Principles of Forest Entomology	65	2
355	Invertebrate Zoology	41	1
385	Comparative Vertebrate Anatomy	51	1.5
390	Principles of Wildlife Management	115	2
401/601	Molecular Biology Techniques	23	1
405	Literature of Natural History	27	1
413	Introduction to Conservation Biology	103	1.5
416/616	Intro. Environmental Interpretation	54	1
417/617	Advanced Perspectives of Interpretation	56	1
419	Problem Solving in Conserv. Biol.	41	0.5
423/623	Marine Ecology		2
427	Plant Developmental Biology	19	0.5
445/645	Plant Ecology	33	1
446/646	Ecology of Mosses	28	1
462/662	Animal Physiol.: Environ. & Ecol.	78	0.5
480	Principles of Animal Behavior	45	2
482	Ornithology	20	1
483	Mammal Diversity	73	2
485	Herpetology	79	1
486	Ichthyology		2
487	Fisheries Science and Management	30	1
491	Wildlife Ecol. & Manage. Practicum	31	1
493/693	Wildlife Habitats/Populations	44	2
516	Ecosystems	29	1
518	Systems Ecology	18	1
524	Limnology		1
525	Limnology Laboratory		
535	Systematic Botany	12	0.5
554	Aquatic Entomology	16	0.5

Governance Structure

Components:

Chair (D. Leopold)

Graduate Program Advisory Committee (K. Limburg, chair; M. Dovciak, D. Fernando, T. Horton, W. Porter, K. Schulz, W. Shields, C. Whipps; Danielle Baker and Anna Stewart, graduate student representatives)

Building and Space Committee (John Farrell, chair; J. Brunner, K. Limburg, P. McHale, B. McMaster, C. Whipps)

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

Awards Committee (D. Leopold and others)

- Undergraduate and Graduate Academic Awards
- Illustrious Alumni, Emeriti Awards

Supporting Offices, Committees, Directors, and Coordinators

Administrative Office

- Office Manager/Secretary 1 (Sandra Polimino)
- Keyboard Specialist 2 (Dawn P. Thomas, undergraduate program secretary; Barbara Scharf, graduate program secretary)
- Keyboard Specialist 1 (Joanne Rappleyea; receptionist)

Undergraduate Curriculum Director (R. Norton)

Undergraduate Curriculum Coordinators (by major)

Environmental Biology (R. Norton)

Aquatic and Fisheries Science (D. Stewart)

Biotechnology (W. Powell)

Conservation Biology (J. Gibbs)

Forest Health (J. Castello)

Natural History and Interpretation (A. Saunders)

Wildlife Science (G. Baldassarre)

Graduate Program Director (D. Fernando)

Adirondack Ecological Center (W. Porter, Director)

Cranberry Lake Biological Station (A. Weir, Director)

Roosevelt Wild Life Station (W. Porter, Director)

Thousand Islands Biological Station (J. Farrell, Director)

Animal Use and Care Protocols (college-wide committee; J. Brunner)

Exhibits Coordinator (A. Saunders)

Instructional Support Specialist Supervisors

- K. Adams – S. Teale
- R. Giegerich – J. Frair
- P. McHale – M. Mitchell
- B. McMaster – D. Leopold
- T. Ettinger – D. Leopold

Environmental Studies Program Coordinator (C. Hall)

Budget

EFB's budget comes from three main sources, i.e., (1) state allocations; (2) the SUNY Research Foundation (RF) research incentives funds; and, (3) development funds through the College Foundation. A summary of the allocations from each source and expenditures follows.

State budget allocations: \$69,576 total (versus \$69,400 previous year); excludes search committee allocations from the Provost, CLBS, AEC, Biotechnology, Tree Pest Info Service, and Academic Equipment Replacement allocations – amounts of these shown below)

Initial Allocation (August 28, 2009): \$69,576 (\$65,000 OTPS; \$4,576 TS)

Expenditures:

Offices (main, faculty, staff, grads):	\$14,000
Computers:	\$1,000
Photocopy:	\$5,000
Mileage:	\$2,000
Repairs:	\$3,500
Building and facilities:	\$4,300
Seminars and receptions	\$8,500
Operating (over expenditures, all categories)	\$4,500
Faculty subaccounts and additional requests:	\$22,200
Temporary services	\$4,576

Biotechnology accounts: \$10,900

Tree Pest Info Service account: \$1,750

Academic Equipment Replacement: **\$42,500** (versus \$0 previous year)

End-of-year allocation: **\$0** (versus \$0 previous year)

SUNY RF departmental Research Incentives funds (\$33,297 allocated 10/09; carryover of \$15,467 balance from previous years; total available \$48,764)

Expenditures (estimated, by general categories):

Individual faculty requests (equipment, supplies, travel, misc.)	\$10,764
Department equipment, supplies	\$7,500
Seminars, receptions, workshops	\$11,000
Greenhouse expenditures	\$3,000
Student awards	\$2,500
Three CLBS undergraduate research fellowships	<u>\$7,000</u>
Total Expenditures	\$41,764
Balance (July 26, 2010)	\$7,000

Development funds (\$49,225 budgeted for '09-'10)

Undergraduate and graduate student awards come from the following endowments: Maurice and Annette Alexander, Robert L. Burgess, Betty Moore Chamberlaine, Leroy C. Stegeman, Robert A. Zabel, John and Etta Simeone, Josiah L. Lowe-Hugh E. Wilcox, Ralph T. King, Phyllis Roskin, Joseph and Ruth Hasenstab, Lanier Memorial, Silverborg Memorial, and Patricia D. and Jeff J. Morrell.

Because of recent endowment losses, departments were advised in early 2009 to use college foundation funds already made available for last year and decide whether to leave some of these funds for this year. Consequently, at the beginning of this past academic year EFB had \$49,225 (versus \$109,213 for '07-'08 before these substantial endowment losses). Of this, \$42,875 was available for student scholarships. By the end of May '10 the department awarded about \$22,325 of this total, leaving about \$20,550 to add to endowment residuals for student awards during the '10-'11 academic year and perhaps beyond, until endowments yield funds again. Without these residuals, many of the EFB scholarships would have no funds for awards next May (2011).

EFB had an additional \$3,800 in the Dence Memorial account (which helped to support Dr. Randy Olsen's public presentation at Syracuse University, April '10) and \$2,550 in a General EFB Fund, the result of occasional donations to the department, primarily from current and retired faculty, and used for end of year student awards that are made at our annual spring recognition ceremony.

This past academic year we received from the Dr. Sam Grober estate a gift that established the Dr. Sam Grober Graduate Research Fellowship. This annual fellowship is to support graduate research at the Cranberry Lake Biological Station, where Dr. Grober was an undergraduate student and helped with construction of the mess hall in the early 1930's.

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

Student Learning Outcomes Assessment (adapted from Dr. R. Norton, EFB Undergraduate Curriculum Director)

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

As part of the department's strategic planning we adopted a vision statement in November 2001 that included as a key task the importance of strengthening our undergraduate curriculum, which we planned to do by offering a smaller number of distinct majors. By Fall

'04, all seven of EFB's current undergraduate majors (i.e., Aquatic and Fisheries Science, Biotechnology, Conservation Biology, Environmental Biology, Forest Health, Natural History and Interpretation, and Wildlife Science) were being offered, replacing the elective concentrations or options. But with the implementation of these seven majors, explicit student learning objectives were not developed for each nor had any formal assessment process been implemented although during the spring '05 semester, according to a SUNY mandate, an external review of the Environmental Biology major was made.

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

At this time, instructors have submitted type-1 data for courses relevant to assessing Environmental Biology, Biotechnology, and Natural History & Interpretation; those for other majors are anticipated to be collated and submitted before the start of the Fall 2010 semester. For tools that factor in final course grades (type-2 data) we require restricted access to student records, in order to download the data. We had requested that an appropriate mechanism (database inquiry form) be constructed by college programmers, but to date we know of no progress toward such a mechanism.

We developed a general structure for an "omnibus" spreadsheet that incorporates each assessment tool for each major, along with various weighting factors. Most of these tools are organized around Leikert-scale evaluations. Once constructed, the spreadsheet will be easily populated with assessment data as they are annually reported to a central location.

As both types of data are currently incomplete for this first year of implementation, we have not formally accessed student performance in any of the seven majors, and have no recommendations for changes.

Objectives 2009-2010

Objectives, status, and relations to strategic plan

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

- (1) attraction and retention of top-flight scientists;
- (2) evolution of a stronger learning and mentoring environment for students, faculty, and staff;
- (3) development of a more fully integrated field program;
- (4) development of greater prominence and national/international recognition of our graduate program;

- (5) enhancement and formal recognition of our public service, informational outreach, and service learning program;
- (6) development of new undergraduate programs;
- (7) development of international perspectives and opportunities; and,
- (8) working as College partners on data development and utilization.

Numerous examples and data throughout this annual report indicate that EFB continues to make substantial progress towards accomplishing these tasks.

Our main objectives during the '09-'10 academic year were to: (1) implement methods of assessment for each undergraduate major; (2) initiate a course in Physics, i.e., "Physics of Life", to provide an alternative to the physics courses at Syracuse University; (3) send the department's annual report to parents of all incoming freshman and transfer students; (4) initiate discussion to examine an undergraduate major or/and graduate area of study in Environmental Health; and, (5) replace key faculty lost due to retirement or taking a position at another institution.

Progress on student learning outcomes assessment was discussed in the previous section.

Based on student evaluations, Dr. Turner's assessment, and significant savings in Accessory Instruction at Syracuse University, the Physics of Life course was a tremendous success in its first offering during the fall 2009.

The department's annual report was sent to parents of all incoming freshman and transfer students last August. A few parents responded very positively, noting that they appreciated the information and that it gave them a better idea of the breadth of resources and opportunities for students in EFB.

In January 2010, Dr. John Castello and a college-wide group of faculty drafted recommendations to the Provost for Environmental Health undergraduate and graduate programs at ESF. We are in the process of hiring the first of three anticipated faculty to develop and deliver these programs.

EFB conducted national faculty searches this past academic year to replace Drs. George Bachand and Bill Porter and Professor Saunders. Dr. Lee Newman will join EFB this August to replace Dr. Bachand. Beth Folta also arrives in August to replace Professor Saunders. Negotiations continue with a possible replacement for Dr. Porter. The search for Dr. Porter's replacement led to a possible hire for planned Environmental Health programs at ESF.

Objectives 2010-2011

Objectives and relations to strategic plan

Our primary objective for this coming year is to gather data from peer departments and institutions on faculty teaching, research, and outreach to compare with data in these categories produced by EFB faculty. Additionally, substantial time will be required to plan for the new Academic Research Building, which EFB will occupy when completed in 2014 or 2015.

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

The first of the three new anticipated hires for ESF Environmental Health programs will begin part time in January 2011 to begin the planning for these programs.

Undergraduate Recruitment Efforts

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

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

Two 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 this past spring included the link to this message.

As of June 26, 2010 (vs. week before in 2009 and 2008), we had received 992 total applications for fall 2009 (freshman + transfer students; vs. 968 last June and 859 in June 2008). We have accepted 433 (vs. 403 and 408 the previous two years) applicants and have received 185 deposits (vs. 198 and 191). Of the total number of applications that we received, 69% were for freshman; about 55% of our deposits are from this group; about 44% of the applicants were accepted. The total number of deposits by EFB major and percent of total for the class entering fall 2010 (in parentheses) are: Aquatic and Fisheries Science, 18 (10% vs. 7% for class entering fall 2009); Biotechnology, 11 (6%, same); Conservation Biology, 37 (20%, same); Environmental Biology, 60 (32% vs. 34%); Forest Health, 3 (<2% vs. 4%); Natural History and Interpretation, 2 (1%, same); and, Wildlife Science, 54 (29% vs. 28%).

Longer Term Visioning and Planning

The EFB Chair spent a significant amount of time this past year serving on the College's Advisory/Steering Committee for the Campus Master Plan of Study. This committee focused on examining future options for building locations on campus, and general features of the two newest buildings planned for construction, i.e., the Gateway Building (scheduled for completion by end of 2011) and an Academic Research Building that is currently planned to be completed in about four years and will be the new home to the Department of Environmental and Forest Biology. More recent, regular, and longer meetings have been devoted to all aspects of the Gateway Building, which because of its intended program use, highly unique combined heat and power systems, landscaping, and adjacency to Illick, will greatly benefit EFB programs. Besides these formal campus planning activities, the EFB Chair spends a substantial amount of time advising Physical Plant on campus plantings, which also are very important to EFB's (and the Department of Landscape Architecture's) teaching programs. Beginning sometime during the

summer 2010, planning for the new Academic Research Building will intensify, now that a team of consultants has been selected.

Program visioning and strategic planning have not been undertaken formally at the department level in EFB since the department's strategic plan was developed in 2001-2002. Very limited space, resources, and understaffed Development Office greatly limit the extent to which many significant ideas can be pursued and implemented. However, with the addition of faculty the past four years, greater use efficiency and enhancements of existing space, and improvements at our field stations, the department is closer towards realizing its basic goal of being one of the premier environmental biology programs. The EFB Chair hopes that with the department's strong foundation and energy from many new faculty that the department is poised to discuss and move towards EFB's aspirations beyond what has already been articulated and attained.

Appendix A. EFB Faculty: Rank (during reporting period), Education, and Interests

Name and Title	Degrees	Interest Areas
Abrahamson , Lawrence Sr. Research Associate	PhD, University of Wisconsin, MS, University of Wisconsin, BS, Michigan Tech. Univ.	Forest Entomology; IPM of gypsy moth and other defoliators; insect monitoring and survey; pest management (insects, fungi & weeds) pesticide science
Baldassarre , Guy Distinguished Teaching Professor	PhD, Texas Tech University MS, Univ. of Wisconsin BS, Univ. of Maine	Waterfowl and wetland wildlife ecology; shorebird ecology; nongame birds; ornithology
Brunner , Jesse Assistant Professor	PhD, Arizona State University BA, Carleton College	Evolutionary ecology of infectious disease, transmission dynamics, persistence in small populations, and evolution of virulence.
Castello , John Professor	PhD, Univ. of Wisconsin MS, Washington State Univ. BA, Montclair State College	Plant virology; viruses and mycoplasma in urban and forest tree decline; forest pathology; microbiology
Dovciak , Martin Assistant Professor	PhD, Univ. of Minnesota Dipl. Engin., Zvolen Technical University	Plant ecology; forest ecology; biodiversity; plant population & community dynamics; spatial ecology; ecosystem management & restoration
Farrell , John Associate Professor	PhD, SUNY ESF MS, SUNY ESF BS, Cornell University	Fisheries management, aquatic ecology, wetlands restoration, St. Lawrence River studies, muskellunge and northern pike ecology & mgt., invasive species
Fernando , Danilo Associate Professor	PhD, Univ of Alberta, Canada MS, Univ of Phillippines BS, Mountain State Agr. Coll.	Plant reproductive biology, plant structure and development, in vitro fertilization in conifers, pollen transformation & gene expression during pollen tube development
Fierke , Melissa Assistant Professor	PhD, University of Arkansas MS, Oregon State University BS, Arkansas Tech University AA, North Arkansas CC	Forest entomology and forest ecology; impacts of invasives in forested settings with a focus on wood-boring insects.
Frair , Jacqueline Assistant Professor	PhD, Univ of Alberta, Canada MS, University of Wisconsin BS, Cornell University	Wildlife and landscape ecology, animal movements and habitat use, predator-prey interactions
Gibbs , James Professor	PhD, Yale University MA, University of Missouri BS, University of Maine	Conservation biology, ecological monitoring, wildlife management, population biology and conservation genetics
Hall , Charles A. S. Professor	PhD, Univ of No. Carolina MS, Penn State University BA, Colgate University	Systems ecology; synthetic studies of population and ecosystems, including studies of fish migrations, estuaries, tropical land use change and energetics. Emphasis on measuring and modeling human-dominated eco-systems and geographic modeling.
Horton , Thomas Associate Professor	PhD, Univ of Cal.-Berkeley MA, SanFrancisco State Univ. BA, Humbolt State University	Mycorrhizal ecology and systematics, mycology, restoration ecology

Kimmerer, Robin Professor	PhD, Univ. of Wisconsin MS Univ. of Wisconsin BS, SUNY ESF	Ethnobotany, conservation biology, and bryophyte ecology
Leopold, Donald Distinguished Teaching Professor and Chair	PhD, Purdue University MSF, University of Kentucky BS, University of Kentucky	Forest and freshwater wetland ecology; dynamics of plant communities as affected by man and environment; management for unique communities and rare species; dendrology
Limburg, Karin Associate Professor	PhD, Cornell University MS, University of Florida AB, Vassar College	Fisheries ecology, ecosystem ecology, fish migration, biogeochemical tracers modeling ecological economics
Lomolino, Mark Professor	PhD, SUNY Binghamton MS University of Florida BS SUNY-Cortland	Biogeography; conservation biology, diversity in isolated ecosystems and habitat islands.
McGee, Gregory Instructor	PhD, SUNY ESF MS, SUNY ESF BS, Allegheny College	Forest ecology, management, and restoration; effects of atmospheric nitrogen deposition on northern hardwood forests.
McGrath, Kathleen Adjunct Assist. Prof. & Research Assoc.	PhD, University of Idaho MS, University of Vermont BS, University of Vermont	Stream ecology, conservation of native fishes, watershed and spatial ecology, hyporheic exchange, stream restoration, stream geomorphology
McNulty, Stacy Research Associate	MS, SUNY ESF BA, SUNY Geneseo	Forest and landscape ecology, applied GIS; ecology, conservation, and forest management in the Adirondacks
Mitchell, Myron Distinguished Professor	PhD, University of Calgary BA, Lake Forest College	Biogeochemical cycling in forests and freshwater ecosystems
Nakas, James Professor	PhD, Rutgers University MS, Seton Hall University BS, Lemoyne College	Microbiology; transformation & decomposition processes; nutrient cycling; soil and aquatic microbiology; microbial biomass; solvent production; microbial ecology
Nakatsugawa, Tsutomu Professor	PhD, Iowa State University MS, Iowa State University B.Agric, Univ. of Tokyo	Toxicology role of liver in chemical defense; chemical ecology and health impacts of nature's chemical warfare; health effects of pesticides and other pollutants
Norton, Roy Professor	PhD, SUNY ESF MS, SUNY ESF BS, SUNY ESF	Acarology, soil biology; systematics and ecology of oribatid mites, arachnid community structure; effect of human disturbances on soil microarthropods; mite-insect interrelationships
Parry, Dylan Assistant Professor	PhD, Michigan State Univ. MS, University of Alberta BS, 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.

Porter, William Professor	PhD, Univ. of Minnesota MS, University of Minnesota BS, Univ. of Northern Iowa	Wildlife population dynamics; integrated forest-wildlife management, habitat analysis and project impact evaluation; radio-telemetry
Powell, William Professor	PhD, Utah State University BS, Salisbury State University	Forest biotechnology, molecular plant-microbe interactions, plant genetic engineering, plant gene analysis
Saunders, D. Andrew Research Associate	MS, Utah State University BS, University of Missouri	Environmental Interpretation
Schulz, Kimberly Associate Professor	PhD, University of Michigan BA, Cornell University	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
Shields, William Professor	PhD, Ohio State University MS, Ohio State University AB, Rutgers University	Animal behavior; evolution and genetics; evolution of animal communication and dispersal systems; effects of genetic constraints on the evolution of social behavior; sociobiology and behavioral ecology, the use of DNA in identity testing and conservation biology; the interface between science and the law
Stewart, Donald Professor	PhD, University of Wisconsin MS, University of Michigan BS, University of Michigan	Fish ecology and fisheries management; ecological energetics; modeling predation and production processes; Great Lakes ecosystems; Amazonian ecosystems; ecology and systematics of Neotropical freshwater fishes
Teale, Stephen Associate Professor	PhD, SUNY ESF MS, University of Kansas BA, College of St. Rose	Forest entomology; chemical ecology; pheromones of forest insects; evolution of pheromone communication
Turner, Scott Professor	PhD, Colorado State Univ. MS & BA University of California-Santa-Cruz	Animal physiology; physiological ecology, thermal energetics; biology of body size; physiology of gas exchange
Weir, Alexander Associate Professor	PhD, University of Newcastle upon Tyne BS, University of Bradford, UK	Systematics and evolutionary biology of fungi using classical and modern molecular approaches; fungal biodiversity and conservation; fungal arthropod interactions; biology of parasites and symbionts
Whipps, Christopher Assistant Professor	PhD, Oregon State University BS, University of Victoria at Malaspina University-College	Fish and wildlife diseases, parasitology, microbiology, taxonomy, molecular systematics, diagnostics, parasites as biological tags and ecological indicators

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?"

Lawrence P. Abrahamson

Students

Since I do not have direct contact with the students in class most of my contact is with them on an individual basis. In this presence I have given advice to both undergraduates and graduates on courses and options in the environmental and forestry fields the after leaving SUNY-ESF. I an active on graduate committees and provide advice to grad students on various aspects of woody energy crops and pesticide application and effects. I have provided many job opportunities for both undergrads and graduate students while attending SUNY-ESF working on various aspects of my funded research projects.

Department/college

I served as the Continuing Education and Extension Coordinator for the Department of Environmental and Forest Biology. In this role I supervise Kim Adams in her role as Extension specialist for the Department and College. I have not been active in this role at the Department level as I assume some of the responsibilities have been taken over by other individuals. I am a member of the Human Subjects Committee (Institutional Review Board (IRB)) for Syracuse University and SUNY-ESF. I am also a member of the SUNY wide Human Subjects Committee (Institutional Review Board (IRB)) for the Research Foundation. As the Pesticide Use advisor to the College I work with the grounds people and John Wasiel, environmental Health and Safety Officer on a case by case basis. I remain involved in Faculty governance by attending the college meetings and serving as Sergeant-at-Arms for the Faculty Governance. I have dedicated a great deal of effort to outreach and tech transfer associated with the willow program. Much of this effort has been directed at educating legislators, the press, and the public and has positively impacted the reputation and notoriety of ESF. While all of the seven plant patent applications for new willow varieties have now been issued by the U.S. Patent and Trademark Office, a new plant patent application for at two new ornamental varieties has been submitted (Invention No. 1649-550, "Ornamental Varieties of Willows". I have been promoting the willow crop enterprise, including the publication of Willow Fact Sheets, a revised willow planting manual (in works) and presenting outreach exhibits at Empire Farm Days, the New York State Fair, etc. Together with Larry Smart and Research Foundation, I also worked to develop new licensing partners for our willow varieties. These efforts have now resulted in the third year of commercial sale of willow cuttings and whips of varieties developed in our breeding program that is generating a royalty stream to the inventors and to the College.

Professional

I continue to take part in and travel to professional meetings, presenting papers and cooperating with fellow researchers, which has led to invitations to give additional presentations. I continue to work well with Tim Volk (and Larry Smart @ Cornell) to develop the willow enterprise system in not only New York but the rest of the Northeast US and Canada. I am working to keep my international contacts in place so that our willow research can be developed for use in Europe (Sweden, UK, Ireland, Poland, etc.), New Zealand, China and Chile. I am actively involved in the International Symposium on Environmental Concerns in Rights-of-Way Management, as co-chair of the 8th Symposium and on the steering Committee with the 9th Symposium held in Portland, OR September 27 through October 1 2009 and the 10th Symposium to be held in 2014. I collaborate with Tim Volk on a number of funded projects that will expand our willow research, demonstration and outreach efforts.

Guy A. Baldassarre

Students

My student contributions continue to be in advising (35 undergrads) and teaching (3 courses). I also write a significant number of recommendations for recent and past graduates.

Department

At the departmental level, I am still the undergraduate curriculum coordinator for the Wildlife Science major, which is a big task given we are now at about 145 majors.

Professional

Professionally, I am totally engaged in rewriting the classic work, "Ducks, Geese and Swans of North America," last published in 1976. In addition to introductory material, I am rewriting 40+ species accounts, which average about 60-80 hours each. I am about half way through the initial manuscript, and this task will be my major focus until completed.

John D. Castello

I continue to work hard to enhance the Forest Health major within EFB, of which I am the coordinator. This past year (2008-2009), three students graduated from the major. Despite the losses to graduation, the major appears healthy. We now have approximately 17 students in the major as of late May (2010). I completed development of an assessment plan for the major, which has been implemented. EFB 494, a senior synthesis course for forest health majors is now being taught. Enrollment in EFB 340, Forest and Shade Tree Pathology, has remained at around 50 students. Enrollment in EFB 345-Forest Health, at CLBS has maintained an enrollment of 8-14 students during the past 3-4 years as well. I attribute this increase to enhanced interest in Forest Health at ESF. Enrollment in the new course cotaught with Dr. S.A. Teale for the second time this past spring semester called 'Peoples, Plagues, and Pests ' (EFB 217) has increased by 50% to 167 students.

Dr. S.A. Teale and I will complete our textbook on Forest Health for Cambridge University Press in July. The manuscript will be submitted on August 1, 2010. My research program is expanding in new directions. I submitted three proposals this year. One proposal (with S. McNulty and S.A. Teale) involving beech bark disease is a continuation of recent efforts with Dr. Teale working on this disease. One student (S.K. Letkowski) just completed his MS degree on this research topic this past year. J. Cale will switch from an MS into a PhD program this fall to expand his work on beech bark disease in collaboration with S.A. Teale and M. Johnston at the Ranger School. One paper has been published from this work already, and a second is in preparation. A second proposal on fungal isolation from *Sirex noctilio* has been submitted to the USDA Forest Service (with S.A. Teale).

Martin Dovciak

Students

I taught (1) EFB 535 Flowering Plants: Diversity, Evolution, & Systematics (taught for the first time under this new name and a new course description), (2) EFB 445/645/796 Plant Ecology, (3) EFB 202 Plant Ecology & Taxonomy module at CLBS, and co-taught (4) EFB 797 Adaptive Peaks (two semesters). Enrollment in EFB 535 doubled and students seemed to have enjoyed it as suggested by well above average course evaluations. Student enrollment and satisfaction in EFB 445/645 was on the level of the previous two years. EFB 445/645 was a complicated course to teach in current structure and since it had not been updated since the mid 1980's, I redeveloped the course under the new heading EFB 445/645 Plant Ecology & Global Change (to be offered next Spring). I built publicly available course websites for both EFB 535 and 445/645 (linked to the ESF online catalogue) and improved the current Blackboard-based websites for both courses (these include all lecture slides, lab assignments, student PowerPoint presentations ("featured plants"), video clips, exam reports/suggested answers, links to assigned readings,

and class announcements). I have worked with Terry Ettinger to better develop the greenhouse collection of flowering plants that could be used in the class (more remains to be done). In addition to my regular offerings, I gave guest lectures in EFB 326-Diversity of Plants, EFB 796-Core Course, and BIO 415/615-Conservation Biology (Syracuse University). Outside the classroom, I successfully graduated my first MS student, served as an MP (or Co-MP) to 5 graduate students (1 Ph.D., 4 M.S.), served on steering committees for 7 other graduate students (incl. one from Syracuse University), mentored 3 undergraduate research students (incl. a NSF UMEB student and a HWF Roosevelt student), and officially advised 19 undergraduates.

Department/College

My main contributions to departmental and college activities in terms of research included participation as a CoPI in a large multi-agency, multi-investigator NPS-funded research project, the Appalachian Trail Mega-transect Acid Deposition Effects Study. This research has a NPS produced web page and good potential to garner national attention. At the College level, I served on CoR, Climate Change thematic sub-committee for the Empire Innovation Faculty Search, CGMA, was a founding member of a Beech Working Group, and a core faculty in CUE. Outside of ESF, I continued my service as a reviewer for major peer-reviewed journals (6 manuscripts, 4 journals) - activities that contribute to the name recognition of both the college and the department. At the departmental level I continued to serve as the Chair for the Selection Committee for the Robert Burgess Graduate Scholarship in Ecology.

Self

Professionally, this was a good year – I continued building my research group which included five graduate students in total (1 Ph.D. and 4 M.S. students) this year, and I have successfully graduated my first MS student. I have become a CoPI on a NPS-funded multiagency project lead by USGS (Appalachian trail MEGA-transect study) with a total budget of \$747,242 (\$49,310 supports SUNY-ESF graduate student field research). I was also a CoPI on a NSRC research on Ca importance for biodiversity (with Colin Beier et. al.) and participated on three newly funded research proposals (as a PI or CoPI) funded by USDA CSREES/McIntire-Stennis Program. I also continued to be involved as a collaborator on three multi-year research projects at the University of Washington, Seattle; I co-authored a manuscript from one of these studies (Cedar River restoration study; published in *Ecological Modeling*) and I am a lead author on another one (Andrews LTER vegetation dynamics; currently in review in *Ecology Letters*). I coauthored two other manuscripts that are currently in review (one in *Biological Conservation*, one in *Ecological Applications*) based on projects that I was involved with since arriving to SUNY-ESF. I presented my work at a couple of interesting venues— as an invited seminar at Syracuse University Biology Department and an invited talk at Syracuse Botanical Club.

John M. Farrell

Students

The students and my research program in aquatic ecology continue to mutually benefit from work and research conducted at TIBS and ESF. Integrating my PhD and MS students along with motivated undergraduates and High School juniors and seniors continues to serve well in getting the work done and providing a variety of exciting educational experiences. Highlights for the year include having six undergraduates (2 ES 3 EFB and 1 from RIT) work with my research program at TIBS. We also had 3 high school Junior/Senior level volunteers that worked 8 weeks (40+ hours per week) who were the some of the most reliable volunteers we've had – their parents commented on how their children have changed in a positive sense (getting up early, having a sense of direction and motivation) following their research experiences. For one of the these students I applied as an American Fisheries Mentor and she has since received a AFS Hutton Scholarship and will work with our research group during summer 2010. I also advised EFB Senior Eric Patch in an undergraduate research experience in aquatic restoration. Eric did independent research on the fish community response to wetland channel restorations in invasive cattail mats in the French Creek Wildlife Management Area in cooperation with DEC and the USFWS. He

presented his research results for EFB's Aquabreak last fall. My graduate program continues to be strong with three active PhD candidates and one MS. I had an MPS student complete his degree program last May. I actively searched nationally for new MS level students and have 3 new MS students starting out this summer and fall (2 RA and 1 TA). My advanced students have been presenting research at conferences including the International Association of Great Lakes Researchers Annual Meeting and at the NY American Fisheries Society Meeting as well as local and regional venues. Geof Eckerlin (PhD candidate) won the best poster award at both the NYAFS and GLRC meetings and was a co-author on Best Paper at NYAFS. Working with past graduate students we submitted several manuscripts and completed publication of two significant papers with students. I continue to encourage my students to reach out and work with others and we have developed some important collaborations as a result (i.e. Cornell, Montreal, DEC, USFWS as examples) that will benefit our program.

Department/college

My Directorship at TIBS continues to be the most important service I provide to ESF and EFB. This field station is really starting to take off and have greater visibility in academia, regionally in the Great Lakes, and with agencies and managers as well as the local river community. Development and infrastructural improvements need to continue to keep pace with interest and growth in the program. I have reached out to faculty that we are open for business and the NSF CIRTAS-TIBS linkage will undoubtedly take EFB Aquatics and TIBS to a new level. I have submitted an NSF Facilities and Marine Lab Improvements proposal in support of the planned new Multipurpose Student-Researcher Building of which ~177K have been already raised in conjunction with the ESF Development Office (Bob Quinn). During summer 2010 we plan to go public with the initiative and move forward with construction in 2011 for our wet lab renovations and construction of the new building. We will continue our partnership with the world-class Antique Boat Museum in our River Lecture Series. Last summer ESF faculty (J. Gibbs and M. Teece) and myself provided seminars to the community that were very well received with strong attendance and we were invited to continue this community program. Highlights for my work within EFB and ESF on the main campus included significant work with the building and advisory committee that hopefully will lead to improvements with our conference rooms and I also completed development of a brochure highlighting the Aquatics program at the request of the faculty who provided significant input. I have had the opportunity to serve as chair of the Wildlife Ecologist search committee (with Drs. Baldassarre, Frair, Limburg, Stella and graduate representative David Williams).

Professional

My change in appointment from Senior Research Associate to Associate Professor has been challenging this year but also has been very rewarding. Teaching the EFB Core course (with Kim Schulz) was also a challenging yet rewarding experience. We inherited a curriculum last fall and built one in the spring semester. I believe the goal of helping create a cohort of students who know each other and the faculty better was accomplished. We required students to develop professional skills and I think they have benefitted from the variety of approaches we used. Some students in the grant development portion actually submitted grants that were funded as a result of the course. Another highlight was an interview that was videotaped and a panel of professionals brought in to discuss the real world hiring process. Students were also exposed to the insights of the EFB faculty and thanks go to the many who were involved. In research I worked as a co-editor of a special issue in the Journal *Hydrobiologia* that was published this year following a symposium "Ecosystem Studies of the St. Lawrence River" at the St. Lawrence Institute in Cornwall, Ontario. This year also marked a group of publications that indicate a significant diversification in my research with topics on lower trophic levels of the St. Lawrence, muskrat populations and water levels, cattail population dynamics and wetland change, walleye spawning habitat and aspects of river ecology. Obviously I had much help from students, staff and faculty in realizing this goal. Success with research, grants, and teaching will help continue to fuel this business of providing opportunity and guidance to these talented young people we serve.

Danilo D. Fernando

Students

This past academic year, I taught Plant Developmental Biology and Plant Diversity, convened the freshman orientation seminar for biotechnology majors, trained several undergraduate students in my lab through independent research and internship, presented invited lectures to two different courses, and worked with my two Ph.D. students on various aspects of their research and grant/fellowship applications. In total, at least 123 students have been served in various capacities. To enhance student interest in my classes and broaden their understanding of various groups of plants, I invited several speakers to give presentations in Plant Diversity, such as Drs. Robin Kimmerer and Martin Dovciak (who talked about bryophytes and overview of flowering plants, respectively) and Dr. Jim Seago (from SUNY Oswego) who talked on Basal Angiosperms and root development in wetland plants.

Department/college

I served as the Director of our graduate program (for the third year) and my major responsibilities included the following: 1) replied to various inquiries about our graduate program (through email, phone, and/or personal visits) on an almost daily basis from several potential applicants and current graduate students, 2) processed a total of 129 applications (22 for spring and 107 for fall) that involved reviewing each application for initial assessment and to designate specific 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, and 3) provided orientation seminars to new graduate students about our graduate program. I also served as the department's representative to the Graduate Council and raised issues regarding problems/suggestions on how to improve the graduate program. I have also shared the ideas and activities of OIGS to the department's graduate committee and faculty. As the coordinator on optical instruments in the department, I worked with Bridget McMaster regarding various problems on light microscopes and teaching needs.

Professional

The following are what I consider as significant: 1) served as a Guest Editor for a Special Issue on Plant Development and Evolution by the International Journal of Plant Developmental Biology. I have received and reviewed all 10 invited reviews from various colleagues around the world, invited and formed at least three reviewers for each of the manuscripts, reviewed and synthesized the reviewers' comments for each of the manuscripts. I also made sure that most of the reviewers' comments were addressed in the revised manuscripts. This Special Issue will be published in July 2010; 2) served in the USDA Plant Biology: Growth and Development panel to review grant applications in Washington DC in September 2009. I reviewed 16 grant proposals (as primary, secondary or tertiary reviewer) and participated in the deliberations of at least 75 proposals; and 3) following proposal review, integration of reviewers' comments/suggestions and various other negotiations, the publisher - Taylor and Francis Group has unofficially approved our proposal (with my co-author - Dr. John N. Owens) to write a textbook on "Sexual Reproduction of Trees." The start date of this 15-month activity is still under negotiation.

Melissa K. Fierke

In the fall semester, I taught General Biology for the second year with ~300 students. I supervised two graduate TAs, their workshops and grading, and all went smoothly. I continued to make use of blackboard, posting assignments, quizzes, grades, etc. and contacted students that were doing poorly. I was happy with the end of the course with a 73.7 class average and class evaluations increased slightly to 4.1 and 4.3 for the two lecture sections. I worked with an undergraduate in the spring semester, Erik

Gustafson, and he presented a poster at the Student Spotlight on Research on his research into entomopathogens of *Sirex noctilio*. I facilitated two summer internships in 2009, one on the endangered American burying beetle research in NW Arkansas and another on horse-breeding for a pre-vet student in Environmental Science. I am supervising two internships this summer, both involved with emerald ash borer. One is working for the NY-DEC monitoring a native digger wasp and the other is a sophomore at SUNY Fredonia and is monitoring traps hung in girdled ash trees in and around Randolph in SW NY for EAB as well as traps in Allegany State Park for Cerambycids. I again helped coordinate the Adaptive Peaks Graduate Seminar series in both the fall and spring semesters and organized a graduate seminar for invasive forest insect pests. I also developed two new courses, Insect Diversity, which was taught at the graduate level this spring, and Forest Health Monitoring, which was taught as a two-week field course out of Heiberg for Forest Health majors. The Insect Diversity course was wonderful as I finally had the opportunity to teach in my field. The FHM course was a challenge, but the students were good and were overall positive and satisfied with what the course.

I am happy with the progress of my current cadre of graduate students. Pat Eager defended his thesis research and is in the process of submitting two manuscripts on parasitoids of *Sirex noctilio*. He presented his research at the Entomological Society of America annual meeting in Indianapolis and placed second in the student competition for his section. Peter Rockermann has also presented his research on the importance of ash in NY riparian zones at several venues, including the annual ESA meeting and is finishing his research on ash-specialists in ash-dominated riparian forests that may face extirpation with the demise of ash due to emerald ash borer. Warren Hellman worked for the NY DEC last summer biomonitoring emerald ash borer using a buprestid-hunting native digger wasp, *Cerceris fumipennis*. He has his first data set documenting current diversity of Buprestid beetles in NY ahead of the non-native parasitoids that have been introduced to control emerald ash borer and will be continuing that research this summer as well as doing a similar study in Michigan at the release sites of the parasitoids and developing translocation protocols for the wasp to improve detection and delimitation techniques for EAB. Warren has also given multiple talks, a webinar, and organized volunteer trainings for using the digger wasp to monitor for EAB. He also won a couple of awards, including funding from the Sussman Foundation and the Stegeman outstanding masters student in invertebrate studies at ESF. Two new students started with me this spring and they have hit the ground running. Chris Standley is continuing on Pat's work on the *Sirex noctilio*-parasitoid complex and Kim Dean is working on entomopathogens of EAB as well as improving efficacy of the current survey protocols for EAB. I have another student that I recruited coming in the fall to work on ecosystem and biomass dynamics associated with the loss of ash in NY state parks.

I've continued my outreach efforts giving presentations at the American Chemical Society meeting and presentations in and around Syracuse. I am trying to pass on these outreach opportunities more to my graduate students and they are doing an excellent job of taking these on, being enthusiastic and getting our science out there, e.g., Pete and Warren manned an entomology display in the ESF booth at the 2009 New York State Fair. I've continued to serve as an active part of the ESF Learning Community committee as well as the EFB curriculum committee this past year and reviewed scholarship applications for four EFB scholarships.

Professional development has included attending conferences and meetings, making contacts in the northeast in an effort to get my name and interests known, finishing publications from my PhD research and postdoctoral work as well as working with two of my graduate students, Pat and Pete, in getting their research written up into manuscripts as well as writing multiple grants. I gave an invited presentation in the forest entomology section "What's New in Forest Entomology" at the annual Entomological Society meeting in Indianapolis and attended the Emerald Ash Borer conference in Pittsburg to learn more from and network with movers and shakers working in EAB.

Jacqueline L. Frair

Students

This past academic year I know that I was a more effective mentor to both undergraduate and graduate students, both inside and outside of classes. This has come from trial and error, discussion with peers and personal mentors, and finding the time to invest in students on a more personal level. Significant milestones at the graduate student level include: 1) my first graduate student, Christina Boser, successfully completed her MS thesis and took a full-time job with the Nature Conservancy in California, 2) current MS students in my lab, Sara Hansen and Scott Warsen, successfully procured funding in support of their research, 3) my first Ph.D. student, Robin Holevinski, successfully completed her candidacy exam, and 4) the much improved “Tools of the Ecological Detective” course that I co-taught with Jesse Brunner that this year included a 3-hr lab component that helps students develop R programming skills. This course in particular makes a strong contribution to our graduate program, and I am pleased with its evolution (although some refinement is still required). Significant milestones at the undergraduate level include: 1) successful incorporation of three undergraduate TAs in my core wildlife course (who received rave reviews from the students for their knowledge of complicated analyses and software), 2) successful mentoring of two Cranberry Lake Research Fellows, Lynne Beaty and George Prounis, whose research posters earned first and third place at ESF’s Spotlight on Student Research and Outreach, 3) supporting members of the student chapter of The Wildlife Society as they handily won first place in the NY State student quiz bowl competition, and 4) having written letters of recommendation for several students that are moving into graduate school and professional positions. Having now spent four complete years at ESF, there were many familiar faces at graduation. I take immense pleasure in having seen these students mature and watching them embark upon their professional careers. I am increasingly certain that I’m training these students to be competent and confident wildlife professionals. I look forward to seeing all they achieve. As my courses evolve and my teaching abilities mature, I appreciate having the ability to invest in students on a more personal level, which resulted in my successful nominations of two students, Lynne Beaty and John Vanek, for the SUNY Chancellor’s Award and Outstanding Undergraduate Student Award (from the NY State Chapter of The Wildlife Society), respectively, and a comment on my undergraduate course review indicating that my “respect for students is unmatched.”

Department/college

This year my departmental and college-level service was dominated by my service as the chair of the Faculty Governance Committee on Research (COR), and Vice-President of the NYS Chapter of The Wildlife Society (TWS). Being responsive to faculty and graduate student requests, this year the COR modified submission and review guidelines for two ESF-based funding competitions, sought faculty input on potential members of the McIntire-Stennis Public Advisory Board, and worked to better highlight graduate student research at the Spotlight on Student Research and Outreach event. We reviewed a total of 55 grant applications and are working on a fall showcase for McIntire-Stennis funded research that involves the new Public Advisory Board. The spotlight event this year showcased 41 undergraduate posters, 71 graduate student posters, and additionally included (for the first time) 6 oral presentations by graduate students. We worked with the GSA Professional Development Committee to secure funding for graduate student awards, coordinate the judging of student posters, and run the oral presentation session. This was a successful collaboration that will hopefully continue in the years to come. ESF was well represented this year at NYS TWS events, which included a fall field meeting at the Wanakena Ranger School and the annual meeting in Alexandria Bay. I worked with the ESF Alumni Association to host a student-professional mixer and poster session at the annual meeting, and instituted new awards for an outstanding wildlife graduate student and student presentations at the annual meeting. This year my own graduate student, Robin Holevinski, won both the outstanding student and best poster award.

Professional

This year I've worked to bring several papers to fruition that stemmed from a workshop on GPS applications in wildlife research (2009; Trento, Italy). A total of five co-authored review papers are the result, currently in press for a special issue of the Philosophical Transactions of the Royal Society B. I've also initiated new research collaborations (with Mark Teece at ESF and Luke Hunter at Panthera), as well as investing significant effort in data analyses from ongoing collaborations (notably for work on elk and wolves in Alberta). As a result of ongoing collaborations I participated in a workshop at the national Institute for Complex Data Structures in Montreal that focused on "Statistical Methods for Geographic and Spatial Data in the Management of Natural Resources" and for which my ongoing research in Alberta was highlighted (and presented by a co-author).

James P. Gibbs

At the Departmental level I continue to serve as Coordinator for the Conservation Biology undergraduate major, which is enjoying healthy growth. I offer two of the Major's three core courses for undergraduates, and advise about 40 undergraduate. I also teach at our Cranberry Lake Field Station, now for the 14th consecutive year, to contribute to the field component of our teaching program. As internship coordinator for EFB I spend much time helping many EFB students from all majors find and receive academic credit for professional experiences, this year aided by a resurrection of the ESF/NYS-DEC internship program. I was appointed Assoc. Chair in January but was slow to start making contributions in that role but anticipate starting soon a productivity benchmarking survey to provide context for our Department's activities. I also co-chaired (with Norton) a search for a new informal biology educator faculty position. On the research and outreach front, we have launched with good success a major constructed small wetlands project at Heiberg Forest that involves many collaborations and created opportunities for others to leverage significant research grants to work within the network of constructed pools. I remain preoccupied overseeing the financial aspects of a large Guyana-based NSF "biocomplexity" grant relocated to ESF two years ago and extended for another year. I am also an active as an adjunct scientist with the Charles Darwin Foundation, advising on various matters, and secured funding for two very exciting projects to be initiated in 2010 and focused on using giant tortoises as ecological analogs to jumpstart restoration of island ecosystems. I remain involved with conservation of the Kihansi spray toad in Tanzania, participating in a workshop this spring in Dar es Salaam developing guidelines for reintroducing the animals to the wild, and also actively involved with a NGO (Altai Assistance Project, as Vice Chair) generating support for conserving the biological and cultural riches of the Altai region of Russia. Software I developed for designing monitoring programs (Program Monitor) was released this year after a year of reprogramming (with E. Ene). Last we also developed and will launch in the fall season a web-based squirrel morph reporting scheme focused on getting citizen scientists to think about contemporary evolution as part of ESF's NSF ULTRA project.

Charles A.S. Hall

Students

I continue teaching a very large load (6 courses) to try to bring what I think is important to our students. I am driven, perhaps foolishly, by the concept that if I do not teach e.g. Systems Ecology, Energy or Biophysical Economics it simply will not be taught. I have been greatly aided in this by graduate and undergraduate TAS for which I am appreciative and grateful. I try to maintain my perception of very serious quality within this schedule. I believe in giving serious, thinking paper assignments and tests (and I grade the "biggie" questions in all of my advanced classes and read all papers with much feedback). In addition, as I think anyone knowledgeable will tell you, there is usually a line of students waiting for personal interaction with me essentially every afternoon. My graduate students are doing very well and I was pleased to see that three of five teaching fellows went to my students. Anna Stewart continues to receive about every possible prize including a Fulbright for her PhD research. My former graduate students continue to receive what I consider premium job offers. I listed half a dozen last year who

received positions at premium Universities and Institutes while forgetting that Mary Killilea started as tenure track assistant professor at NYU. Ye Qi of Tsinghua University (“China’s MIT”) was chosen to appear on Chinese Television with Secretary of State Clinton, Hanquin Tian is distinguished Professor at Auburn and on and on.

Department/college

I believe that I bring our programs and students at ESF to the world very effectively in a series of high quality and high profile papers in, for example, Earth, BioScience and American Scientist, as well as many disciplinary journals in energy, modeling, ecology and increasingly economics. I will be featured on the Discovery Channel special four part series on “Energy” this summer (I have been filmed for many hours at two locations, including with my former PhD student Nancy Harris). Our Biophysical Economics approach garnered some very large fruits this year with coverage of our Syracuse meeting in the New York Times and the publication of our papers in “The Corporate Examiner”. We have predicted all of the financial (and environmental) chaos of recent years for decades and believe that we understand them better than most.

Peak oil for the world, predicted by Hubbert in 1968 and in my own papers since 1975, occurred unequivocally in July of 2008. Energy has come to the forefront in our society, again, and my guess is to stay. I find that both my earlier and my most recent work is gaining a great deal of attention, although in a very uneven way. I remain very much in demand as a speaker on energy and its relation to environment. For example I was an invited and very effective plenary speaker at three national meetings, AAAS had a special session on my most important contribution (EROI) and I was also an invited speaker at 4 colleges and universities. I am editing a new series on Energy at Springer, a series designed to back up my main project now, the book “Energy and the Wealth of Nations”. I was invited to join the scientific advisory board of the Institute for Integrative Economics, invited to appear in Congressional and other testimony by economist J.K. Galbraith (Son of...) and so on. High level resource and financial people call or email me several times a week (today from South Africa). I run an energy list serve with about 500 members where I distill and send out at weekly intervals what I believe to be the most important energy and energy/economic information. I have also been interviewed for local TV number of times and, as mentioned, will be featured on the Discovery Channel.

Self

I am now 67 and am aware every day of the long shadow of aging. I have to think about how long I can play this game and at what level. It is very hard for me to contemplate retiring because I do not know who I am if I am not Professor Hall. I fish, read and travel all I wish and have few other things I wish to do. Nevertheless I believe that my abilities and productivity as a teacher and scientist show little if any indication of decline. I taught 6 serious and very well regarded classes (5 and a seminar) with frequently very positive student responses (“life changing” and “best class I ever took” were not rare comments verbally or in writing). Additionally I take pride in the very unique nature of what I teach: I think I add an important and different perspective to our program with my emphasis on systems, ecosystems and energy approaches to natural systems and systems of humans and nature studied as ecosystems. I thank EFB and my other Departments for continuing to support me with the most incredibly responsible and gifted TAs I could ever wish for. Certainly they deserve much credit for the success of my courses. While there is always room for improvement (always in organization) my evaluations, remarks of students years later and my own evaluation is that I continue to contribute a great deal to three Departments. In addition I published nine papers this year, and about fifteen if we count newly accepted papers (some overlap), often in excellent places (Last year two in BioScience and one in American Scientist, this year one in Earth (perhaps the Earth scientist’s equivalent of BioScience) and two in a very different venue: The Corporate Examiner. Meanwhile I continue to publish in appropriate good disciplinary Journals, this year International Journal of Climatology and (assuming the acceptance of revisions) Oikos. I am very excited about that paper (Nancy Harris’ PhD work) which tests at an

ecosystem level Howard Odum's Maximum Power Principle. Finally I am starting on a new venture: Urban Ecology, with two new NSF grants from Ultra and one paper already accepted.

I also believe, as so nicely put by Karin Limburg last January at the Hardy L. Shirley Faculty Mentoring Colloquium, that after many years "in the wilderness" that my work is beginning to be taken much more seriously, or perhaps to be taken seriously by a considerably larger number of people. This is true to the effect that I have told a number of friends that I have become a "micro-celebrity", having recently been filmed for PBS, extensively for the Discovery Channel four part series on Energy, written up in the New York Times (our Biophysical Economics conference last October), interviewed for Forbes yesterday and so on. The annual meeting of the American Institute for the Advancement of Science had a special session, organized by Cary King of the University of Texas, where 6 US energy analysts, including myself as an invitee, discussed the current state of EROI, energy return on investment, the main product of my life's work. Additionally I am sought more and more by members of the financial community as it becomes increasingly clear that our energy supplies can no longer grow and this translates into severe limitations on economic growth. The recent behavior of the entire economy, the fact that 40 odd of our 50 states, including our own, are in severe economic distress, the erratic and downward behavior of the stock market are all quite explicable by our analysis and indeed were predicted by our earlier publications. We are attempting to investigate possible adaptations to these new circumstances through our two new urban ecology programs.

I have to consider what might remain at ESF after I am gone from here or from the Earth. I take great satisfaction that Systems Ecology and Ecosystems, what I was brought here to develop, are strong and healthy, that we have a functional new energy minor and it will soon be a major and that we have a formal course in Biophysical Economics. Our Environmental Sciences program is more formalized and perhaps strengthened, although with less punch than I envisioned. I have begun working with about 5 other faculty members to create unified undergraduate programs (minor etc) in Ecological Economics of which my newly named Biophysical Economics course will be key.

To my and many others' astonishment there does not exist at NSF or even DOE programs to fund the kind of research I consider most important. Nevertheless I do have in operation at this time three NSF grants of which I am co-PI, one from the Forest Service and the promise of about \$100,000 in private money. Additionally our group in Cordoba Argentina has received a \$1 million grant for integrated land and energy planning for the Argentine Pampas. I remain the original loaves and fishes guy and have 11 graduate students all of whom were supported in some way this year.

As to what I have done professionally all I can say is that I continue, as always, to integrate the physical sciences with biology and social sciences using what I believe to be rigorous science as I try to prepare students at all levels at this University and the world for what I perceive to be a very different energy/economic future for which there is very little understanding or preparation. But I am not a policy person: I am interested in science, in how ecosystems work, including the human-dominated ecosystems that constitutes the majority of the terrestrial surface of the Earth. I seek to understand these systems and promulgate that understanding to an energy-illiterate world and scientific establishment.

Thomas R. Horton

Students

I continue to get lots of mileage out of direct interactions with undergraduate students in my coursework and through their contributions working on my lab. I enjoyed teaching General Ecology after my sabbatical leave. I had an excellent cohort of TAs working on the labs. The students in lecture were very engaged and I expect to hear good things about these students from other professors as they move through the program. I am proud to say that this group actually clapped on the last day of lecture, as much a reflection of their good nature as my ability to make the course enjoyable (I hope!). This year I facilitated connecting the students in EFB 320 with two field research opportunities. The first was with Operation

Wallacea where about 30 students signed on with real interest and about five are headed to summer experiences at field sites such as a cloud forest in Honduras and a wildlife preserve in Africa. I also connected students interested in outdoor education with a DEC representative who signed up several of our students to work at field camps this summer. I offered Advanced Mycology: Basidiomycetes for the first time last fall and the students really responded. This course included collecting fungi during weekend forays including a camping trip near Newcomb that was a big hit. A cohort of my advisees graduated this spring, including the student who finished with the highest GPA in EFB. I identified the potential of this student four years ago and I helped facilitate her navigation through the program and to help her gain excellent research experience in several labs. I enjoyed helping her and another former undergraduate student network at last summer's annual meeting of the Mycological Society of America in Snowbird Utah and was pleased to learn that both have landed graduate positions. I a close connection I had with many of this year's graduating students through my classes and their performances at the Coffee Haus Concerts. One of my advisees wrote a successful proposal for a CLBS Undergraduate Research Fellowship to investigate mycorrhizal ecology of spruce. Two of my graduate students finished their MS degrees and are working to get their papers out despite starting Phd programs (University of Zurich, O'Brien; University of Wisconsin, Galante). Tera Galante's talk at last year's MSA meeting was highlighted in a comment published in the *New Phytologist*. Joe Vineis project is progressing well and his talk at last year's ESA meeting was highlighted in the *Bulletin of the Ecological Society of America*. One way to quantify success with students is recognition of their research after they finish and I note here that Sara Ashkannejhad's (MS 2006) paper in *New Phytologist* (2006) has now been cited 48 times according to Google Scholar.

Department/college

I took over the responsibility of maintaining the two new growth chambers on the third floor. I also took over maintaining the water purifier on the fourth floor. I serve on multiple graduate student committees, the GPAC committee, and served on the search committee that resulted in the hire of Dr. Lee Newman. I am very pleased with her hire for her energy, applied research, and her ability to strengthen plant sciences in our department. I also served on a committee to review proposals from firms hoping to be selected to build our new biology building. I also enjoy mentoring faculty as they move along the tenure track. I advise students who have an interest in becoming science educators and facilitate their entry into the dual program with SU that leads to an EFB B.S. and New York certification in Secondary Science Education. Given the recent turn-over in the office of Instruction and Graduate Studies, I wound up being one of, if not the, most knowledgeable individual on campus about the dual program and helped Dean Shannon understand how our students navigate both their ESF degrees and the Science Education coursework at SU, as well how best to facilitate communication between the two campuses. I also make significant contributions through my teaching, research and outreach. I teach General Ecology (249 students, 10 labs, 5 TAs), a major course for the department and the college and it is solely my charge to deliver the lectures and run the labs. In terms of research, I see my productivity benefitting the department and college. I brought in \$253,000 (new NSF award + an NSF Supplementary Authorization). Two of my papers were published during the last annual report period and two additional manuscripts are in review.

Self

I had a good time teaching General Ecology last fall and was rewarded with great interactions with the students. One of my objectives has been to build a strong mycology program and there were a number of steps that I took towards this end. First, I taught Basidiomycete taxonomy, which I will alternate with Mycorrhizal Ecology each fall. Second, I organized the 1st Annual Mushroom Fair at Beaver Lake Nature Center in September. The Nature Center was very impressed with our turnout and immediately invited us back do it again this year. Third, I co-organized a symposium at last summer's MSA/BSA on Conservation of Fungi that led to a special issue in *Fungal Ecology* (I have two papers in review for this issue). There is no doubt that students are interested in conservation issues but education about fungi is sadly neglected. Raising the awareness on campus and beyond about conservation of fungi will continue

to be a focus of mine, both as a teacher and researcher. I received a \$240,000 NSF award from the Population and Community Ecology panel this spring. The fact that this award was funded *in full* suggests the panel felt this proposal was among the top tier of those submitted. This NSF award follows a paper published in *Ecology* with Dr. Dan Simberloff, one of the world's preeminent ecologists and I look forward to our continued collaboration. This was funding was in addition to a \$13,000 Supplementary Authorization from NSF to support the final stages of my work on an NSF award originally funded in 2006 with collaborators at UNH. My papers continue to be cited. My 21 peer reviewed publications have now been cited 1226 times, with an average of 58.38 citations per item and my H-index = 14. I am proud of the attention my work receives both nationally and internationally.

Robin W. Kimmerer

Students

My major and most rewarding contributions during 2009-2010 have been to our students. I have taught 12 distinct courses. I am pleased to be able to create innovative, interdisciplinary courses which broaden the scope of ideas and perspectives available to our students. Excellent student evaluations indicate that they appreciate the content and character of these offerings. In the capacity as Director of both the USDA Multicultural Scholars program and the NSF Undergraduate Mentoring in Environmental Biology Program, I have helped to mentor the academic, personal and professional development of 23 promising undergraduates this year (in addition to my assigned advisees) . This effort has included three different weekly seminars, out of class activities, one on one mentoring and individual research guidance for students engaged in undergraduate research and/or apprenticeships. All students completing the UMEB program presented research posters at the Spotlight on Research. The retention and achievement rates of underrepresented minority students in our programs is 93%, nearly double the national average, which attests to the strength of our USDA and NSF sponsored mentoring and enrichment programs. My 8 graduate students are flourishing and making solid contributions. I also serve as advisor to two student organizations on campus. I have contributed to teaching in diverse outreach settings such as Onondaga Nation School and through a wide array of invited public presentations. My central focus on the scholarship of teaching was rewarded with the appointment to the rank of SUNY Distinguished Teaching Professor.

Department/college

I have served as founder and Director of The Center for Native Peoples and the Environment in 2009-2010 which has brought significant positive attention to the College's leadership role in incorporating traditional ecological knowledge in environmental education and research. The many activities of the Center include a summer community environmental internship program at Onondaga Nation and at Tuscarora nation. The Center initiated the new "Native Earth Summer Youth Camp" last summer, 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, which lays the foundation for additional partnerships. 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, and in attraction of 3 new indigenous students to our graduate programs, a testament to the importance of these programs. 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 such as the recent NSF-IGERT "Helping Forests Walk" have developed. I served as the PI for the development of this years IGERT pre-proposal with an interdisciplinary group of collaborators. Unfortunately, that proposal was not successful with NSF, but we mounted another collaborative effort and resubmitted a revised IGERT pre-proposal to the current competition . I'm very excited about the creative directions a successful IGERT could generate. The Center has also catalyzed new research directions in biocultural restoration.

Self/profession

I have invested a significant amount of time and effort in completion of the book proposal and manuscript for a new book entitled “Braiding Sweetgrass”. I’m delighted that the manuscript has been accepted for publication by Milkweed Press with an anticipated publication in fall 2011. My work in literary biology and the integration of indigenous and scientific perspectives has led to acceptance as Writer in Residence at the Blue Mountain Center for the Arts, The Sitka Center for Art and Ecology and Green Mountain College. Recognition of this effort has led to an appointment to the Board of Directors of The Orion Society, the leading journal of environmental literature. I have worked this year to orchestrate a sabbatical leave for next year which includes these three writing residencies, as well as visiting scholar status at the College of Menominee Nation and Michigan State University. I’m particularly proud of the contributions of the Center for Native Peoples and the Environment, as an emerging change agent in broadening the scientific dialogue to include traditional ecological knowledge.

Donald J. Leopold

Students

This past AY I taught about 125 students in Dendrology (EFB 336) and had one of my Ph.D. students, Sara Scanga, finish her doctoral program in December. She was immediately hired for the tenure-track Assistant Professor in Plant Ecology position at Utica College. In September, Dr. Neil Ringler and I were asked to assist the county in providing interns and other help to the Carpenter Brook Fish Hatchery because of serious county budget problems. EFB aquatic and fisheries science faculty have assisted in recruiting student interns that have helped to keep this facility open.

Department/college

During the past year I gave 14 invited presentations, typically on native plant conservation topics, including the keynote and book signing in November at the Indiana Native Plant and Wildflower Society 16th Annual Conference to about 275 people. In March 2010, Drs. Bongarten, Ringler, Gibbs, Teale, Stella, Diemont, and I visited INECOL in Xalapa, Mexico at their invitation to discuss research collaboration and graduate training. That trip has already led to a \$50K commitment from CONACYT in Mexico for a workshop to be held likely during the spring 2011 to bring researchers together to discuss the ecology and conservation of mountain cloud forests in Mexico. This past year has required substantial attention to planning for the Gateway Building, especially the plans for the landscaping around the building and the green roof. I have had to initiate a research project, working with Tim Toland (Dept. of LA) and Terry Ettinger (campus greenhouse manager) to demonstrate that the plant selection for the green roof will be successful. In August I agreed to serve a second three-year term as chair of the department.

Professional

Last August I received New York State Nursery and Landscape Association 2009 George L. Good Gold Medal of Horticulture Award for contributions to the horticulture and green industries of NYS.

Karin E. Limburg

Students

I had a new cohort of graduate students enter, along with a new post-doc. I felt that I did a better job than in previous years in terms of building some cohesion. I worked with the three new MSc students to develop research proposals, and have tried to involve them in other aspects of professional work such as reviewing manuscripts. All of them submitted proposals for funding their research, and one of them was successful. I have found that post-docs can be extremely helpful in mentoring, as they bridge between the grad school experience and the next career step. Hence, it has been a pleasure to work with this group. I was also able to provide research experience for some undergraduates in my lab (otolith research, a topic that requires stamina). I’ve also

continued to mentor my doctoral students, one of whom (A. Sopacua) finished her dissertation revisions and took a job with UNICEF back in her home country of Indonesia, as a water resources expert.

In terms of teaching, the Fisheries course had a record number of enrollees. I think this was due to the bad economy last year, which stimulated greater attendance in school. But the course went well, and reviews were good. In the springtime, I decided to teach a graduate level course, “Quantitative Modeling and Analysis.” I piloted the use of a textbook that introduced many complex topics, but that worked examples explicitly in Excel. I liked this approach, as I think it was pretty accessible for the students. I’ll note that most of the students in this course are not the type who ordinarily leap at modeling classes; and in fact, my intent was to reach this audience. Given that this was the first time through, it was fairly successful. I judge that by the fact that all the students successfully taught parts of the book, all are now at least somewhat conversant in parameter estimation and Monte Carlo, Bayesian, and other analysis, and the student projects were in general quite good. I think at least two of them have a good chance of being expanded into publications.

I also organized the call for nominations for the EFB Outstanding Doctoral Student award, and was pleased that we had an awardee this year (this is not always the case).

Department/college

Along with this last point, I continued to chair the EFB Graduate Program Advisory Committee (GPAC) and served on two other committees. Our GPAC developed a new core course for incoming grad students, and it was run in both semesters by John Farrell and Kim Schulz, who did a remarkable job getting this off the ground. With Valerie Luzadis (lead PI) and Greg Boyer, I obtained funding for and helped to run a SUNY “Conversations in the Discipline” (CID) workshop on ecosystem services. It brought in around 60 people from as far away as Canada, and was quite successful as these things go. It helps to draw attention to the fact that SUNY ESF has strengths in this transdisciplinary arena. I’ve also written another CID proposal with Stacy McNulty of the Adirondack Ecological Center, for which we’ve received funding for a workshop to expand the research and education networks within the Hudson River watershed. Although there is an active network, it has largely ignored the Upper Hudson and the Mohawk Valley, areas where SUNY ESF can – and does – play an important role. Our workshop will be held at Huntington in early October. We anticipate hosting 40-60 participants.

Self

Over the last year or two I’ve gotten involved in some new research networks, and this has been both exciting and has led to new collaborations and research funding. The research areas include the restoration of ecosystems for diadromous (land-sea migrating) fishes, identification and management of marine bycatch of river herring (actually, two species of land-sea migrating herrings), and the joint interaction of watershed nutrient loadings and fisheries on the generation and persistence of marine hypoxia. These are in addition to ongoing research in the Hudson River estuary, Baltic Sea, and Grand Canyon. As is often the case, it is possible to use teaching to gain further expertise. This was part of my motivation to teach “Quantitative Modeling and Analysis.” It was a good refresher and also a chance to learn more up to date methodologies, in order to be a better teacher and practitioner. I hope to expand on this as a grad-level course to be run every other spring, alternating with a grad-level course in grant proposal writing. The other ongoing themes in my research program continue to evolve.

Mark V. Lomolino

Course development

The course, Ecology and Conservation of Island Life, is one I am developing and hope to offer a graduate and upper level undergraduate course during the Fall semester of odd years. I offered a preliminary version of this as a 1 credit graduate course (EFB797) to 10 graduate students during Fall, 2009. Based on evaluations, the course was very well received and there would be much interest for a 3 credit course

of the same title. Mammal Diversity, EFB 483, is a four credit course that I have developed after arriving at ESF. During the Spring semester, I thoroughly revised and expanded the lab and discussion portion of this course, adding additional discussion topics, developing a web page and on line resources, organizing the mammal teaching collection in Room 238, better integrating lectures, video and power points shows of living mammals in lecture, lab and discussions, and offering optional labs in mammal tracking during three weekends (at the campus cemetery and Beaver Lake Nature Center) and one at the zoo.

Research and Scholarship

Publication of the 4th Edition of Biogeography – Lomolino, Riddle, Whittaker and Brown, Sinauer Associates. This thoroughly revised and full-color edition should continue to be the leading text in the field of biogeography. Expanded research program on ecology, evolution and biogeography of body size to include effects of climate change (dissertation topic of Katherina Searing) and patterns of extinct insular mammals and mammal species recently introduced to islands (recently notified of initial funding of \$100,000 for these studies by NSF). Publication of important review of the conceptual development of island biogeography theory in Quarterly Reviews.

Gregory G. McGee

This year I continued to adjust the General Biology labs in order to provide engaging experiences that build student capabilities in scientific inquiry, communication and laboratory skills. Both courses saw some modifications in content and administration, including the development (with Katie D'Amico, graduate assistant) of an introductory genetics lab that demonstrated DNA amplification through PCR and a restriction enzyme digest; and a more engaging microbiology demonstration laboratory that included DNA extraction and protein electrophoresis. The graduate assistants and I continued to emphasize instruction on hypothesis development and testing throughout the year. Students wrote two substantial and several other minor lab reports in each course. We continued to devote a great deal of effort to teaching laboratory techniques, including microscopy, sterile transfer methods, and molecular methods. Once again, I had students demonstrate their laboratory proficiencies through a one-on-one exam with their instructor. However, this year I placed a greater emphasis on this exam, and I believe the students took it more seriously than last year: 95% of students scored higher than 70, and 55% scored higher than 90. This year I provided students an opportunity to prepare and deliver an oral presentation at the end of the spring semester. Student groups presented experimental findings of their laboratory activities from the semester, and I used this activity as a means to conduct student-lead review sessions prior to the lab practical exam. Also, this year, I was finally able to include the participation of several excellent undergraduate teaching assistants who had taken the course the year before. Their primary role this year was to support and assist the graduate instructors, and help answer student questions during instruction. However, when given the opportunity to lead classroom activities, most of the undergraduates did a superb job. This year, I plan to increase the weekly instructional involvement of the undergraduate assistants in order to provide them with a more meaningful experience.

In addition to synchronizing the laboratory instruction with Melissa Fieke's and Chris Whipps' lecture components, Neal Abrams, Betsy Hogan and I continue to identify themes and content through which we can integrate instruction in our General Chemistry and Biology laboratories and Writing sections. This spring we resubmitted an NSF-TUES proposal to explore student learning gains of an integrated introductory chemistry/biology/writing experience.

Beginning last summer, I took on greater administrative and instructional roles in EFB202. It was during 202 that I was able to observe the improvement in analytical and conceptual capabilities of the first-year student cohort during their first three semesters. And I further realized the degree of continuity that I can develop between the freshman biology laboratories and EFB202 with regard to student capabilities in lab skills; basic experimental design; and data management, analysis and interpretation. I have already begun to instruct the General Biology laboratory students on aspects of hypothesis development, experimental

design and data interpretation in manners that I believe lays the groundwork for a more successful EFB202 experience.

Through my involvement in EFB202, I implemented or coordinated student learning outcome assessments to be used for EFB's Middle States accreditation. I coordinated diversity-related assessments with a number of instructors; developed a student peer-review evaluation tool to assess student group work; and restructured the EFB202 Research Symposium evaluations to permit assessment of student oral presentation skills and hypothesis testing skills. Further, I have contributed to the efforts to establish a system to compile and integrate assessment data for the department.

I had the pleasure of collaborating with Annie Woods at the AEC to develop the first Pre-Orientation Adirondack Experience for eleven EFB freshmen (August 22-25). The purpose of that pre-orientation program was to offer incoming students a voluntary opportunity to enjoy informal outdoor experiences, and develop friendships and a sense of community with their new peers prior to their official on-campus orientation. Students participated in a day-long canoe/bushwhack (which included experiencing a mid-summer thunderstorm in the wilderness), whitewater rafting, a High Peak ascent, and a couple evenings of thoughtful discussion and contemplation around evening campfires. The group clearly bonded during their time. They returned to campus to participate in the rest of their freshman orientation with a degree of familiarity and confidence that the rest of their new peers had not yet developed. During the first semester I observed many in the group continue to socialize and study with one another, but it's my impression that the bonds they formed while on the trip have not remained as the students made new acquaintance and friends. I have no information on any long-term benefits that this experience may have had on student performance and retention. Anecdotally, I know several students on the trip have done quite well this year. However, I also know that one student withdrew within two months, one has transferred out of ESF and one has been placed on academic probation.

My service to the college took a variety of forms this year. I continued to enjoy my participation on the ESF Learning Community Team. Once again I contributed to the planning of, and participated in the two day-long Freshmen Retreats last autumn. Interactions with other LC faculty have continued to lead to a number of collaborative ideas for biology/chemistry/writing instruction (described above). In addition, as a member of the COI Subcommittee on General Education, I reviewed numerous student petitions for General Education courses; I was involved in the South Campus Housing Task Force, which was active last spring and summer and served to ensure a smooth transition of our students to housing on the South Campus; and facilitated two different workshops at the ESF Graduate Student Colloquium.

Stacy A. McNulty

Students

Mentoring of students was and is a key and expanding part of my duties and one from which I derive great pleasure. Over the past year my graduate students and I engaged in exciting collaborative work with faculty at ESF and with outside partners. I believe relationships built between graduate students and representatives of agencies and organizations will help our students be better-prepared for their future careers; a specific example is helping two students write successful Sussman Internships with NY Natural Heritage Program and the Adirondack Park Invasive Plant Program. The UMEB undergraduate program (with Robin Kimmerer) is in its fourth year; we received an extension for at least another two years from NSF. The first cohorts of UMEB graduates have moved into careers in science and community leadership (for example, one former student is working on a Master's degree in mycology and another in inner-city youth development). I keep in touch with the students via Facebook and other communication to maintain their bond to EFB and AEC and to let them know they continue to be important to ESF as alumni. The value of the UMEB program for students was recognized internationally through the OBFS Human Diversity Award. This honor permitted me to

represent UMEB to other field stations, many of whom asked for our proposal and details about the program.

Department/college

Two areas where my work has contributed to the mission of the department and college: visibility and collaboration deserve special mention.

- A new collaboration about which I am most excited is the Source to Sink: Hudson Watershed Education and Research Meeting, co-hosted by myself and Karin Limburg and the Environmental Consortium of Hudson Valley Colleges & Universities (EC). The SUNY-funded meeting is for researchers, students and practitioners to share information about research and educational opportunities. Attendees, most of whom are from the Hudson Valley or Estuary, will visit Hudson headwater facilities at AEC and Northern Forest Institute and strengthen links between EC members. While the meeting will be in October, already the planning has resulted in EC considering an Upper Hudson/Headwaters representative seat on their board and greater representation of Adirondack research and courses. While many ESF faculty have studied aspects of the Hudson, this meeting should lead to a greater role of the college in watershed planning and outreach, further establishing ESF as a leader of science and educational outreach.
- Another expanding content area coming to fruition is spatial data sharing and querying via the Adirondack Regional Information Assessment System. ARIAS, a regional spatially-enabled database on the web, ARIAS supports land planning, tourism planning, modeling and other efforts to understand the Northern Forest (though it's not limited to any one region). This system is online and accepting datasets from various sources such as socioeconomic data, recreation use, and water chemistry. The key feature is linkage of previously disparate datasets so a user can explore maps and run dynamic queries. It is based entirely on open-source software (read: free) and presents a new model for data sharing across large regions and multiple partners. It has significant potential for CGMA, ESF's forest properties, and anyone at ESF interested in sharing or accessing datasets.

Self

This past year, I put a lot of energy into my graduate students, and they rewarded me with their insight and energy. I spent a great deal of time learning ESF's graduate student application process and the steps students go through once enrolled so I could better serve students. It was also the first year I spent significant time reviewing graduate applications, which gave me a better sense of how resources are allocated at the departmental level and of identifying characteristics of students who will excel at ESF. Working with graduate students is one of the motivations for me to decide to pursue a doctoral degree myself (see below).

Myron J. Mitchell

My contribution to students has focused on the support and development of our program related to water resources. This past spring we had a successful seminar entitled "Cross-Disciplinary Seminar in Hydrological and Biogeochemical Processes" with 59 participants including faculty members, visiting scientists, staff and students. I also have employed three undergraduate students in my laboratory. I have been a strong proponent for developing closer academic integration of graduate programs at ESF and SU, but some of this activity has been stalled due to budgetary constraints.

Over the past year a substantial portion of my time and energy has been devoted to SUNY wide efforts. I am a member of SUNY Research Foundation Board and currently chair the Committee on Research. Also, I am the RF Board representative for the Research Foundation Strategic Planning Committee. I also serve as a member of the SUNY Distinguished Professor Committee. I was appointed by the SUNY Strategic Planning group of 200. These activities have resulted in trips and meetings throughout the SUNY campuses of New York State, numerous trips to Albany and many hours of telephone and web

conference calls. I feel fortunate to have this role and have tried to represent the general interests of SUNY faculty and also be sensitive to issues and needs associated with ESF. Within the teaching, research and public service components of SUNY, ESF is unique. This uniqueness has some advantages, but also some disadvantages with respect to the positioning of ESF within SUNY.

I have continued to maintain a vigorous research program with more than \$1.8 million in grants. During the period of this report I coauthored ten peer reviewed papers and one book chapter. One of these papers was the culmination of a multiyear effort and included 20 authors. This multi-authored paper is currently in press (and on line) in Biogeochemistry and is entitled “Comparisons of Watershed Sulfur Budgets in Southeast Canada and Northeast US: New Approaches and Implications”. This project and resultant paper required coordination and agreement between three federal governmental agencies (US-EPA, US-USGS, and Environment Canada). In addition to a large effort associated with data analyses and interpretation there were important policy/science issues related to atmospheric deposition that needed to be addressed in this paper.

James P. Nakas

Students

Regarding our undergraduate students, during the past year I have made my laboratory more accessible for students who wish to explore research possibilities in microbiology. To this end, I have had up to three students in the laboratory during each semester. The undergraduate student is assigned to a graduate student to assist in experimental design, data collection, visualization of data in graphic or tabular form, interpretation of data, etc. I meet with each student pair at the beginning of the semester and periodically during the semester to outline their duties and monitor their progress. This approach to involving undergraduates in laboratory research has worked very well and the students have all had favorable comments on their experience.

Department/college

Will be taken from my research as I see more contributions there than in other areas:

- 1) Collaborations continue with Welch Allyn, Tessy Plastics, and Blue Highway for the purpose of producing sufficient quantities of biodegradable polymers for use in medical products via injection molding. To date, fermentation for polymer production has been scaled-up to 200L using biodiesel-glycerol as the carbon source. A trial run for the production of ear tips using our polymer was conducted at Tessy Plastics and sample tips were produced.
- 2) Several meetings were held with a relatively new company, Auburn Biodiesel, for the purpose of securing a reliable source for biodiesel-glycerol. The CEO of Auburn-biodiesel agreed to supply us with glycerol for all of our fermentation needs.
- 3) Because of our focus on producing biodegradable plastics from biodiesel-glycerol, we have filed a new technology disclosure (NTD) to the Research Foundation prior to submitting a new patent application on this process. The CEO of Auburn Biodiesel has offered to pay for the patent application to the USP&TO.
- 4) Recently, we have concentrated our efforts on polymerizing our PHAs (polyhydroxyalkanoates) in a manner that, if successful, will generate polymers of enormous size, perhaps 1 to 2 million Daltons, with unpredictable physical-chemical properties. Discussions with the Technology Transfer Office of the RF indicate their willingness to pursue this as a separate patent or perhaps combined as an extension of the patent described in 3). This would be a separate patent application from the US and Canadian patents which are still pending and separate from that described in 3).

- 5) After almost five years and many hours of meetings as part of the advisory committee for the CNY Biotechnology Research Center, it is now very gratifying to watch the steel being raised for the CNYBRC in close proximity to the Center of Excellence. The Biotechnology Research Center will serve as a focus for research by new and emerging companies in central New York and provide space for collaborative efforts with academic institutions to stimulate economic development.
- 6) My research group will soon initiate experiments, in collaboration with Drs. Driscoll and Stipanovic to test wood hydrolysate, generated using an electron beam, to separate lignin from cellulose and hemicellulose, as a source of sugars for fermentation purposes. The fermentations will be directed toward the production of ethanol, butanol, and PHAs.

Self

I can state that I have devoted a considerable amount of time with corporate entities (Welch Allyn, Tessy Plastics, Blue Highway, Auburn Biodiesel, Northern Biodiesel, Sunoco, R₃Biofuels, etc., etc.) trying to understand what they want from the academic community and trying to deliver it. They do not necessarily want, or need, to know about our latest publication as much as they need to know how what we have learned can make a better product or improve a process to make the product better, more efficiently, or greener. The latter has considerable appeal and fits well with our work on biodegradable plastics.

Tsutomu Nakatsugawa

I volunteered to work on two committees related to possible hiring of a faculty member in the area of environmental health. Neither has resulted in a new faculty at ESF yet, but I believe these ESF/EFB initiatives are significant in finally focusing on this important aspect of environmental science. Work as Chair of PT committee entailed a regular pre-review of one faculty member and initiation of a full review of another.

Book manuscript revision has turned out to be a greater challenge than anticipated as it entailed replacing much of technicalities with the narrative without loss of scientific contents. I am reasonably satisfied with the progress to date.

Roy A. Norton

Students

I taught 41 undergraduates in Invertebrate Zoology, a time-demanding course that continues to be highly regarded by most students. I also served students directly as ENB Curriculum Coordinator (CC) and EFB Curriculum Director (CD), dealing with myriad academic and personal matters. Beyond guiding my own 28 advisees, and serving as planned or ad-hoc stand-in when other advisors are not available, I dealt daily with referrals from other faculty members (or am contacted directly by students) on the more difficult of issues.

Department/college

These, in large part, also relate to CC and CD positions and to affiliated activities and committees as indicated above. Significant time was invested in a major modification of all Curriculum Plan Sheets and the departmental student handbook. Also, I initiated and worked with Academic Computing personnel on a revamping of the Advising interface of the Faculty Services website; this involved a reorganization of server access and form-generation and resulted in significant improvement of functionality for both advisors and students. I guided our continuing efforts to establish a functional and sustainable approach to academic assessment of our 7 undergraduate majors by working with curriculum coordinators to produce a Learning Outcome matrix that James Gibbs will build into an omnibus spreadsheet. With co-chair James Gibbs, I led a search to replace retiring faculty member Andy Saunders and expand the position to

one more broadly focused on Informal Biology Education; the search seems to have been successful, but is still in the final phase.

Self

This has been a productive year for research, with 10 papers or book chapters published and 3 others accepted during the reporting period. Collectively, these are on diverse subjects (systematics, evolutionary biology, molecular biology, paleobiology, ecology, reproductive biology, functional anatomy and embryology) and involve 17 coauthors from 6 other institutions in the US, Poland, Germany, Brazil and the Philippines. I continue to serve on editorial or advisory boards of 8 scientific journals, and during the reporting period refereed 28 papers submitted to 11 journals, mostly international in scope. I also provided expert advice to 11 researchers on diverse projects associated with universities and agencies in the US, Canada, and 7 foreign countries. Travel to Germany allowed me to strengthen my ties with two strong laboratories: a group at the University of Göttingen (led by Prof. Stefan Scheu) that uses molecular tools to investigate trophic interactions, evolutionary biology and systematics of soil animals; and a group at Tübingen University (led by Dr. Michael Heethoff) that uses electron microscopy and front-line synchrotron X-ray microtomography imaging techniques to investigate embryology, reproductive biology and functional anatomy of mites.

Dylan Parry

Students

I again taught my Ecology and Management of Invasive Species course in the fall. This marked the second year of the expanded class size in this course and I continued to add new components to this course to keep it fresh and current in this rapidly developing field. Once again, it received high scores on student evaluations. I undertook a tremendous challenge in the fall as I developed a completely new course (Forensic Entomology) that has huge potential and offers an innovative way to teach ecology to very non-traditional students in biology-based course. Although the course was originally developed to be a core component of the new Forensic Science degree program at Syracuse University, I opened ESF sections and will offer the course jointly (cross-listed) in the future. The course was primarily field (and lab) based and despite the challenges involved in implementing a hands-on course like this (while juggling my other course and a new baby), it got excellent evaluations from the inaugural students. In the spring, I continued to tweak my course in Plant-Herbivore Interactions, which I will switch to every other year beginning in 2011. My Insect Ecology seminar course had ten graduate students enrolled this year, which really prompted engagement and lively discussion among the students. As I have done in all but one year since I started at ESF, I contributed to the teaching program at Cranberry Lake through EFB-202 where I instructed the entomology component of the diversity field course (EFB-202). Among my graduate students, Brian Hoven completed a very nice, comprehensive masters thesis and successfully defended in December. I have seen several revisions of Phil Barber's MS thesis and expect that he will defend in September. Nicole Werner finished her MPS and graduated this spring. I welcomed a new MS student (Chris Standley) this spring, whom I will share with Melissa Fierke.

Department/college

In the third year of my tenure as Chair of EFB's Curriculum and Course Assessment Committee (CCAC), we had a significantly slower year after two frenetic years dealing with the implementation of assessment and all of the associate changes to our course offerings. As usual, we shepherded course changes and new course proposals through our department and COI, maintaining our 100% success rate at COI on adoption. We developed frameworks for two Minors in EFB, proposals that should be presented to our faculty in the fall.

Self

This was an incredible year on a personal level as my daughter (and first child) was born in September. Of course, there is a large learning curve with such an event, and many aspects that no amount of reading

can prepare one for, not the least being a major reallocation of time. Nonetheless, I was still able to get three manuscripts completed and submitted, two with my former student Keith Post (MS 2009). I will be an invited symposium presenter at the Society for Conservation Biology's meeting in Canada next month, where I will talk about my ongoing research in the Albany Pine Bush and the effects of restoration efforts on several different threatened insects. I am looking forward to my sabbatical this fall as an opportunity to complete several projects and initiate some new research.

William F. Porter

Students

As my last annual report to EFB, this is bittersweet. With the support of outstanding Teaching Assistants and colleagues, both of my courses, EFB 484 – Winter Mammalian Ecology and EFB 493 – Management of Wildlife Habitats and Populations, were perhaps the best I've presented. Consequently, I am saddened by the fact that this year was my last in teaching these courses. Similarly, I completed 2 MS and 2 PhD students who were among the best I've seen in my career. The defenses of Matt Smith and Megan Skrip were exemplary. Amy Dechen Quinn and David Williams may have produced what we hope for from every doctoral research project, a paradigm shift. Manuscripts by Zak Danks and Ben Zuckerberg, accepted for publication in the *Journal of Wildlife Management* and in *Biological Conservation*, are among the best work coming out of my lab. I have never been more pleased.

Department/college

Are related to the accomplishments at the Adirondack Ecological Center. A total of 73 research projects were underway and 39 refereed publications were produced in the past year. There were 454 students attending credit-bearing courses conducted in part or entirely at the AEC. The number of people reached via AEC staff public service and professional presentations was 2,150. Combined with non-ESF users, 54 faculty and scientists accessed HWF resources for research and student instruction, up 20% from last year. Efforts toward *Building for the Future* resulted in near-completion of a \$350,000 restoration of Huntington Lodge. All furnishings for the Lodge are being provided by Stickley-Audi Furniture through discounts and a matching donation from the company. A lease was signed with Open Space Institute for use of the Masten House, providing a new venue for interdisciplinary educational experiences. An addition to the Rich Lake Dining Center was completed and all dining room furnishing were replaced with funds received through Congressman McHugh and a large grant from the Town of Newcomb. A \$154,000 award was received from the National Science Foundation for installation of a wireless Internet system that now provides high-speed access for students in the bunkhouses, and residents in Huntington and Arbutus Lodges, and adjacent buildings, as well as Physical Plant staff at the Stone Carriage House. Further, it will soon support emerging technologies that use wireless Internet access in the field. The system is built around a novel application of radio receiver and transmitter equipment on Goodnow fire-tower that is powered by photovoltaic arrays. The pace of growth in both infrastructure and program activity has never been greater.

Self

Finally, I am deeply honored to have been selected as the new Boone and Crockett Chair of Wildlife Conservation at Michigan State University. Few endowed chairs exist in wildlife and I recognize the responsibility associated with this position. My charge will be much as it has been at ESF – to build a research program that will help foster a stronger relationship between science and conservation policy. The focus will broaden from the Adirondacks and New York State to the Northern Forest and national programs. I honestly did not conceive of ever moving from ESF because I have enjoyed every day of the past 32 years. As I came to know Michigan State and the Boone and Crockett Club, I was drawn by the scope of what they are seeking to achieve in the future academic experience for students, their intent to have significant impact on the large challenges facing wildlife conservation and the resources they bring to these efforts. I learned a lot about teaching, mentoring and leadership at ESF and I look forward to applying those lessons in new arenas.

William A. Powell

Students

In addition to serving as the biotechnology coordinator, teaching one of the larger courses in EFB (Principles of genetics with 214 students), voluntarily filling the vacancy to teach the graduate and undergraduate Molecular Biology Techniques course (23 students), and teaching one of the core biotechnology major courses BTC497 (20 students), I continue to offer both graduate and undergraduate research projects in my lab. In addition, I have taught two high school students over the summer. I can only do this because of my success at attracting research grants that provides the supplies and equipment for these projects (see section IIIB). I have always believed that a hands-on learning experience, in addition to course work, is needed by all our students and I am committed to offer these experiences as I am able.

Department/college

For our department, I chaired a successful faculty search to replace Larry Smart and Annette Kretzer, and more recently George Bachand, with an exciting new faculty member, Dr. Lee Newman. I have participated wherever is needed by standing in as Chair, participating in open houses and award ceremonies, taking photos of these events, giving seminars to freshmen and graduate students, etc. I have also recently been assigned to represent faculty on the Academic Research Building committee. For our college, I stepped in as the executive chair of faculty governance at a time when this organization appeared to be collapsing. Over the past year, attendance at campus faculty meetings had nearly doubled since I took the position and we have accomplished many things, including fixing the "R" grade. There is still much to do, but I believe I did make significant progress in faculty governance during my two-year term. Lastly, by involving the public in our research plantings of transgenic American chestnut trees, by participating in alumni tours of our labs and greenhouse, and being active with outreach, I believe our chestnut project is helping with our college's public image. This should help with attracting students and also donations to the ESF College Foundation (example the recent, possible million dollar donor interested in American chestnut who two years ago donated ~\$90,000 to buy our growth chambers).

Professional

I believe what I do for ESF is closely linked to what I do for myself. Each benefits the other. The big thing this year is the expansion of our American chestnut research. Through much work, I have become a co-PI on a 5.2 million dollar, multi-institutional research project. ESF will be receiving approximately one million of these funds, with the rest going to collaborators at Penn state, University of Georgia, NC State, Clemson, and the US Forest Service. The goal of this Forest Health Initiative is to use American chestnut as a model for the use of biotechnology tools for improving the health of our forests. With this increase in funding, over a very good previous year in grant awards, the progress to develop a blight resistant tree will be greatly accelerated. My plans for next spring and summer is to tour the country and give talks on the progress we expect to make, thereby promoting our college and the chestnut project.

Neil H. Ringler

I taught EFB courses in fish ecology, aquatic entomology and comparative anatomy. Steve Tyszko completed his Master's degree this year, and two Master's graduates from last year pursued doctorates on Onondaga Lake studies. A new student studying watersheds in Spain joined the doctoral group as well, with an additional student from NYDEC's Bio-monitoring unit, beginning in August, 2010 (co-major with Karin Limburg). Studies of Onondaga lake and its tributaries have flourished based on teamwork among ESF, Honeywell and consulting scientists and engineers. Two papers will be presented at the North American Benthological Society meetings in Salt Lake City in June, 2010. We are making important recommendations on the habitat enhancements of this perturbed ecosystem, and plan to publish significant scientific results of interest at the national level. I shared this work during May, 2010 at the University of Alaska, Anchorage and at the University of Louisiana, Lafayette. I worked with Chairman

Leopold, Don Stewart and others to assist the Carpenter's Brook Fish Hatchery during its County budget crisis.

Contributions at the College level included the team search and successful capture of three fine scientists as part of the Empire Innovation Program. College-level activities that connect closely with EFB included development and hosting of the Faculty Mentoring Conference, "Faculty Excellence and Maximum Impact," at Drumlins January 6, 2010. We initiated a new "3rd party" program to commercialize intellectual property (Foresight, Inc.), including that developed by EFB scientists. The addition of a new Research Foundation Technology Transfer person (Patrick McCloskey) to work with Upstate Medical University and ESF will help all programs, including EFB. Working with the College-wide Committee on Research has proven very valuable as we further develop the Exemplary Researcher, Seed Grant and McIntire-Stennis programs, and we completed appropriate policy documentation including ORP Policy 10: "Data Ownership," and ORP Policy 11: "Guidelines and Procedures for Establishment of Centers and Institutes..." Work with the Syracuse Center of Excellence contributed to enhance research connectivity with the Brookhaven National laboratory, which will provide future opportunities in biology and ecology. Our visit to INECOL in Xalapa, Mexico was a highlight of our semester, and hopefully will be followed with significant long-term research in cloud forest communities.

D. Andrew Saunders

Students

I have ended my professional career at ESF this past year by offering quality courses to record enrollments for each course. As always, the courses have emphasized practical skills equipping graduates for competitive employment. The overarching philosophy for all courses has been promoting the applications of Environmental Interpretation to energize and enrich science communication in its broadest sense. As a special emphasis this year, each course has acknowledged the growing chasm between children and nature, the hazards of this gulf, and practical solutions to the problem within the realm of all resource professionals, but especially interpreters/educators. From my perspective, each of my courses was the best of the series that I have offered at ESF over the decades. However, this is a distinction that ultimately rests with the opinions of my students.

I am fortunate. This past year was one of the most enjoyable of my 25-year career at ESF, a consequence of several conditions such as wonderful students in each course, and to dedicated TAs helping with the courses. The Ottawa Museums Field Trip for EFB 404, *Natural History Museums and Modern Science* during "spring break" was the most profitable and enjoyable of any field trip I have offered during my tenure. The 29 students who accompanied me all expressed appreciation for the experience and benefited from interacting with the many museum professionals who freely shared their time and expertise with us. These were the most courteous, congenial, attentive, and punctual group of ESF students I have entertained on any field trip. At the close of this past semester the Natural History and Interpretation major now accommodates the largest group of students since its inception and is but three students short of the optimum (40) target audience projected at its onset.

Department

From the perspective of the department and campus, facilitating and staffing the EFB Open Houses by creating a visitor-friendly venue in Room 12, the Roosevelt Discovery Center, while but a small cog in the campus wheel, helped to recruit new generations of scholars. Overseeing the refurbishing or replacement of some lobby and first floor exhibits, another contribution, also communicates to campus visitors the achievements of colleagues and our students, and available departmental and interdisciplinary programs. Like other dimensions of the Natural History and Interpretation major and the graduate Environmental Interpretation program, the products for one campus audience such as these exhibits prove to be the profession-building experiences for another.

Campus

Creating opportunities for the Environmental Interpretation students to move out into the community in service-learning endeavors is another example of this synergism. This past year the interpretation students contributed approximately 664 hours in community products and programs. The successful completion of *the Morningside Science and Multidisciplinary Trail* exemplifies this service-learning component. The completion of the second and last installment of *Naturally New York –dedicated to connecting children and communities to the natural history of Central New York*, was made possible through the energies and devotion of MPS graduate student, Anne Schlesinger, assisted by another of my MPS students, Kendra Ormerod. Fifteen community-minded, pre-selected adults participated in this year's 14-part program. This is another example of a campus program with far-reaching impacts.

Final Notes

I retire this summer grateful to my colleagues who helped me establish and maintain the Environmental Interpretation program at SUNY-ESF and its undergraduate Natural History and Interpretation major. Few in academe are extended this honor and it is one I appreciate. I am also grateful to the generations of students who have joined me in the classroom, providing satisfying memories to reflect upon. Our journey has been one of mutual discovery and insight. I am indebted to those who played a key role in ensuring and choosing my successor who will take this program to its next level. Environmental Interpretation in all its forms offers to some of our students satisfying and exciting alternatives to the more traditional science careers. To all our students the program offers an enlightened view of effective and enriched science communication.

Kimberly L. Schulz

Students

This year I devoted the majority of my time to teaching and mentoring students. First, John Farrell and I devoted considerable time and effort on short notice to developing and co-teaching the two new Core Courses in fall and spring. There were some growing pains, but we really believe that (the second semester course especially) came together well and was valuable for new graduate students (we learned a lot, too). Although some students grumbled during the first term, and we have many suggestions for improvement, the requirement that students work on proposals resulted in several successful grant applications by new students. We provided an outline for future instructors and talked with the GPAC about continuing this class with multiple instructors, in a 4 semester rotation; we both hope this class will become a regular offering and are willing to participate in this rotation and contribute to group teaching materials. Second, I also continued to offer my limnology lecture and newly revised 2 credit Limnology Practicum, in which students learn advanced methods and perform independent projects. Three of the students presented their independent projects from this class in the Student Spotlight on Research, and one has submitted a manuscript for publication -- a great success for a semester-long class. Third, I also revised (especially making the recitation sections more interactive) and offered the biannual Marine Ecology class which was oversubscribed and had to turn away potential students; this class continues to improve, and is generally received well by the students. We led 80 students on a field trip to Cape Cod, and developed websites on "Seafood in Syracuse" that I will put online this summer. In addition I continued to spend considerable effort mentoring numerous undergraduates (including 2 UMEB scholars, 1 Cranberry Scholar and 5 additional students on independent projects, one of which will be submitted as a manuscript in 2010). Finally, I continued to mentor a moderately-large graduate student laboratory group (6 students), and am pleased that both Brandy Brown and Cheryl Whritenour successfully defended their M.S. dissertations and are submitting manuscripts on this work over the summer. Brown is now working full time with John Farrell, and Whritenour won two prestigious national fellowships to continue on to Ph.D. work at SUNY-ESF.

Department/college

This year the availability of recovery act funds finally permitted some of the aquatics group at ESF, organized as CIRTAS (Center for Integrated Research and Teaching in Aquatic Science), to apply for funds to renovate the laboratory spaces in Illick Hall (CIRTAS) and TIBS. I devoted a majority of the summer of 2009 to this effort, working with other co-PIs to organize and write a successful \$1.7 million proposal for renovation and a well-reviewed, but unfunded instrumentation grant that we will resubmit in 2011. The renovation grant also has required a lot of subsequent effort to meet programmatic requirements, but is an amazing opportunity for us to bring aquatic science at ESF to a new level, and I am looking forward to helping lead these efforts over the next few years. In addition I have served on the college-wide Middle States Steering Committee, the Promotion and Tenure Committee in EFB, the Graduate Program Advisory Committee, and was the EFB representative to the Water Resources Minor. I also continued to co-facilitate the college-wide AquaBreak seminar and mentor three early-career faculty members.

Self

This year I focused on grant writing and research more than on manuscript production (3 publications this year). I continue to run a very active research laboratory that successfully pursues a number of ongoing funded research efforts. In addition to the large renovation grant, I received a new NSF research grant for work at the Heiberg Forest, which brings an exciting new direction to my research program. My lab group also used a SUNY ESF seed grant to complete a salt-marsh 'megatransect' along the Eastern U.S. seaboard in summer 2009 (and led to a subsequent NERR fellowship for Whritenour), finished experiments from our fatty acid project, and performed a number of successful field, lab and modeling efforts that we will be publishing over the next year. I also am participating in a working group at the National Institute for Mathematical and Biological Synthesis.

William M. Shields

I continue in the same vein. I added the sophomore honors seminar to my plate for the first time and it went well. I had 13 finish the course and we all had a rewarding experience. Barb and I finished about half of our book so that is on time. More work on this gets done in the summer when we both have more time and live in the same house. I published 2 papers related to forensic DNA one in Science with a group of prominent researchers to change the way the FBI handles scientific information. I taught Behavior again this spring with a surprise in enrollment (only 44 students). Perhaps because of class size I received the best reviews of the course ever. About 25% of the students claimed it as the best course ever or at ESF (in one case at ESF or SU). I continue to act as official and unofficial advisor for a number of undergraduates and enroll lots of students in EFB 420 and 498. I have accepted fewer graduate students in order to free time to write the 2 books that are underway or planned.

Stephen A. Teale

In this year, I taught six courses to 266 students including Chemical Ecology which I had not been taught since Dietland Muller-Schwarze's retirement. This was essentially a new course because I had not taught it since 2003. John Castello and I taught Peoples, Plagues and Pests for the second time. This course saw a 50% increase in enrollment over last year for a total of 167 students and again received very favorable evaluations. We intend to continue teaching this course every spring with the goal of introducing students to microorganisms and invertebrates in a way that is interesting and relevant.

Another significant effort this year was pulling together our book on Forest Health, with John Castello and I as co-editors.. The ms is nearly finished and will be submitted to Cambridge Univ. Press by July 31. Although my principal role is as a co-editor, I am also a co-author of 5 of the 11 chapters. The main objective of the text is to elevate forest health from a fuzzy concept to an objective theoretical framework. At the same time the book brings together under a single cover the principal disciplines that interface

directly with forest health. If successful, this book will represent a significant paradigm shift in forest health. This book grew out of our Forest Health course, not our research programs.

J. Scott Turner

I launched EFB 200 Physics of Life. The course had an initial enrollment of 140, which dropped to 129 by the end of the semester. Part of this launch involved delivering electronic course materials through a variety of media. For this, I produced, along with the staff at ITS, 35 short instructional videos, which are available to students on iTunesU and the ESF channel on YouTube. A fuller retrospective is given on a “post-mortem” video production that was distributed to the Chair and relevant administrators in January 2010. I left on sabbatical before I could get the evaluations. However, informal feedback was very positive. Likewise, I am unsure at this point of the hoped-for impact on accessory instruction.

I was awarded a grant from the John C Templeton Foundation to fund my sabbatical leave at Cambridge University, where I am writing my third book. Since January 2010, I have been in residence in St John’s College at Cambridge. I have completed four chapters of an expected ten. By the time my sabbatical in Cambridge is finished, I expect to have completed five. By the time the Fall 2010 semester commences, I expect to have completed seven.

My work on termite architecture and biological design continues and continues to attract media attention. Some of these are outlined in the body of the report above.

I was promoted to Professor effective September 2009.

Alexander Weir

Students

This year I have again spent much time on the coordination and execution of international field experiences for our students. The party of 10 students going to Russia in June/July 2009 was the largest participation ever in this program, and facilitated an increased number of Russian students in attendance at Cranberry Lake Biological Station in August 2009. My regular Mycology (EFB 440/640) class also attracted a beginning enrollment of 63 students during Fall 09, again a record enrollment for this class, making it the highest enrollment introductory mycology class in the country. In addition to these regular teaching assignments, I have also had an increase in advising load, with more students enrolled in internships, study abroad opportunities, college teaching experiences, and independent research activities, than ever before. In addition, I have continued to serve students in my capacity as Director of the Cranberry Lake Biological Station, answering many questions and queries throughout the year. At the graduate level, I completed two MS students this past year, and started a new MS and PhD student in my lab.

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 2009, with similar enrollments expected for the summer 2010 program. Both the teaching and research programs were successful with almost 200 undergraduate students present at the Station during the summer of 09, and research groups from Indiana State University, as well as are own two Cranberry Lake Fellowship awardees, and four UMEB participants. The summer 2010 season shows an increase in research usage with the Indiana State University group, along with 3 Cranberry Lake Fellowship awardees, UMEB participants, and a newly-funded graduate “Grober Research Fellowship”. My submission to NSF for funding for the Lodge renovations was unsuccessful, although it received good reviews. A resubmission of this proposal occurred in March 2010 and we should hear by September 2010 if this has been successful. We also received College funding this past year for a new Whaler, an essential addition to the fleet of boats at the Station.

Another important assignment this past year has been my membership of the EFB Promotion and

Tenure Committee. In addition to regular meeting activities, I have also monitored the teaching of two of our beginning faculty and provided feedback to the candidates and to the committee. I have also continued to serve the Department as Curator of the Herbaria, and as the contact point for international opportunities for our students.

Self

This has been another good year on the NSF PEET grant with resolution of the phenomenon of “position specificity” arising from Lauren Goldmann’s MS work. Lauren will be presenting the results of this work at the 9th International Mycological Congress in Edinburgh, Scotland in August 2010. In addition to this, we have also added many new sequences to our growing database for a phylogenetic overview of the order, including at least 7 new genera collected during our expedition to South Africa and Namibia in March 2010. We now have more than enough results for publication of at least 3 manuscripts and will begin these in Fall 2010. My new graduate student, Jessica Gibson, has also made much headway with her TEM investigation of these fungi and we are hopeful that this fine-structure work will complement the results from our molecular investigations.

Christopher M. Whipps

Students

For the second time I taught EFB103 to approximately 200 students in the Spring semester. As with the first time this course was offered, I attempted to make this large lecture class an interactive, assessment based course using multiple modes of instruction. Specifically, this involved in-class assignments, demonstrations using students as players in cell processes, and reflective dialog with students on in-class questions. I also increased the number of out-of-class assignments to improve course engagement. In addition to the more straightforward assignments, I incorporated a weekly writing exercise with the goal of getting student hands on the primary literature, allow an opportunity to ‘show us what you know’, and help improve writing skills as they are required to clearly articulate or argue a position or idea. Topics connected with class subjects, or something completely different to get them thinking laterally. The first 6 writings also required a self-assessment of their own work. This is intended to get them thinking in an introspective manner and look for ways they can improve. This cycle of writing and self-assessment was generally well received by students and their writing improved dramatically as the semester progressed. Greg McGee and I made a concerted effort to integrate the lecture and lab implementing several modifications. This Fall I co-taught EFB496/796 Emerging Diseases of Fish and Wildlife with Jesse Brunner for the first time. The first half of this course, for which I was responsible, focused on disease causing agents, pathology, and immunity. Laboratory activities included parasite surveys from fish in NY, necropsy demonstrations by DEC state pathologist Kevin Hynes, and bird and mammal pathology. Ron Giegerich was pivotal in providing specimens and clinical background on pathology specimens and we plan to develop and expand this portion of the course in future years. I also facilitated 2 graduate-coordinated seminar courses this year on population genetics and applied microbiology.

Department/college

The teaching activities described above, particularly for the large required course EFB103, fall well within contributions to the college. As I continue to enhance this course with measures that improve retention and writing skill, this will better prepare students for their sophomore courses in Cell Biology and Genetics related topics. I serve on a number of departmental and college committees, the most time this year dedicated to the Cell and Molecular Biologist search (Chair: Powell), and the ESF Environmental Health Program Feasibility Program (Chair: Castello). Serving on the EFB Curriculum Committee, I initiated the move of EFB325 to the Spring semester to more effectively balance student course loads and integrate into related curriculum. This involved the course description for EFB325 to be updated and title modified to Cell Biology to reflect a more contemporary offering consistent with curricula at other top-notch institutions. I am currently serving on graduate committees for 8 ESF students and have served as examiner or chair on 5 others this past year.

Professional

Most notably, I recently received an NIH subcontract to continue my research on mycobacteriosis in laboratory zebrafish. This is a growing problem with huge potential for future research directions and by being able to hire a research support specialist, the work will advance more rapidly. My other primary area of research interest in baseline levels of disease in NY state fishes expanded to include Lake Ontario through a collaboration with the DEC. From a parasitological perspective, I have identified 3 new species of fish parasite including a new genus. This work was advanced significantly by an ESF seed grant to conduct electron microscopy work to investigate the developmental biology of a group of enigmatic parasites. This preliminary work has also sparked collaboration with a lab in China doing complementary research, and we have already published a paper together. This coming Fall, I look forward to welcoming my first Master's student to the lab.

Appendix C. Faculty Publications (published or in press; papers in review not included)

Books

- Lomolino, M. V., B. R. Riddle, R. J. Whittaker and J. H. Brown. 2010. *Biogeography*, 4th Edition. Sinauer Associates.
- Porter, W. F., J. D. Erickson and R. S. Whaley. 2009. *The Great Experiment in Conservation: Voices from the Adirondack Park*. Syracuse University Press. Syracuse, NY. 622 pp.
- Turner, J.S. 2010. (Japanese language edition) *The Tinkerer's Accomplice. How Design Emerges from Life Itself*. Seidosha.

Refereed Publications

Lawrence P. Abrahamson

- Volk, T.A., T. Verwijst, P.J. Tharakan, L.P. Abrahamson, and E.H. White. (in press). Are Short-Rotation Woody Crops Sustainable? 2nd World Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection. May 10 – 14, Rome, Italy.
- Volk, T.A., L.P. Abrahamson and E.H. White. (in press). Integration of Cover Crops During the Establishment of Short-Rotation Woody Crops. 2nd World Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection. May 10 – 14, Rome, Italy.
- Abrahamson, L.P., S. Liu, and T.E. Amidon, (in press) editors of special edition of *Biomass & Bioenergy* on “International Biorefinery Conference IBC 09, October 8&9, 2009, Syracuse, NY”

Guy A. Baldassarre

- Vilella, F. J., and G.A. Baldassarre. 2010. Abundance and distribution of waterbirds in the Llanos of Venezuela. *Wilson Journal of Ornithology* 122:102-115.
- Osborne, C. E., B. L. Swift, and G.A. Baldassarre. 2010. Fate of captive-reared and released Mallards on eastern Long Island, New York. *Human-Wildlife Interactions* 4:52-60

Jesse L. Brunner

- Keesing, F., J. Brunner, S.T. Duerr, M. Killilea, K. Logiudice, K. A. Schmidt, H. Vuong, and R. Ostfeld. 2009. Hosts as ecological traps for the vector of Lyme disease. *Proceedings of the Royal Society B-Biological Sciences* 276:3911-3919.

John D. Castello

- Teale, S.A., Letkowski, S.K., Matusick, G., Stehman, S.V., and Castello, J.D. 2009. Quantitative, nondestructive, assessment of beech scale (Hemiptera: Cryptococcidae) density using digital image analysis of wax masses. *Env. Entomol.* 38:1235-1240.

Martin Dovciak

- Sprugel, D.G., K.G. Rauscher, R. Gersonde, M. Dovčiak, J.A. Lutz, and C.B. Halpern. 2009. Spatially explicit modeling of overstory manipulations in young forests: Effects on stand structure and light. *Ecological Modelling* 220:3565-3575.

John M. Farrell

- M. B. Rippke, M. T. Distler, and J. M. Farrell. (in press) Post-glacial vegetation dynamics of an upper St. Lawrence River coastal wetland: Paleoecological evidence for a recent historic increase in cattail (*Typha*). *Wetlands*.

- Marty, J.E., M. R. Twiss, J. J. Ridal, Y. de Lafontaine, and J. M. Farrell. 2010. From the Great Lakes flows a Great River: Overview of the St. Lawrence River Ecology supplement. *Hydrobiologia* 647:1-5.
- Farrell, J. M., K. T. Holeck, E. L. Mills, C. E. Hoffman, and V. J. Patil. 2010. Recent Ecological Trends in Lower Trophic Levels of the International Section of the St. Lawrence River: A Comparison of the 1970s to the 2000s. *Hydrobiologia* 647:21-33.
- Farrell, J. M., B. A. Murry, D. J. Leopold, A. Halpern, M. Rippke, K. S. Godwin, and S. D. Hafner. Water-level regulation and coastal wetland vegetation in the upper St. Lawrence River: inferences from historical aerial imagery, seed banks, and *Typha* dynamics. *Hydrobiologia* 647:127-144.
- Toner, J., J. M. Farrell, and J. V. Mead. 2010. Muskrat abundance responses to water-level regulation within freshwater coastal wetlands. *Wetlands* 30:211-219.
- Kelder, B. F., and J. M. Farrell. 2009. A spatially explicit model to predict walleye spawning in an eastern Lake Ontario tributary. *North American Journal of Fisheries Management* 29:1686-1697.
- M. Power, J. Marty, M. R. Twiss, J. Ridal, Y. de Lafontaine, J. M. Farrell 2010. Guest editors: St. Lawrence River-Great Lakes Ecosystems: An Ecological Overview. *Hydrobiologia* Special Issue volume 647, 198 pages.

Danilo D. Fernando

- Fernando DD, Quinn CR, Brenner E, Owens JN. Male gametophyte development and evolution in gymnosperms. Invited Review. *International Journal of Plant Developmental Biology* (in press). Delay in publication is due to it being moved from a regular article to being part of a Special Issue.
- Owens JN and Fernando DD. 2009. Developmental, ultrastructural and molecular studies of male and female sterility in western white pine (*Pinus monticola*). In: D. Noshad, N.E. Woon, J. King and R.A. Sniezko (eds). *Breeding and Genetic Resources of Five-Needle Pines. Proceedings of the Conference 2008*. Yangyang, Korea, pp. 71-72.
- Owens JN, Kittirat T, and Fernando DD. 2009. Factors affecting seed production in *Pinus monticola* and *P. albicaulis*. In: D. Noshad, N.E. Woon, J. King and R.A. Sniezko (eds). *Breeding and Genetic Resources of Five-Needle Pines. Proceedings of the Conference 2008*. Yangyang, Seoul, Korea, pp. 35-44.

Melissa K. Fierke

- M.K. Fierke, F.M. Stephen. 2010. Historic populations of red oak borer (Coleoptera: Cerambycidae) in living northern red oaks from the Boston Mountains of Arkansas. *Can. J. For. Res.* 40: 679-686.
- L. Haavik, M.K. Fierke, F.M. Stephen. 2010. Factors affecting suitability of *Quercus rubra* as hosts for *Enaphalodes rufulus* (Coleoptera: Cerambycidae). *Env. Entom.* 39:520-527.

Jacqueline L. Frair

- Frair, J., Fieberg, J., Hebblewhite, M., Cagnacci, F., DeCesare, N. and Pedrotti, L. (in press) Resolving issues of imprecise and habitat-biased locations in ecological analyses using GPS telemetry data. *Philosophical Transactions of the Royal Society B*.
- Merrill, E., Sand, H., Zimmerman, B., McPhee, H., Webb, N., Hebblewhite, M., Wabakken, P. and Frair, J. (in press) Building a mechanistic understanding of predation with GPS-based movement data. *Philosophical Transactions of the Royal Society B*.
- Fieberg, J., Boyce, M.S. Matthiopoulos, J., Hebblewhite, M. and Frair, J. (in press) Correlation and studies of habitat selection: problem, red herring, or opportunity? *Philosophical Transactions of the Royal Society B*.
- Morales, J.M., Moorcroft, P. R., Matthiopoulos, J., Frair, J. L., Kie, J. G., Powell, R. A., Merrill, E. H. and Haydon, D. T. (in press) Towards mechanistic links between animal movements and population dynamics. *Philosophical Transactions of the Royal Society B*.

- Beyer, H.L., Haydon, D.T., Morales, J.M., Frair, J., Hebblewhite, M., Merrill, E.H., Boyce, M.S., Mitchell, M. and Matthiopoulos, J. (in press) Habitat preference: understanding use versus availability designs. *Philosophical Transactions of the Royal Society B*.
- Van Moorter, B., Visscher, D. R., Jerde, C. L., Frair, J. L. and Merrill, E. H. 2010. Identifying movement states from location data using cluster analysis. *Journal of Wildlife Management* 74:588-594.
- Wolf, M., Frair, J., Merrill, E. and Turchin, P. 2009. The attraction of the known: the importance of spatial familiarity in habitat selection in wapiti (*Cervus elaphus*). *Ecography* 32:401-410.
- Zuckerberg, B., Huettmann, F., and Frair J. (in press) Data management as a scientific foundation for reliable predictive modeling. Chapter 3 in Drew, A., Huettman, F., and Wiersma, Y., eds., *Predictive Modeling in Landscape Ecology*. Springer Verlag, NY.

James P. Gibbs

- Patrick, DA and Gibbs, JP. 2010. Population structure and movements of freshwater turtles across a road-density gradient. *LANDSCAPE ECOLOGY* 25:791-801.
- Shoemaker, KT, and Gibbs, JP. 2010. Evaluating Basking-Habitat Deficiency in the Threatened Eastern Massasauga Rattlesnake. *JOURNAL OF WILDLIFE MANAGEMENT* 74:504-513.
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- Russello, MA, Poulakakis, N, Gibbs, JP, Tapia, W, Benavides, E, Powell, JR, Caccone, A. 2010. DNA from the Past Informs Ex Situ Conservation for the Future: An "Extinct" Species of Galapagos Tortoise Identified in Captivity. 5:e8683.
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Charles A.S. Hall

- Murphy, David J., Hall, Charles A. S. 2010. Year in review—EROI or energy return on (energy) invested. *Annals of the New York Academy of Sciences*. 1185, Issue Ecological Economics Reviews:102-118.
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J. Scott Turner

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Turner, J.S.. In press. Water dynamics of mound building and repair for *Macrotermes michaelseni*. Cimbebasia Memoirs (in press)

Turner, J.S., W L Park, E Marais, A Mudengi, M Vinte. In press. Observations on water, soil movements and mound reconstruction in *Macrotermes michaelseni* colonies in northern Namibia. Cimbebasia Memoirs (in press)

Turner, J.S. and E Marais. In press. The annual variation of temperature in the mound and nest of *Macrotermes michaelseni* in northern Namibia. Cimbebasia Memoirs (in press)

Turner, J.S. In press. Observations on annual variation of moisture in the mound and nest of *Macrotermes michaelseni* in northern Namibia. Cimbebasia Memoirs (in press)

Turner, J.S. In press. Agents of biological design. Why are living things well-crafted for the things they do? Proceedings of the Retrospective Symposium on the Wistar Conference on Mathematical Challenges to the Neodarwinian Interpretation of Evolution. Discovery Institute.

Alexander Weir

Rossi, W., and A. Weir (in press). New species of *Stigmatomyces* from Asia. Mycologia (accepted May 2010).

Christopher M. Whipps

Liu, Y., Whipps, C.M., Gu, Z.M. (In Press) The first report of *Myxobolus turpisrotundus* (Myxosporea: Bivalvulida) spores with a caudal appendage and phylogeny of genera *Myxobolus* and *Henneguya*: morphology and molecular evidences to interrogate the validity of genus *Henneguya*. Parasitology Research.

Whipps, C.M., Boorom, K., Bermudez, L.E., Kent, M.L. (2010) Molecular characterization of *Blastocystis* species in Oregon identifies multiple subtypes. Parasitology Research. 106(4):827-832.

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Appendix D. Papers Submitted, In Review, Pending Decision

Lawrence P. Abrahamson

Kiernan, B.D., T.A. Volk, J. Gingerich, L.P. Abrahamson, and E.H. White. (Submitted). An evaluation of chips from willow shrubs (*Salix* spp.) grown in short-rotation intensive culture as a carbon source for composting layer manure. Bioresource Technology.

Jesse L. Brunner

Brunner, J.L., K.E. Barnett, C.J. Gosier, S.A. McNulty, M.J. Rubbo, M.B. Kolozsvary. In revision.

Ranaviruses in vernal pool amphibian die-offs in New York State. Herpetological Review.

Warne, R, E.J. Crespi, and J.L. Brunner. In revision. Escape from the pond: Stress and developmental responses to ranavirus infection in wood frog tadpoles. Functional Ecology

Martin Dovciak

Dovčiak, M., and C.B. Halpern, 201x. Diversity-stability relationships in forest herb populations during four decades of community assembly. Ecology Letters, in review.

Álvarez-Yépiz, J.C., M. Dovčiak, and A. Búrquez, 201x. Persistence of a rare ancient cycad: effects of environment and demography. Biological Conservation, in review.

Beier, C.M., A.M. Woods, K. Hotopp, J.P. Gibbs, M.J. Mitchell, M. Dovčiak, D.J. Leopold, G.B. Lawrence, B.D. Page, 201x. Variability in land snail and amphibian communities along a soil calcium gradient in northern hardwood forests of the Adirondack Mountains, New York. Ecological Applications, in review.

John M. Farrell

Eckerlin G. E., Farrell J. M., Casey R, Hope K, Bowser P, Casey J, and Grocock G. (in revision)

Temporal variation in incidence of viral haemorrhagic septicaemia virus type IVb among smallmouth bass *Micropterus dolomieu* (Lacepède) in the St. Lawrence River. Transactions of the American Fisheries Society

Murry, B.A., M. J. Cooper, K. Kapuscinski, D. Coulter, D. F. Clapp, T. Paoli, C. R. Ruetz III, J. M. Farrell and D. G. Uzarski. (in review) Increasing prevalence of the invasive round goby in coastal wetlands of the Laurentian Great Lakes: implications to native fish refugia. Biological Invasions.

Melissa K. Fierke

M.K. Fierke, F.M. Stephen. Variation in phenolic composition of oaks attacked by red oak borer, *Enaphalodes rufulus* (Haldeman) (Coleoptera: Cerambycidae) a native wood-boring beetle. J. Chem. Ecol. In revision.

Charles A.S. Hall

Murphy, D., Hall, C.A.S., Powers, B. New perspectives on the Energy Return on Investment (EROI) of Corn Ethanol. (In Revision)

Thomas R. Horton

Molina R, Horton TR, Trappe JM, Marcot BG (in review) Addressing uncertainty: how to conserve and manage rare and little-known fungi. Fungal Ecology (Special issue on Conservation of Fungi).

Lilleskov EA, Horton TR, Hobbie E (in review) Patterns of fungal species response to elevated soil N. Fungal Ecology (Special issue on Conservation of Fungi).

Donald J. Leopold

Newhouse, A.E., J.P. Gibbs, L.B. Smart, and D.J. Leopold, A molecular genetic and fitness evaluation of commercial and locally collected *Lupinus perennis* L. (blue lupine) seeds for use in *Lycaeides melissa samuelis* Nabokov (Karner blue butterfly) restoration efforts. Restoration Ecology (in revision)

- Quaye, A.K., T.A. Volk, S. Hafner, D.J. Leopold, and C. Schirmer, Impacts of paper sludge, manure, and fertilizer application on soil properties and biomass production in a short rotation willow cropping system in central New York. *Biomass and Bioenergy* (submitted)
- Eallonardo Jr., A.S., D.J. Leopold, J.D. Fridley, and J.C. Stella. Linking plant traits to stress and resource gradients in inland salt and freshwater marsh communities. *Ecology* (submitted)
- Beier, C.M., A.M. Woods, K. Hotopp, J.P. Gibbs, M.J. Mitchell, M. Dovčiak, D.J. Leopold, G.B. Lawrence, B.D. Page. Variability in land snail and amphibian communities along a soil calcium gradient in northern hardwood forests of the Adirondack Mountains, New York. *Ecological Applications*, in review.

Karin E. Limburg

- Daniels, R.A., R.E. Schmidt, and K.E. Limburg. Hudson River fisheries: vast to dwindling in 400 years. In R.E. Henshaw, editor. *Environmental History: Human Uses that Changed Ecology; Ecology that Changed Human Uses*. SUNY Press. (revised, currently in re-review)
- Lochet, A., K.E. Limburg, L. Rudstam, M. Montesdeoca. 2010. Selenium in fish otoliths: effects of selenium and mercury from the water. *Canadian Journal of Fisheries and Aquatic Sciences* (accepted pending revision).
- Pace, M.L., S.E. Hampton, K.E. Limburg, E.M. Bennett, E.M. Cook, J.M. Grove, K.Y. Kaneshiro, S.L. LaDeau, G.E. Likens, D. McKnight, D.C. Richardson, D.L. Strayer. 2010. Individual ecologists: opportunities and rewards for engaging with environmental issues. *Frontiers in Ecology and Environment* (re-submitted following revision).
- Sopacua, J.A., C.N. Kroll, and K.E. Limburg. Spatial analysis of saltwater intrusion and groundwater vulnerability in coastal Krueng Aceh Watershed, Banda Aceh, Indonesia. *International Journal of Water Resources Management* (in review)

Gregory G. McGee

- Keeton, W.S., A.A. Whitman, G.G. McGee and C.L. Goodale. In revision. Late-successional biomass development in northern hardwood-conifer forests of Northeastern United States. *Forest Science*.

Stacy McNulty

- Brunner, J.L., K.E. Barnett, C. Gosier, S.A. McNulty, M. Rubbo, and M.B. Kolozsvary. In submission. Ranaviruses in vernal pool amphibian die-offs in New York State. *Herpetological Review*.
- Jablonski, K., S. McNulty, and M. Schlesinger. In submission. A digital mapping method for avian field studies. *Journal of Field Ornithology*.
- Jensen, P.G., C.L. Demers, S.A. McNulty, W. Jakubas, and M.M. Humphries. In submission. Harvest Dynamics of American Martens and Fishers Relative to Forest Tree Seed Crops and Prey Abundance" *Journal of Wildlife Management*.

James P. Nakas

- Pan, Wenyang, D.J. Kiemle, A.J. Stipanovic, T.E. Amidon, S. Liu, and J.P. Nakas. 2010. Production of poly- β -hydroxyalkanoates by *Burkholderia cepacia* ATCC 17759 using detoxified sugar maple hemicellulosic hydrolysate. *Biotechnol. Lett.*, submitted.

Dylan Parry

- Post, K.H. and D. Parry. Effects of genetically-modified, pathogen-resistant American Elm (Urticales: Ulmaceae) on phytophagous insects. *Journal of Economic Entomology*. In Review.
- Post, K.H. and D. Parry. 2010. Non-Target Effects of Transgenic Blight-Resistant American Chestnut (Fagales: Fagaceae) on Insect Herbivores. *Environmental Entomology*. In Review

Stephen A. Teale

Shumate, A.M., S.A. Teale, B.D. Ayres and M.P. Ayres. Submitted. Disruptive selection maintains variation in pheromone production by the bark beetle *Ips pini*. Environmental Entomology.

J. Scott Turner

Turner, J.S. Submitted. Termites as models of swarm cognition. Swarm Intelligence. Invited contribution to special volume on swarm cognition.

Alex Weir

Thompson, L. and A. Weir (submitted). Laboulbeniales on Elateridae (Coleoptera); a review. Submitted to Mycologia

Goldmann, L. and A. Weir (submitted). Two new species of *Ilyomyces* from New York. Submitted to Mycologia

Christopher M. Whipps

Whipps, C.M., Fournie, J.W., Morrison, D.A., Azevedo, C., Matos, E., Thebo, P., Kent, M.L. (In Review) Phylogeny of *Calyptospora* (Apicomplexa: Coccidia). Molecular Phylogenetics and Evolution.

Appendix E. Papers/Posters Presented at Science Meetings

Lawrence P. Abrahamson

- E.H. White, L.P. Abrahamson, T.A. Volk, R.H. Germain and P.J. Castellano, Current State of Forest Inventory in New York, The Forest Biomass Discovery Workshop, Queen's University, Kingston, On, March 7, 2009.
- Volk, T.A., L.P. Abrahamson, T. Amidon, T. Buchholz, P. Castellano, L. Smart, and E. White. 2009. Woody Biomass: Sources, Sustainability and Status of Markets. NY Society of American Foresters, Syracuse, NY, January 28 – 30.
- White, E.H., L.P. Abrahamson, T.A. Volk, L.B. Smart and T.E. Amidon, The Salix Program in the Northeast. 14th Annual Ethanol Conference, San Antonio, TX, February 22 – 26, 2009.
- Volk, T.A., L.P. Abrahamson, T. Amidon, D. Aneshansley, K. D. Cameron, G. Johnson, J. Posselius, D. Rak, L.B. Smart, E. Spomer, E.H. White. 2009. Developing Willow Biomass Crops for Bioenergy and Bioproducts in the Northeastern and Midwestern United States. Sun Grant Energy Conference Washington, DC, March 10 – 13.
- Volk, T.A., L.P. Abrahamson, T. Amidon, D. Aneshansley, T. Buchholz, K. D. Cameron, G. Johnson, J. Mirck, J. Posselius, D. Rak, L.B. Smart, E. Spomer, E.H. White. 2009. Willow Crops: Research Update and Opportunity, Saskatoon, SK March 17 – 18.
- Volk, T.A., T. Buchholz, P. Castellano, L. Abrahamson, and L. Smart. 2009. Heating the Northeast. Nashua, NH, April 29 – 30.
- Moderator of three sessions during the “Ninth International Symposium on Environmental Concerns in Rights-of-Way Management” in Portland, OR September 27-30, 2009.

Jesse L. Brunner

Amphibian Ranaviruses in New York State. Rhode Island Natural History Survey

John M. Farrell

- Kapusinski, K. L. and J. M. Farrell. Description and Comparison of Fish Assemblages at Muskellunge Nursery Sites in the Buffalo Harbor (Lake Erie), Upper Niagara River, and St. Lawrence River. 53rd Annual Conference on Great Lakes Research, May 2010.
- Kapusinski, K. L. and J. M. Farrell. A Comparison of diets of young-of-year muskellunge from the St. Lawrence and upper Niagara Rivers. New York Chapter of the American Fisheries Society Annual Meeting, February 2010.
- Eckerlin, G. E., J. M. Farrell, R.N. Casey, K. M. Hope, P. R. Bowser, J. Casey and G. H. Groocock. Viral Haemorrhagic Septicaemia Virus (VHS) Type IVb in the Great Lakes: Ecological and Monitoring Implications and Recommendations. NY American Fisheries Society Annual Meeting, Lake George, NY (won best poster presentation)
- Eckerlin, G. E., J. M. Farrell, R.N. Casey, K. M. Hope, P. R. Bowser, J. Casey and G. H. Groocock. Viral Haemorrhagic Septicaemia Virus (VHS) Type IVb in the Great Lakes: Ecological and Monitoring Implications and Recommendations. Great Lakes Research Consortium Student Faculty Conference Syracuse, NY (won best poster presentation).
- Eckerlin, G. E., J. M. Farrell, R. M. Klindt and R. D. McCullough. Smallmouth bass growth and mortality trends in the St. Lawrence River following invasion by round goby: an ecological trade-off between increased growth and exposure to VHSV. NY American Fisheries Society Annual Meeting, Lake George, NY (oral presentation).
- Avruskin, G., Distler, M., Hall, M., and J. Farrell. Predicting Wetland Community Response to Water Level Changes. Association of American Geographers. Washington D.C. April 2010 (poster presentation).

Danilo D. Fernando

Towards our understanding of pollen tube biosynthesis and evolution. Gordon Research Conference, Bryant University, Smithfield, RI. August 2-7, 2009.

Melissa K. Fierke

- Stephen, F. M., L. J. Haavik, M. K. Fierke, J. J. Riggins, L. D. Galligan and J. M. Guldin. 2009. History and dynamics of red oak borer in Arkansas. IUFRO conference "Forest insects and environmental change". Jackson Hole, Wyoming. September 27 - October 2, 2009.
- M. Bohne, D. Souto, C. Teerling, B. Payton, C. Rutledge, C. Burnham, J. Weimer, J. Weaver, T. Hanson, M. Fierke, W. Hellman, E.R. Hoebeke. Biosurveillance of Buprestidae in New York and New England. 2010 Invasive Species Conference. Annapolis MD.
- Stephen, F. M., L. J. Haavik, M. K. Fierke, J. J. Riggins, L. D. Galligan and J. M. Guldin. 2010. The recent oak decline and red oak borer outbreak in Arkansas. Southern Hardwood Forest Research Group. Stoneville, MS. Invited Presentation.
- M.K. Fierke, P. Eager, P. Rockermann, W. Hellman. 2009. Finding a niche in northeastern forest entomology – emerald ash borer and *Sirex noctilio*. Annual Meeting of the Entomological Society of America. Indianapolis, IN.
- P.T. Eager, D.L. Allen, M.K. Fierke. Investigating the *Sirex noctilio* (Hymenoptera: Siricidae) - parasitoid complex in New York State. 12/2009. Annual Meeting of the Entomological Society of America. Indianapolis IN. Oral presentation, 2nd place - student competition for President's Prize.
- P.J. Rockermann, D. Parry, M.K. Fierke. Annual Meeting of the Entomological Society of America. Indianapolis IN.
- W.E. Hellman, M.K. Fierke. 2009. Species richness of Buprestidae as sampled by *Cerceris fumipennis*. Annual Meeting of the Entomological Society of America. Indianapolis, IN. Poster Presentation.
- W.E. Hellman, M.K. Fierke. 2010. A Promising Alternative Survey Method for Emerald Ash Borer Using the Wasp *Cerceris fumipennis*. NY Society of American Foresters Annual Winter Meeting. Syracuse, NY.
- W.E. Hellman, M.K. Fierke. 2010. Species richness of Buprestidae as sampled by *Cerceris fumipennis*. Spotlight on Student Research. SUNY ESF. Syracuse NY. Poster Presentation.
- E. Gustafson, M.K. Fierke. 2010. Investigations of Fungal Entomopathogens of *Sirex noctilio* F. (Hymenoptera: Siricidae) in Central New York. Spotlight on Student Research. SUNY ESF. Syracuse NY. Poster Presentation.

Jacqueline L. Frair

- "The dividing line: differentiating two stocks of coyotes in New York State", Frair, J., Whipps, C., Kretzer, A., and Holevinski, R. Northeast Fish and Wildlife Association Meeting, Apr 2010, Boston, MA.
- "The dividing line: differentiating two stocks of coyotes in New York State", Frair, J., Whipps, C., Kretzer, A., and Holevinski, R. National meeting of The Wildlife Society, Sep 2009, Monterey, CA.
- "Wolf and industry influences on elk habitat effectiveness in the eastern Canadian Rockies", J. Frair, E. Merrill, M. Boyce, N. Webb, M. Hebblewhite, D. Visscher, J. Allen. NICDS Workshop, Mar 2010, Montreal, Canada.
- "Foraging ecology of coyotes in New York State" (poster presentation), R. Holevinski, J. Frair, G. Batcheller, and P. Jensen. Annual meeting of the NY State Chapter of The Wildlife Society, Mar 2010, Alexandria Bay, NY. won best graduate student poster
- "Using site occupancy and detection probabilities to estimate eastern coyote populations", R. Holevinski, J. Frair, J. Gibbs, C. Boser, and G. Batcheller. National meeting of The Wildlife Society, Sep 2009, Monterey, CA.
- "Coyote foraging ecology and selection for white-tailed deer fawns", C. Boser, J. Frair, R. Holevinski, and G. Batcheller. National meeting of The Wildlife Society, Sep 2009, Monterey, CA.

“Coyote foraging ecology and selection for white-tailed deer fawns”, C. Boser, J. Frair, R. Holevinski, and G. Batcheller. Ecological Society of America Annual Conference, Aug 2009, Albuquerque, New Mexico.

“Thresholds in landscape connectivity and mortality risks for elk in response to growing road networks”, J. Frair, E. Merrill, H. Beyer, and J. Morales. The 8th Western States and Provinces Deer and Elk Workshop, 2009, Spokane, WA.

James P. Gibbs

“Monitoring Biological Diversity in Galapagos: Challenges and Pitfalls,” 7/21, invited keynote for International symposium: “Charles Darwin Foundation: 50 years of Science for Galapagos,” Puerto Ayora, Galapagos.

Charles A.S. Hall

Welcome and Introduction. Second annual meeting on Biophysical Economics, Syracuse N.Y. History, meaning and implications of EROI. AAAS special session on EROI. American Association for the Advancement of Science annual meeting, San Diego, Cal. Feb 2010.

“Peak oil, EROI and your financial future” Invited plenary talk, Green Energy Summit Milwaukee March 31.

“Peak oil, EROI and your financial future” Invited plenary talk, US Fish and Wildlife Conference, Region 7 (Alaska) Feb. 9th

“Peak oil, EROI and your financial future” Plenary talk at Trout Unlimited Keystone Coldwater Conference, Penn State, State College Pa. Feb 19.

Thomas R. Horton

Horton TR, Parker VT, O’Brien MJ*. Ectomycorrhizal networks in plant communities: a Gleasonian point of view. MSA/BSA Annual Meetings, Snowbird, Utah, July 2009. Contributed talk.

Galante TE*, Horton TR, Swaney DP. 95% of spores fall within 45 cm of the cap: A field and modeling based study. MSA/BSA Annual Meetings, Snowbird, Utah, July 2009. Contributed talk. Highlighted in a recent comment in *New Phytologist* by Peay et al 2010 on page 878.

Conrad AO, Horton TR. An initial survey of fungi in the cloud forests of Honduras with a focus on edibles. MSA/BSA Annual Meetings, Snowbird, Utah, July 2009. Poster presentation.

Vineis JH*, Horton TR, Hobbie EA. Ectomycorrhizal communities in temperate forest ecosystems: Does diversity decrease along an increasing natural nitrogen gradient? ESA Annual Meeting, Albuquerque, New Mexico, August 2009. Invited oral presentation (OOS 27). Highlighted *Bulletin of the Ecological Society of America* (Vol. 91, No. 1, pp. 68-79)

O’Brien MJ*, Horton TR. Using neighborhood models to examine the role of ecto and arbuscular mycorrhizal forest communities on Eastern hemlock seedling establishment. ESA Annual Meeting, Albuquerque, New Mexico, August 2009. Contributed talk.

Robin W. Kimmerer

Keynote Address, Michigan State University Fish and Wildlife Annual Research Symposium “Traditional Ecological Knowledge and Conservation Biology”. East Lansing, MI 2/19/2010

Keynote Address, American Indian Science and Engineering Society, Purdue University. “The Fortress, the River and the Garden: bridging science and traditional knowledge”. Purdue, Indiana

Keynote Address, Natural Resources Damage Assessment Restoration Workshop, Department of the Interior. Phoenix, AZ.

Keynote Address. International Green Buildings Conference. 9/17/09 “New Questions, Ancient Knowledge”. Syracuse, New York

Keynote Address, Cornell University, American Indian Program Eco-Forum. 10/23/09.

Keynote Address. Indigenous Womens Science Network. “Advice to my sisters” Portland Oregon 10/30/09

Donald J. Leopold

Raynal, D.J. and D.J. Leopold, Population ecology, dynamics and conservation of rare plants in New York State, International Symposium on Biology of Rare and Endemic Plant Species (BIORARE 2010), May 2010, Mugla, Turkey (invited)

Karin E. Limburg

Limburg KE, and JR Waldman. Dramatic declines in North Atlantic diadromous fishes. Oral presentation, US Society for Ecological Economics Biennial Conference, June 2009, Washington, DC.

Limburg KE, V Luzadis, M Ramsey, C Mayer, and K Schulz. The good, the bad, and the algae: ecosystem services and disservices of dreissenid mussels. Poster presentation, US Society for Ecological Economics Biennial Conference, June 2009, Washington, DC.

Limburg KE. Apples and oranges, selenium and barium: what can be learned about otolith chemistry from comparing different analytical techniques. Oral presentation, 4th International Otolith Symposium, August 2009, Monterey, CA.

Limburg KE, Dale D, Høie H, Olson C, and Walther Y. Modern and Neolithic Baltic Sea cod otolith chemistry: potential to track juvenile habitat use and other life history parameters. Oral presentation, 4th International Otolith Symposium, August 2009, Monterey, CA.

Limburg KE, and B Hong. OtoGIS: a new way to analyze otolith multivariate data. Poster presentation, 4th International Otolith Symposium, August 2009, Monterey, CA.

Limburg KE, A Locket, D Dale, and D Driscoll. Where does the Selenium come from? A geographic survey of Central New York to determine the source of Selenium discovered in otoliths. Poster presentation, 4th International Otolith Symposium, August 2009, Monterey, CA.

Limburg KE and M Elfman. Oscillatory patterns of Zn in otoliths support a recent phylogenetic typology of Salmoniformes and their sister groups. Poster presentation, 4th International Otolith Symposium, August 2009, Monterey, CA.

Locket, A, KE Limburg, and D Dale. Effects of Mercury on Selenium incorporation into fish otoliths. Oral presentation, 4th International Otolith Symposium, August 2009, Monterey, CA.

Hayden T, KE Limburg, WB Pine III, and T Frazer. Humpback chub: resolving site-specific otolith markers in the Grand Canyon. Poster presentation, 4th International Otolith Symposium, August 2009, Monterey, CA.

Limburg KE. The Polgar Fellowship Program: (some) pathways of progress, and "grand challenges" for the next quarter century. Keynote presentation, 25th Anniversary of the T.T. Polgar Fellowship Program, Cary Institute of Ecosystem Studies, Millbrook, NY, September 2009.

Monteiro R, I Valiela, and KE Limburg. Effects of land use on alewife growth rates using biogeochemical tracers in New England estuaries. Oral Presentation, Coastal and Estuarine Research Federation Biennial Conference, Portland, OR, November 2009.

Limburg KE, V Luzadis, M Ramsey, C Mayer, and K Schulz. The Good, the Bad and the Algae: Ecosystem services and disservices generated by invasive zebra and quagga mussels. Oral Presentation, Coastal and Estuarine Research Federation Biennial Conference, Portland, OR, November 2009.

Ramsey MM, KE Limburg, and V Luzadis. Quantifying the Ecosystem services of open space areas in the Moodna Creek watershed: A tool for sustainable watershed management. Ecological Society of America Millennium Conference: Water-Ecosystem Services, Drought, and Environmental Justice, Atlanta, GA, November 2009.

Limburg KE and T Hayden. Use of otolith chemistry to reconstruct the lives of fishes. Oral presentation, Annual Meeting, Grand Canyon Research and Monitoring, Cedar Key, FL, March 2010.

Hayden T, KE Limburg, W Pine. Otolith chemistry as biomarkers of life history in endangered humpback chub in the Colorado River, Grand Canyon. Oral presentation, Annual Meeting, Grand Canyon Research and Monitoring, Cedar Key, FL, March 2010.

- Limburg KE. Aquatic ecosystem services: a useful paradigm for limnologists? Keynote presentation, Annual meeting of , Groupe de Recherche Interuniversitaire en Limnologie et en Environnement Aquatique (GRIL), Montreal, March 2010.
- Limburg KE. Review of otolith chemistry and how it can be applied to assess resilience of diadromous species. Oral presentation, workshop on Resilience in Diadromous Species Populations, University of Maine at Orono, April 2010.
- Turner SM, KE Limburg, SR Thorrold, JR Waldman. Determination of river herring natal origin by otolith microchemical markers. Oral presentation, 66th Annual Northeast Fish and Wildlife Conference, Newton, MA, April 2010.
- Limburg KE, Dale D, Høie H, Olson C, and Walther Y. Modern and Neolithic Baltic Sea cod otolith chemistry: potential to track juvenile habitat use and other life history parameters. Oral presentation, 66th Annual Northeast Fish and Wildlife Conference, Newton, MA, April 2010.

Stacy A. McNulty

- Signell, S.A., S.A. McNulty, and C.M. Beier. Adirondack Park Regional GIS Project (APR-GIS): Creation of a web-accessible spatial database for the Adirondacks. Adirondack Research Consortium, May 20, 2010, Lake Placid, NY.

Myron J. Mitchell

- Mitchell, M.J. 2009. Invited Presentation on " Impact of Climate Change on Events in Forested Watersheds: Hydrological, Chemical and Isotopic Approaches. Gordon Conference on Small Catchments" for Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology & Geochemistry Thresholds, tipping points and non-linearity: integrated catchment science for the 21st century. 12-17 July 2009, Proctor Academy, Andover, New Hampshire.
- Mitchell, M.J. 2009. Invited Presentation on: Discrepancies in Watershed S Budgets in Southeast Canada and Northeast U.S.: A Comparison of Mass-Balance Approach. NADP Annual Meeting, Saratoga Springs, New York, October 6-8, 2009.
- Mitchell, M.J. 2009. Invited Presentation on: "Climate and Weather Influences on Sulfur, Nitrogen and Mercury Flux". NYSERDA, EMEP meeting in Albany, New York, Oct. 14-15, 2009.
- Invited Plenary Presentation for CARTI and TAD Project Presentations and SAC Review in Syracuse, New York on April 16, 2010 entitled "Characterization of the Ambient Air Quality in Syracuse, NY and Identification of its Origins"

James P. Nakas

- Zhu, C., C.T. Nomura, J.A. Perrotta, A.J. Stipanovic, and J.P. Nakas. 2010. Production and characterization of poly-3-hydroxybutyrate derived from biodiesel-glycerol by *Burkholderia cepacia* ATCC 17759. Amer. Soc. Microbiol., National Meeting, May 23-27, 2010.

Roy A. Norton

- University of Goettingen, Germany: Evolution and Convergence in Predator-defense Systems of Oribatid Mites: Morphological, Behavioral and Chemical. June 2009. Invited

Dylan Parry

- Rockerman, P.J., M.K. Fierke and D. Parry. Diversity of riparian and green ash feeding moths in central New York. Entomological Society of America Annual Meeting. Indianapolis, IN. 12/13/09-12/17/09
- Phillips, M.L. and D. Parry. Adaptive variation in gypsy moth populations along a latitudinal gradient. Entomological Society of America Annual Meeting. Indianapolis, IN. 12/13/09-12/17/09.

William F. Porter

- Cox, G. L., J. D. Erickson, T. P. Holmes, W. F. Porter and A. M. Woods. June 2009. Survey of public priorities as a guide for future investment strategies in the Northern Forest. U.S. Society for Ecological Economics. Washington, D.C.
- Dechen Quinn, A., D. M. Williams and W. F. Porter. August 2009. Space use and resource selection of white-tailed deer in New York: Implications for disease spread. Ecological Society of America, Albuquerque, NM.
- Porter, W. F., Dechen Quinn, A. C. and D. M. Williams. September, 2009. Identifying Capture-Related Mortality Using Post-Capture Movement Rates of White-tailed Deer. Annual Conference of The Wildlife Society, Monterey, CA.
- Porter, W. F. Estimating harvest potential for wild turkeys in New York. February 2010. Annual Convention of the National Wild Turkey Federation, Nashville, TN.
- Skip, M. M. and W. F. Porter. September 2009. Habitat and fall-winter survival of ruffed grouse in New York State. Annual Conference of The Wildlife Society, Monterey, CA.
- Skip, M. M. January, 2010. Habitat and fall-winter survival of ruffed grouse in New York State. Annual Meeting of the New York State Chapter of the National Wild Turkey Federation, Waterloo, NY.
- Williams, D. M., A. C. Dechen Quinn and W. F. Porter. September, 2009. Contact structure of white-tailed deer in New York: Informing risk models and management decisions. Annual Conference of The Wildlife Society, Monterey, CA.
- Williams D.M., A. C. Dechen Quinn, W. F. Porter. July 2009. Contact structure of white-tailed deer in New York: informing risk models and management decisions. 3rd Annual Chronic Wasting Disease Symposium, Salt Lake City, UT.
- Williams D. M., A. C. Dechen Quinn, W. F. Porter. June 2009. Contact structure of white-tailed deer in New York: informing risk models and management decisions. American Society of Mammalogists Annual Conference, Fairbanks, AK.

William A. Powell

- Progress on transgenic chestnut research. 9/24 – 9/26/09, Annual NE1033 chestnut researchers meeting, Ocean Grove, NJ
- The American chestnut Research & Restoration Program. 10/1 -10/4/09, Society of American Foresters (SAF) annual meeting, Orlando, FL
- Update on American chestnut research. 10/16 – 10/17/09, Annual meeting of the New York chapter of The American Chestnut Foundation.
- Update on American chestnut research. 10/23 – 10/24/09, the national annual meeting of The American Chestnut Foundation, Pittsburg, PA
- Three talks on gene discovery, vector design, and chestnut transformation. 11/9 -11/10/09, Forest Health Initiative (FHI) workshop on vectors, Raleigh, NC
- Transgenic events in American chestnut. 11/10 – 11/13/09, NSF sponsored conference Genomics of forest and ecosystem health in the Fagaceae (Beech Family), Raleigh, NC (I was chair of the Symposium on transgenic research in Fagaceae.)
- Update on gene selection, vector construction, and producing transgenic American chestnut trees, 3/30 – 3/31/10, Forest Health Initiative (FHI) Annual Meeting, Washington, DC
- Developing an early screening assay for chestnut blight, 5/17 – 5/19/10, FHI early screening assay workshop, Asheville, NC (Co-organizer also)

Neil H. Ringler

- Tyszko, S. M. and N. H. Ringler. 2009. The feasibility of using electro-fishing to estimate population density of largemouth bass in a large lake. Oral presentation. 139th meeting of the American Fisheries Society. September 2, Nashville, TN.

Stephen A. Teale

“Forest health and wildlife populations” S. Teale, 1 Oct. 2009, Fourteenth Annual Pine Barrens Research Forum, Brookhaven, NY.

J. Scott Turner

The Water Economy of *Macrotermes* colonies. University of Groningen. Groningen, The Netherlands. 11 September 2009. About 50 people in attendance.

Termite Mounds as Models of Swarm Cognition. Lessons for Realizing the Living Building. In symposium on From Insect Nests to Human Architecture. Venice, Italy. 23 September 2009. About 50 people in attendance.

The Intentional Brain. Department of Neuroscience, Michigan State University. 28 October 2009. About 100 people in attendance.

New Concepts in Termite-Inspired Design. Social Biomimicry Conference. Arizona State University. 18-21 February 2010. About 200 people in attendance.

Do Cheaters Prosper? Sordid Society and Public Good in Termite Colonies. SUNY Conversations in the Disciplines. Cornell University. 16 October 2009. About 50 people in attendance.

Christopher M. Whipps

May 24-28, 2010. 35th Annual Eastern Fish Health Workshop, Shepherdstown, WV. Tracking mycobacterial infections in laboratory zebrafish (*Danio rerio*).

Appendix F. Faculty Grants (active during reporting period)

Lawrence P. Abrahamson

Program for wood bioenergy farming research, development and technology transfer in New York (USDA –CSREES), \$130,000 - 200,000/yr 15 years (1996-2011)

Support for willow biomass commercialization: Operations, \$380,000 (2/00-12/10), NYSERDA

Support for willow biomass commercialization: Land restoration, \$398,000 (2/00-12/10) NYSERDA

New York State Energy Research and Development Authority, “Reducing the cost of willow biomass by improving harvest system efficiency and reducing harvesting costs” T.A. Volk, PI; co-PI with L.B. Smart, Total award: \$126,688, Start date: 8/16/2006; End date: 12/31/2009.

NYC Department of Environmental Protection award to SUNY-Delhi, “Center of Excellence in Watershed Application and Technology - Willow Biomass Project” T.A. Volk, PI; co-PI with L.B. Smart, Total award for task: \$384,615, Start date: 7/1/2006; End date: 6/30/2010

Support for 9th ROW Conference in September, 2009, \$29,000 (various).

Support for 10th ROW Conference in 2014, \$8,000 (various).

Growing Willows as an Alternative Cover for the Solvay Wastebeds. Co-Principal Investigator with Dr. Tim Volk and Doug Daley (4/1/03 – 12/31/10, \$1,200,000). Honeywell Inc.

NYSERDA. Reducing the Cost of Willow Biomass by Improving Harvester Efficiency – Phase II. Co-Principal Investigator with Dr. Tim Volk (06/01/2005 – 12/31/09, \$250,000).

\$85,000 from Case New Holland support for development and demonstration of a willow harvesting system (2005-2008 with continuing support through 2009-10 with donated use of an FX45 forage harvester for willow harvesting and a FR 9060 forage harvester with new header).

USDA Rural Development (USDA-DOE Biomass R&D Program), “Overcoming Barriers to Facilitate the Commercialization of Willow Biomass Crops as a Feedstock for Biofuels, Bioenergy, and Bioproducts” T.A. Volk, PI; Co-PI with L.B. Smart and E.H. White, Total award: \$813,415 (\$220,000 of subcontracts; \$324,000 for breeding tasks; current year ~\$100,000) Research Scientist: Kim Cameron, Start date: 11/8/2006; End date: 2/7/2010

Multiple sponsors, Total budget: \$60,000 plus (with T.A. Volk), Start date: 1/1/2005; End date: 12/31/2010

Multiple sponsors for harvesting willow, total budget \$8,000 (with T. Volk), start date 9/2009;

NY Farm Viability Institute, Inc, “Demonstrating Improved Yield and Encouraging Adoption of New Varieties of Fast-Growing Shrub Willow Bioenergy Crops” with co-PIs T.A. Volk and L.B. Smart, Total award: \$125,000; Current year: ~\$15,000; Research Scientist: Kim Cameron, Start date: 4/1/2008; End date: 9/30/09

NYS Department of Transportation, “Developing Living Snowfences in New York” co-PI with T. Volk, Total request: \$280,253, Start date: 9/1/2008; End date: 8/31/2011

USDA McIntire-Stennis Program, “Applying Genomic Approaches to the Improvement of Shrub Willow Bioenergy Crops” with co-PIs T.A. Volk, C.A. Maynard, and L.B. Smart, Total request: \$58,720, Start date: 8/15/2008; End date: 9/30/2010

NYSTAR – “Development of willow production and harvesting demonstration” with T. A. Volk and Catalyst Renewables, \$500,000, Start date: 1/1/09 – 3/30/11.

USDA Forest Service. The role of *Glyeobius speciosus* in sugar maple decline, with D. Allen (6/30/2006 – 4/30/2010) \$25,000.

USDA Forest Service. The economic effects of ambrosia beetles and round headed borers on black cherry blow down at the Kane Experimental Forest, with D. Allen (8/29/2006 – 12/31/2010) \$36,000.

Jesse L. Brunner

SUNY-ESF Seed grant: Fluorescent frogs and Viruses: Developing Novel Methods for Studying Pathogen Transmission, \$8000, March 2009 – March 2010.

EPA-G2007-STAR-F1, Mechanisms Linking Host Biodiversity to Lyme Disease Risk, \$750,000. PI: Richard S. Ostfeld (Cary Institute of Ecosystem Studies); coPIs: Felicia Keesing (Bard College), Charles Canham (CIES), Jesse Brunner (SUNY-ESF / CIES), and Mary Killilea (CIES). 1 May 2008 – 30 April 2011

NSF COLLABORATIVE RESEARCH: The Ecology of *Anaplasma phagocytophilum*: Reservoirs, Risk, and Incidence, \$1,971,613. PI: Felicia Keesing (Bard College), Mike Tibbetts (Bard), Ken Schmidt (Texas Tech), Kathleen LoGiudice (Union College), Rick Ostfeld (CIES), and Jesse Brunner (SUNY-ESF / CIES). 1 September 2008 – 31 August 2013.

NIH R03, Overwintering Mortality of *Nymphal Ixodes scapularis*, Lyme Disease Vector, in a Changing Climate, \$162,503. PI: Richard S. Ostfeld (CIES); coPIs: Jesse Brunner (SUNY-ESF) and Mary Killilea (CIES). 22 May 2009 – 30 April 2011.

NSF EF, Fear, Food, and Infections: Linking Host Behavior to Disease Transmission in the Ranavirus-Salamander System, \$303,722. PI: Jesse Brunner. 15 July 2009 – 14 July 2011.

John D. Castello

McNulty, S.A., Castello, J.D., and Teale, S.A. 2009. The influence of American beech thickets on biodiversity in the northern hardwood forest. USDA Forest Service, Northern States Resource Cooperative. May 22, 2009. \$34,785. Start date: October 1, 2009. Duration: 1 year.

Teale, S.A., Castello, J.D., Millar, J.G. 2009. Fungal attractants for *Sirex noctilio* and its parasitoids. USDA Forest Service. \$40,000. Start date: January 1, 2010. Duration: 1 year.

Martin Dovciak

USDA CSREES/McIntire-Stennis. Forest change in the Adirondacks over 40 years. \$54,034; 2010-11, (PI).

National Park Service. Appalachian trail MEGA-transect study. Total budget: \$747,242; 2010-13, (CoPI). (\$49,310 supports SUNY-ESF graduate student, J. Quant, and field studies carried out by SUNY-ESF).

NSRC, Importance of calcium for supporting biodiversity in acidified landscape. \$41,543; 2009-2010, (CoPI).

USDA CSREES/McIntire-Stennis. Characterization of montane forests using remote sensing. \$79,453; 2010-12, (CoPI).

USDA CSREES/McIntire-Stennis. Coupling local-scale climate change and forest ecosystems. \$81,271; 2010-12, (Co-PI).

John M. Farrell

Farrell, J. M. 6/2009-6/2012. Development of the Fish Habitat Conservation Strategy: An Evaluation of Toolkit Implementation, Fish Enhancement, Research and Mitigation Fund, National Fish and Wildlife Foundation, Two Years, \$563,836.

Farrell, J. M. and K. Kapuscinski. 5/2009-4/2011. Muskellunge *Esox masquinongy* Genetic Structure, Reproductive Ecology, and Interaction with the Fish Community: Acquiring Information Needed for Successful Management. Niagara Greenway Commission, Ecological Greenway Fund, \$148,000.

Farrell, J. M. (and 7 co-investigators) Great Lakes Aquatic Community Pathogens Task Group. Great Lakes Research Consortium Small Grants Program \$1,000

Farrell, J. M. 4/1/2005-3/31/2010. Development and Management of St. Lawrence River Fisheries. Federal Aid in Sportfish Restoration, NYS Department of Environmental Conservation. \$958,184.

Farrell, J. M. 4/1/2010-6/30/2013. Development and Management of St. Lawrence River Fisheries. Federal Aid in Sportfish Restoration, NYS Department of Environmental Conservation. \$640,963.

Danilo D. Fernando

Confronting the obstacles to willow genetic transformation (Tim Volk, co-PI). USDA-McIntire-Stennis, \$50,591. May 15, 2010 - Sep 12, 2012.

Melissa K. Fierke

Doug Allen, Melissa Fierke, USDA Forest Service, Survey of Siricidae (Sirecinae) and their parasitoids in the pine forests of central New York state, with special emphasis on the exotic *Sirex noctilio*, \$63,074, 08/07-05/10.

Melissa Fierke, D. Parry, D. Allen. Evaluating impacts of native parasitoids on the invasive *Sirex noctilio* in New York. McIntire-Stennis Cooperative Forestry. \$79,800, 10/09–9/12.

Claire Rutledge, Philip Careless, Colleen Teerling, Melissa Fierke. Degree day modeling and captive colony research for *Cerceris fumipennis*. \$48,000. (~\$10,000 to ESF).

Colin Beier, J. Gibbs, M. Fierke, M. Mitchell, M. Dovciak. Impacts of acidic deposition and soil calcium depletion on terrestrial biodiversity and food webs in Northern hardwood forest ecosystems. Northern States Research Cooperative. \$150,000.

Jacqueline L. Frair

“Non-harvest based assessment of river otter populations in New York”, Apr 2010-Mar2012, source NYS-DEC; \$160,538, PI: Frair.

“Monitoring populations of elusive forest wildlife: a modern approach using noninvasive genetic techniques”, 2009-2011, source USFS McIntire-Stennis Program, \$50,393, PIs: J. Frair and C. Whipps.

“Conservation Research on the Chittenango Ovate Amber Snail”, 2007-09, source US Fish & Wildlife Service, \$62,020, 2007-2010, PIs: J. Frair and J. Gibbs.

“Population Status and Foraging Ecology of Eastern Coyotes”, 2007-2012, source NYS-DEC, \$670,000, PIs: J. Frair and J. Gibbs.

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

National Geographic Society, “Seed dispersal effectiveness in an island megaherbivore: The Giant Galapagos tortoise,” Steve Blake, Martin Wikelski, Mark Gardner, James P. Gibbs, \$21,500, 1/1/10-12/31/11.

Population Assessment of Giant Tortoise, Tree Cactus and Waved Albatross on Española Island, Galapagos. Galapagos Conservancy, James P. Gibbs, \$32,136, 2/1/10-1/30/11.

Restoration of Pinta Island through the Re-introduction of Giant Tortoises: Phase I Post-release Tortoise and Plant Community Monitoring, James P. Gibbs, \$77,082, 2/1/10-1/30/11.

National Science Foundation, “Ultra-Ex: Positioning Rust-Belt Cities for a Sustainable Future: A Systems Approach to Enhancing Urban Quality of Life” M. Hall and C. Nowak; “Squirrelmapper.org” subproject to James Gibbs, \$13,000, 10/1/09- 3/31/12.

Sloan Foundation, “Professional Science Masters Program at the SUNY College of Environmental Science and Forestry,” Scott Shannon, Gary M. Scott; James P. Gibbs; Kenneth J. Tiss; Shijie Liu; Susan E. Anagnost. \$15,000. 5/09-5/10

New York State Department of Conservation: “Population status and foraging ecology of eastern coyotes in New York State.” Jacqueline L. Frair, James P. Gibbs, Gordon R. Batcheller, \$678,704, 1/06-9/11.

New York State Department of Conservation: “Bog Turtle Dispersal and Population Monitoring,” J. P. Gibbs and L. B. Smart. \$155,000. 4/06 – 3/09 extended to March 2011.

National Science Foundation, “Biodiversity dynamics and land-use changes in the Amazon: Multi-scale interactions between ecological systems and resource-use decisions by indigenous peoples,” J. M. V. Fragoso, J. P. Gibbs, K. Silvius, L. Martins, J. Read. \$1,650,001. 9/05-8-09. Extended to Feb 2011.

Northern States Research Cooperative, “Importance of calcium-rich substrates for supporting refugia of biodiversity and productivity in an increasingly acidified landscape,” Colin Beier, Myron Mitchell, James Gibbs, Donald Leopold, Martin Dovciak, \$41,543, 2009-2010

SUNY-ESF McIntire-Stennis Research Program Proposal, “Restoring Small, Ephemeral Wetlands in Forested Landscapes of New York State: Initiating a Large-scale, Long-term Collaborative Research Program Based at the Heiberg Forest,” James P. Gibbs, John C. Stella, Kimberly L. Schulz, Donald J. Leopold, 1/09-12/12, \$89,850.

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

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

“Phase III: Development of Terrestrial and Related monitoring Protocols for High Priority NETN Vital Signs,” 7/1/03-12/3/107, \$83,729 (augmented \$28,931 1/09, and extended 12/10).

“Monitoring Ecological Integrity of Forest Ecosystems: Evaluation and Implementation of the NETN Forest Condition Protocol” 7/1/2009-6/30/2010. \$49,493

Charles A.S. Hall

National Science Foundation Long Term Ecosystem Research in the Luquillo Forest \$ 5,000,000 (my share \$152,000) (\$25,000 per year Grant period 2006-2012.

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

National Science Foundation: Social-Ecological System Change, Vulnerability, and the Future of a Tropical City” Urban Long-Term Research Area Exploratory Award (ULTRA-EX), (\$300,000; my research \$30,000), Ariel Lugo (PI), Tischa Munoz (co-PI), March 2010 to March 2012.

An Environmental Basis for Rural Planning in the Province of Cordoba, Argentina.” Argentine National Government Award, (\$1,000,000; my research portion is for travel, per diem, and potentially tuition for an Argentine student to study some semesters at ESF), Oscar Giayetto and Juan-Jose Cantero (PIs). May 2010 to May 2013.

US Forest Service Energy and economic analysis for the Caribbean. \$20,000

Institute for Integrated Economic Research. \$10,000

Thomas R. Horton

Simberloff D, Nuñez MA, Horton TR. 2010 – 2013. Collaborative Research: Determinants of ectomycorrhizal fungal spread and its relation to Pinaceae invasion. NSF Population and Community Ecology panel. Total award = \$571,637; Total award to ESF = \$242,040; \$75,000 2009/10.

Powell WA, Maynard CA, Leopold DP, Horton TR, Perry D. 2008 – 2011. Evaluating environmental impacts of transgenic American chestnut trees to chestnut trees produced by conventional breeding. USDA – NRI, BRAG program. \$380,00.

Hobbie E, Ollinger S, Varner, R, Frey S, Horton TR. 2006 – 2009 w/ No-cost extension to August 2010. Collaborative Research: Relationship between carbon allocation to mycorrhizal fungi and organic nitrogen use in temperate forests. NSF – Ecosystems panel. Total award = \$775,00, with \$188,127 to Horton. Supplemental funding awarded July 2009 for \$13,090 through August 2010.

Horton TR, 2006 – 2010. Fungal Biodiversity and Community Dynamics in the Oregon Coastal Dune Ecosystem. USDA-Forest Service, \$30,000.

Horton TR. 2006 – 2010. Facilitated succession towards a climax community at MRGP. Mianus River Gorge Preserve. \$21,000.

Robin W. Kimmerer

National Science Foundation, Undergraduate Mentoring in Environmental Biology, \$600,000 June 2006-August 2011.

Biodiversity Research Initiative, New York State Museum Effects of habitat fragmentation on bryophytes of Northern White Cedar Swamps May 2007-May 2009.

United States Department of Agriculture, Multicultural Scholarship Program, \$144,000, January 2007-- June 2011.

National Science Foundation, Summer Science Camp for Native Youth, \$147,000, August 2009-August 2011

United States Forest Service, Traditional Knowledge of Black Ash Ecology, \$47,000.

Donald J. Leopold

Honeywell, Restoration of inland salt marsh, marl fen, and select woody species: Short-term goals of the native species component of the SWRS demonstration plan; \$421,976; April 2008 to August 2010; D.J. Leopold.

National Science Foundation, Environmental science to promote sustainable urban, rural and indigenous communities; \$1,605,000; March 2007 to February 2010; D.J. Leopold, R. Beal, C.M. Spuches, and D.J. Raynal.

Biodiversity Research Institute, Inventory and analysis of vegetation in remnant inland salt marshes of New York; \$39,467; April 2007 to August 2009; D.J. Leopold.

Biodiversity Research Institute, Environmental influences on plant diversity in rich fens of central New York: A multiscale analysis; \$18,014; November 2006 to March 2009; D.J. Leopold.

NYS-DEC, Invasive plants program coordinator; \$160,000; January 2006 to December 2010; D.J. Leopold.

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

US EPA, STAR Fellowship to Sara Scanga; \$38,519; January 2006 to December 2009.

US EPA, STAR Fellowship to Anthony Eallonardo; \$21,824; August 2007 to August 2009.

US EPA, GRO Fellowship to Matthew Distler; \$27,314; August 2006 to August 2009.

USDA CSREES (SUNY ESF McIntire-Stennis program), Restoring small ephemeral wetlands in forested landscapes of New York State; \$87,817; August 2009 to September 2012; J.P. Gibbs, J.C. Stella, D.J. Leopold, and K.S. Schulz.

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

USDA CSREES Biotechnology Risk Assessment Grants (BRAG) program, Evaluating environmental impacts of transgenic American chestnut trees to chestnut trees produced by conventional breeding; \$380,000; September 2008 to August 2011; W.A. Powell, C.A. Maynard, T.R. Horton, D. Parry, and D.J. Leopold.

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

USDA Forest Service-NSRC, Importance of calcium-rich substrates for supporting refugia of biodiversity and productivity in an increasingly acidified landscape; \$41,543; July 2008 to June 2013; C. Beier, M. Mitchell, J. Gibbs, D. Leopold, and M. Dovciak.

National Geographic Society, Climate buffering in temperate zone fens: implications for climate change; \$5000; May 2010 to December 2011; D. Leopold and P. Raney.

Karin E. Limburg

Grant award, National Science Foundation: "CAREER: Watersheds and fisheries as foci of human impacts and ecological responses: a research and teaching agenda" (4/1/03 – 3/31/09, \$600,000).

Grant award, Syracuse Center of Excellence: "An Integrated Monitoring/Modeling Framework for Assessing Human-Nature Interactions in Urbanizing Watersheds: Wappinger and Onondaga Creek Watersheds," \$299,882, 7/01/06 – 6/30/09.

Grant award, Syracuse Center of Excellence: "Bridging the Temporal Mismatch between Remotely-Sensed Land Use Changes and Field - Based Water Quality/Quantity," \$99,999, 8/5/08 - 7/31/09. G. Mountrakis is PI, Myrna Hall and I are co-PIs.

- In-kind grant award, Cornell High Energy Synchrotron Source (CHESS): Beam time at the synchrotron for X-ray fluorescence analyses: October 2009 (1 week)
- Grant award, National Science Foundation: “MRI: Acquisition of a Laser-Ablation System for High Resolution, Micro-Scale Analysis of Environmental Materials,” \$202,929, 7/01/07 – 6/30/10.
- Grant award, NOAA: “Effects of Land Use on Alewife Growth Rates and Recruitment Using Biogeochemical Tracers in New England,” \$60,000, 3/3/07 - 5/31/10.
- Grant award, NOAA: “Habitat Use by American Shad Larvae in the Hudson River Estuary, New York,” \$40,000, 5/01/10 – 5/31/12.
- Grant award, Hudson River Foundation: “Geochemical Markers in Otoliths to Aid in Stock Identification and Conservation of River Herring,” \$184,660, 6/1/09 – 5/31/11.
- Grant award, National Science Foundation: “Positioning Rust Belt Cities for a Sustainable Future: A Systems Approach to Enhancing Urban Quality of Life,” (D. Nowak and M. Hall, PIs), \$300,000, 1/1/10 – 12/31/11.
- Grant award, USGS (via U. Florida): “Near Shore Fish Ecology in the Grand Canyon,” 4 years, \$1,178,711 total, \$272,976 to ESF. Role: co-PI, but PI at ESF.
- Grant award, SUNY: “Source to Sink: a Conversation in the Disciplines about Expanding the Research and Education Corridor in the Hudson River Watershed,” (with S. McNulty), \$5,000.

Kathleen McGrath

- NYSDEC, “Assessment of Lake Sturgeon Stocking in the Oswego River Basin” \$133,261 total/2 years, ~9/2008 – 6/2010, PI with co-PIs D. Carlson (NYSDEC), D. Dittman (USGS).
- Syracuse Center of Excellence, “Life Down Under: the Forgotten Hyporheic Zone in Stream Restoration and Development of a BioIndicator of Subsurface Recovery” \$100,000/1 year, 6/30/09-7/31/2010, PI with Co-PI L. Lautz (SU).
- NSF, “Collaborative Research: Impacts of In-Stream Restoration On Hydrological, Chemical, and Biological Heterogeneity in the Hyporheic Zone”, \$ 463,056/5 yrs; 1/2010-12/14; PI with PI L. Lautz (SU), Co-PI T. Endreny.

Stacy A. McNulty

- Hai, P.B., S. McNulty, and W. F. Porter. National Science Foundation Field Stations and Marine Labs. \$154,700. 9/2008-8/2010.
- Kimmerer, R. and S. McNulty. National Science Foundation Undergraduate Mentoring in Environmental Biology Program. Integrating Science and Stewardship in the Adirondacks. \$591,925. 6/1/06 - 5/31/11.
- McNulty, S., M. Patinelli-Dubay, and R. Kimmerer. The Ethics of Land Use, Land Stewardship and the Culture of Research: an Interdisciplinary Approach – an NSF UMEB Ethics Supplemental Grant Proposal. National Science Foundation Undergraduate Mentoring in Environmental Biology Program. \$3,600; 6/1/06 – 5/31/11.
- Porter, W., S. McNulty and A. Dechen. New York State Department of Environmental Conservation, A Risk Assessment of a Chronic Wasting Disease Outbreak in New York, \$1,008,190, 8/1/05-12/31/08, extended to 2010.
- S. McNulty, W. Porter, and C. Beier. New York State Department of Environmental Conservation, Application of GIS to Resource Inventory for Unit Management Planning, \$626,431, \$115,000, 6/1/03 – 8/5/10.
- McNulty, S., J. Castello, and S. Teale. The influence of American beech thickets on biodiversity in the northern hardwood forest. Northeastern States Research Cooperative, 10/1/09 – 9/30/10:\$34,785.
- Patrick, D.A. and S.A. McNulty. Assessing biodiversity, forest condition and the effects of management in the Northern Forest: protocol development and field trial in Adirondack Park. Northeastern States Research Cooperative, 10/1/09 – 9/30/10. \$15,000.

- McNulty, S.A. and K.E. Limburg. Source to Sink: Hudson River Watershed Education and Research Meeting. SUNY Conversation in the Disciplines. \$4,935. 9/1-10/31/10.
- Snyder, C. Nonnative earthworm impacts on woodland salamanders and their native prey: Implications for Adirondack forest health. SUNY Potsdam Walker Fellowship. 5/15/10-5/31/11. \$5,880.
- McNulty, S. and C. Snyder. Status of nonnative earthworms in Adirondack Park, NY. American Wildlife Conservation Fund. May 2009-August 2009. \$1,000.

Myron J. Mitchell

- Co-Investigator. Importance of calcium-rich substrates for supporting refugia of biodiversity and productivity in an increasingly acidified landscape. Northern States Research Cooperative (Theme 4: Biodiversity and Protected Area Management). \$41,543. 2009-2010.
- Co-Investigator. Long-Term Ecological Research (LTER) at Hubbard Brook Experimental Forest (HBR) (MJ Mitchell, \$90,000.) 2011-2016
- Co-Investigator. Impacts of Acidic Deposition and Soil Calcium Depletion on Terrestrial Biodiversity and Food Webs in Northern Hardwood Forest Ecosystems. NSRC, Theme 2: Sustaining Ecosystem Health in Northern Forests. \$141,488. 2010-2012.
- Co-Investigator. Positioning Rust-Belt Cities for a Sustainable Future: A Systems Approach to Enhancing Urban Quality of Life. NSF ULTRA-Ex. \$300,000 (M.J. Mitchell--\$33,304) 2010-2012
- Principal Investigator. Collaborative Research: Winter Climate Change in a Northern Hardwood Forest. NSF Ecosystems. \$179,149. 2010-2013.
- Principal Investigator. Collaborative Research: Evolution of Dissolved Organic Nitrogen (DON) from the Headwaters to the Catchment Outlet: Sources, Variation with Scale, and Differences with DOC. NSF-Hydrology. \$70,256.00. 2008-2011
- Principal Investigator. Evaluation and Protection of Adirondack Ecosystems: Impacts of Acid and Mercury Deposition on Watersheds. NYSERDA-EMEP. \$378,568. 2008-2011.
- Principal Investigator. Hydroclimatic effects on ecosystem response: A synthesis of long-term results from watersheds in the northeastern United States and southeastern Canada. NSRC/NERC U.S. Forest Service. \$146,000. 2007-2010.
- Principal Investigator. Characterization of ambient air quality in Syracuse, NY and identification of its origins. CARTI -Collaborative Activities for Research and Technology Innovation. Total \$600,000 (\$200,000 SUNY-ESF). 2007-2010.
- Consultant. PIRE: Ecological and evolutionary effects of climate change and anthropogenic influences in Mongolia. NSF. Total \$2,469,634 (\$47,465 SUNY-ESF) 2007-2012.
- Co-Investigator. The Impact of Changing Climate on Winter Nitrogen Export from a Forested Watershed of the Adirondack Mountains. McIntire-Stennis (\$81,230) 2007-2010.
- Co-Investigator. Water flux and nutrient cycling in the hyporheic zones of a semi-arid watershed. NSF-Hydrology (Total \$730,000; subcontract \$139,424) 2005-2010.
- Co-investigator. Long-term ecological research at the Hubbard Brook Experimental Forest. NSF. (Total: \$4,920,000; subcontract \$167,784). 2004-2009. Graduate Student Supported: Phil-Goo Kang

James P. Nakas

- Antek Incorporated, hydrogen research, J. Nakas and A. Terrinoni; \$29,064; July 2006 to June 30, 2010
- NYSERDA, Production of value-added biodegradable plastics from NYS's low-value biodiesel process-glycerin; C. Nomura and J. Nakas; 79,983; July 2007 to July 2010.
- US DOE, Hot water extraction of hardwood chips and utilization of the residual chips and wood; T. Amidon, J. Nakas and S. Liu; \$1,488,000; October 2007 to September 2011.
- Hillard Corporation, The use of microporous ceramic composite membrane technology in the improvement of biofuels and bioproducts; J. Nakas and J. Fieschko; \$190,000; July 2007 to May 31, 2010.

Blue Highway LCC, Biodegradable plastics from renewable sources for manufacturing medical products in CNY; J.P. Nakas, D. Danna, A. DiRienzo, J. Fieschko, and C. Nomura; \$350,000; October 2008 to December 2011.

Dylan Parry

2009-2012. Fierke, M., D. Parry and D. Allen. Evaluating Impacts of Native Parasitoids on *Sirex noctilio* in New York; \$75,000.

2008-2011. W. Powell, C. Maynard, D. Leopold, T. Horton, D. Parry. USDA Biotechnology Risk Assessment Grants (BRAG) program. Evaluating Environmental Impacts Of Transgenic American Chestnut Trees To Chestnut Trees Produced By Conventional Breeding \$399,985.

William F. Porter

Montrakis, G., W. Porter, B. Zuckerberg and C. Beier. National Aeronautics and Space Administration. Using LIDAR to assess the roles of climate and land-cover change as drivers of biodiversity. \$709,682, 9/1/09 – 8/31/12.

Porter, W. National Wild Turkey Federation. Regional strategies for harvest management based on landscape-scale habitat and weather effects on wild turkey populations, \$73,716, 3/1/09 – 12/31/11.

Porter, W. NYS Chapter – National Wild Turkey Federation. Regional strategies for harvest management based on landscape-scale habitat and weather effects on wild turkey populations, \$5,000, 3/1/09 – 12/31/11.

Porter, W. and S. McNulty. New York State Department of Environmental Conservation, Application of GIS to resource inventory for unit management planning, \$507,794, 6/1/03 – 8/31/09.

Porter, W., S. McNulty and A. Dechen. New York State Department of Environmental Conservation, A risk assessment of a chronic wasting disease outbreak in New York, \$1,008,190, 8/1/05 – 12/31/09.

Porter, W. F and A. C. Dechen. USDI – Geological Survey. Risk assessment of chronic wasting disease outbreak in New York. \$31,517, 6/1/07 – 9/30/09

Porter, W. USDA Cooperative State Research Education and Extension Service/McIntire Stennis. A risk assessment for the spread of chronic wasting disease in the Adirondack Park, \$100,659, 10/1/06 – 8/31/09.

Porter, W. New York Department of Environmental Conservation. Fall and winter survival of ruffed grouse in different landscapes of New York. \$168,103, 7/1/07 – 6/30/10.

At Adirondack Ecological Center

Canon, G., R. Quinn, W. Porter and P. Hai. USDA – Environmental Protection Smart Growth Grant Program. Business Planning for the Northern Forest Institute at the Adirondack Ecological Center. \$50,000, 7/1/08 – 6/30/10.

Martens, J., W. Porter and P. Hai. Empire State Development Corporation, Masten House and Northern Forest Conservation Education Institute. \$1,000,000, 6/1/07 – 6/1/12.

Porter, W. and J. Farrell. US Dept of Housing and Urban Development. Acquisition, renovation and construction of facilities in the North Country for Economic Development and Improvement. \$347,935, 6/1/04 – 1/22/09.

Porter, W., P. Hai and S. McNulty. National Science Foundation High speed wireless Internet installation at the Adirondack Ecological Center. \$154,700, 9/1/08 – 8/31/10

Porter, W. and P. Hai. New York State Construction Fund. Renovation of the Carriage House Teleconference and Distance Learning Center. \$2,500,000, 7/1/08 – 6/30/13.

Porter, W. and P. Hai. New York State Department of Environmental Conservation. Northern Forest Conservation Education and Leadership Training. \$125,000, \$125,000, 7/1/08 – 6/30/09

Porter, W. and P. Hai. Town of Newcomb. Infrastructure Development at Huntington Wildlife Forest. \$91,000, 5/1/09 – 1/31/11.

Porter, W. R. Quinn and P. Hai. Town of Newcomb. Development of Infrastructure and Expansion of Programs at the Adirondack Ecological Center. \$159,000, 5/1/09 – 1/31/11.

William A. Powell

Forest Health Initiative. First and second-generation transgenic American chestnut trees. \$900,000 (8/1/09 – 7/31/12). PI with Dr. Maynard as Co-PI. This is our part of a multi-institutional grant totaling \$5.2 million.

Forest Health Initiative. Supplemental funding to examine early flowering genes in transgenic American chestnut. \$83,000 (6/1/10 – 5/31/12). PI with Dr. Maynard as Co-PI.

Consortium on Plant Biotechnology Research (CPBR). Collaborative research: Developing blight resistance in transgenic American chestnut for agroforestry and restoration. \$67,000 (5/1/10-4/30/11) PI with Dr. Maynard as co-PI.

The New York Chapter of The American Chestnut Foundation. Supplemental grant for technician support for Chestnut research. \$20,000 (1/1/10-12/31/10). PI with Dr. Maynard as co-PI.

Vetlesen Foundation. Equipment grant for woody tissue grinder. \$14,000 (6/1/10-12/31/10). PI with Kathleen Baier as co-PI.

ArborGen LLC. Transformation of American chestnut with genes encoding transcription factors. \$20,000 (1/1/10-12/31/10) PI with Dr. Maynard as Co-PI.

USDA-Biotechnology Risk Assessment Grant program (BRAG), Evaluating Environmental Impacts Of Transgenic American Chestnut Trees To Chestnut Trees Produced By Conventional Breeding. \$380,000 (10/1/08-9/30/11). PI with co-PIs, Dr. Maynard, Dr. Horton, Dr. Parry, and Dr. Leopold.

The New York Chapter of The American Chestnut Foundation. Testing Transgenic Events for Gene Copy Number, Gene Expression, and Blight Resistance. \$100,000 (5/08-6/10). PI with Dr. Maynard as co-PI.

The New York Chapter of The American Chestnut Foundation. Regenerating Transformation Events into Whole Plants and Expansion of Field Trials. \$300,000 (5/08-6/11). Co-PI with Dr. Maynard, PI.

Neil H. Ringler

U.S. Environmental Protection Agency \$1,500,000 Central New York District Cooling Project 1/1/07 – 12/30/09; extended to 06/30/10 (Neil Ringler as Co-PI; Kim Schulz Co-PI; Dr. James Hassett as PI) Honeywell, Inc. \$175,121 5/28/09 – 05/30/10. Onondaga Lake Biological Assessment and Monitoring.

Kimberly L. Schulz

National Science Foundation, “Collaborative Research: EAGER – Eco-evolutionary feedback on community assembly,” PI: K.L. Schulz, co-PI: C.E. Cáceres (U. Illinois); Amount: \$300,000 (\$143,667 to SUNY ESF); Dates: Sept 2009-Aug 2011.

NYSERDA, “Conversion of dairy and biodiesel waste products to omega-3 fatty acids and lipids for biodiesel production using mixotrophic algae;” PI: John Fieschko, co-PI: K.L. Schulz; Amount: \$76,304; Dates: April 2009-March 2011.

SUNY ESF Seed Grant Program, “Extending ecological stoichiometry to the salt marsh: Restoring natural Si:N:P ratios may help remediate estuarine food webs;” PI: K.L. Schulz, co-PI: Cheryl Whritenour; Amount: \$8,000; Dates: March 2009-March 2010.

National Science Foundation, “Can Fatty Acids Improve Our Ability to Trace Food Web Processes?” PI: K.L. Schulz. co-PIs: M.A. Teece, K.E. Limburg and J.M. Farrell. Amount: \$541,900 (all at ESF) over three years. March 2005-February 2010.

Environmental Protection Agency, Central New York District Cooling Project, actual funding level uncertain (\$1 million), P.I.: J.Hassett, co-PIs: Neil Ringler and K. Schulz (SUNY ESF).

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

SUNY-ESF McIntire-Stennis Research Program, “Restoring small, ephemeral wetlands in forested landscapes of New York State: Initiating a large-scale, long-term collaborative research program

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

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

National Estuarine Research Reserve Fellowship (Estuarine Reserves Division, Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA), “Salt Marsh Restoration: The Importance of a Better Biofilm,” Cheryl Whritenour and K.L. Schulz; Amount: \$60,000; Dates: June 2010-May 2009.

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, J. Allison & S. Teale \$123,347 Jan 1, 2010-Dec 31, 2010 (Award divided among 4 PIs - \$29,268 to SUNY-ESF).

Alphawood Foundation, PI: Teale, S. “Asian Longhorn Beetle Research at SUNY-ESF” \$91,425 February 1, 2010 - January 31, 2011.

Alphawood Foundation, PI: Teale, S. “Asian Longhorn Beetle Research at SUNY-ESF” \$ 81,232 FEB-03- 2009 - FEB-02- 2011.

USDA Forest Service STDP, PIs: Teale, S., J.D. Castello, J.G. Millar. “Fungal Attractants for *Sirex noctilio* and its Parasitoids” \$123,630 July 1, 2010 - June 30, 2013 (\$40,000 in first year)

Northeastern States Research Cooperative, PIs: McNulty, S. J.D. Castello & S. Teale. “The influence of American beech thickets on biodiversity in the northern hardwood forest.” \$34,785 October 1, 2009 – September 30, 2010.

McIntire-Stennis Cooperative Forestry Research Program, PIs: Quackenbush, L. & S. Teale. “Remote Sensing Based Classification of Forests Infested by *Sirex* Woodwasp.” \$78,236 Oct. 1, 2008 – Sept. 30, 2010.

USDA-APHIS, PI: Teale, S. “SUNY-ESF/NYSDEC, Division of Lands & Forests Partnership Technology to Combat Asian Long-Horned Beetles in New York Forests” \$437,703 June 1, 2010-May 31, 2012.

J. Scott Turner

National Geographic Society, Mound building termites and the water economy of southern African arid savannas, \$19,500; August 2008 to August 2009.

US Army Research Office, Collective structural defense of the mound-building termites of the genus *Macrotermes*; \$300,000; June 2008 to May 2011

John C Templeton Foundation, Biology’s Second Law: Evolution, Purpose and Desire; \$50,000; 2 years.

Alexander Weir

National Science Foundation – Monographic Approaches to the Laboulbeniales, Subtribe Stigmatomycetinae and the Genus *Stigmatomyces*. NSF PEET (Partnerships for Enhancing Expertise in Taxonomy) Program; \$750,000, January 2006 to December 2010.

National Science Foundation – Research Experiences for Undergraduates (REU) program; \$7000; May 2009 to May 2010

National Science Foundation – Undergraduate Mentoring in Environmental Biology (UMEB) Program – Integrating Science and Stewardship in the Adirondacks. PIs Robin Kimmerer and Stacy McNulty. My dual role will be as Mentor and Facilitator during use of the Cranberry Lake Biological Station by students in this program. Total Amount \$600,000

Christopher M. Whipps

Alaska Department of Fish and Game. \$3,500 (07/01/10-06/30/11) *Ichthyophonus hoferi* in returning Alaskan Chinook salmon; molecular diagnostics.

NIH Subaward P0274A-A (3/1/10 - 2/28/12) \$60,000. Characterizing *Mycobacterium* species from zebrafish and diagnostic development.

SUNY-ESF Seed Grant Program (3/1/09 - 12/31/2010) - \$8,000. Systematics and Biodiversity of the Myxozoa.

USDA-CREES/McIntire-Stennis Program (8/15/09 – 9/30/12) - \$50,500 Monitoring populations of elusive forest wildlife: a modern approach using noninvasive genetic techniques (Co-investigator with Jacqueline Frair)

Appendix G. Service to Department, College, and University

Larry P. Abrahamson

Continuing Education and Extension Coordinator for Faculty of Environmental and Forest Biology.
Member, Human Subjects Committee (Institutional Review Board (IRB)) for Syracuse University and SUNY-ESF.

Pesticide Use Advisor for College

Member/Chair, College UUP Promotion Review Panel

Sergeant.-at-Arms, Faculty Governance

Member, Human Subjects Committee (Institutional Review Board (IRB)) for SUNY-RF representing SUNY-ESF.

Guy A. Baldassarre

Curriculum Coordinator for Wildlife Science major

Jesse L. Brunner

Building advisory committee, member

Chair of Institutional Animal Care and Use Committee

EFB representative to Committee on Instruction

John D. Castello

Member of EFB Promotion and Tenure Committee, December 1, 2008 for three year term.

Coordinator of EFB Forest Health major.

Associate Chair: January 1, 2010-present

Chair, Ad Hoc Committee to develop recommendations for undergraduate program in Environmental Health at SUNY-ESF.

Coordinator for EFB annual spring awards ceremony, May 2010

Martin Dovciak

Chair, Committee for Robert Burgess Graduate Scholarship in Ecology

Worked with Terry Ettinger to develop EFB greenhouse collections (ongoing)

Empire Innovation Search (member of the Climate Change Thematic Committee)

Committee on Research (member)

Beech Working Group (member)

Council for Geospatial Modeling and Analysis (member)

Center for Urban Environment (core faculty member)

John M. Farrell

Chair of EFB Building Advisory Committee; held two meetings that led to providing recommendations to EFB Chair for facility enhancements

Served as lead with EFB AFS Major in production of a program brochure

Service as Wildlife Ecologist Search Committee Chair

Mentored an Assistant Professor in EFB

Supervised two EFB funded Federal Work-study assistants at TIBS

Served as co-author (behind lead Schulz) in development of NSF proposal to enhance EFB's CIRTAS and its connection to TIBS

Developed and taught new EFB Core course seminar to incoming graduate students (with Schulz)

Serve as Director of the Thousand Islands Biological Station (TIBS). Oversee and supervise activities at TIBS including research, community outreach, facilities and development.

Wrote NSF grant for facility improvements implementation at TIBS.

Continued work on development initiative for new TIBS multipurpose building with Bob Quinn.

Helped secure \$5,000 in private gifts to TIBS with Bob Quinn of development office.
 Submitted multiple grants and maintained existing contracts through the RF.
 Supported graduate student poster development and materials for Great lakes Day at the State Capital
 (Geof Eckerlin)

Danilo D. Fernando

Director, EFB Graduate Program
 Member, Graduate Program Advisory Committee
 Coordinator, Committee on Optical Instruments and Equipment
 Member, Graduate Council

Melissa K. Fierke

EFB Curriculum and Course Assessment Committee.
 Scholarship committees: Roskin undergraduate award to outstanding female senior
 Burgess outstanding PhD student award in ecology
 Stegeman invertebrate ecology graduate award
 Outstanding undergraduate teaching assistant award
 Served on committee for the EFB Molecular faculty position.
 Attended seminars for the Natural History & Interpretation candidates and the Wildlife searches.
 Faculty Outreach Committee, beginning 4/10.
 Taught Preorientation for Underrepresented Students 8/18-25/2009.
 Faculty mentor for the Society of Conservation Biology SU/ESF chapter.
 Member of the ESF Learning Community.
 Participated at the Freshmen Learning Community Retreat at Orenda Springs.
 Co-hosted blackboard training at the Graduate Assistant Colloquium on Teaching and Learning.
 Judged GSA Spotlight on Student Research posters.
 May and December convocations as well as May Student Award dinner.

Jacqueline L. Frair

Mentor to two Cranberry Lake Undergraduate Research Fellowship students, Lynne Beaty and George Prounis who presented the following posters at the Spotlight on Student Research and Outreach:
 “The effect of trails on salamander abundance: implications for trail management”, L. Beaty and J. Frair
 (awarded first place)
 “Testing for the presence of necrophobic behavior in small mammals in Adirondack State Park, NY”, G. Prounis, J. Frair, and M. Schlaepfer (awarded third place)
 Mentor to UMEB student Tim McCoy
 Spring Open House – represented wildlife major (17 April 2010)
 Met individually with potential and accepted undergraduate students throughout the year
 Search Committee member – Wildlife faculty (spring-summer 2010)
 Coordinator of Betty Moore Chamberlaine Memorial Fund – graduate student scholarship
 Participant and presenter at EFB awards ceremony – 15 May 2010
 Member, Faculty Governance Executive Board
 Chair, Faculty Governance Committee on Research
 Member, Council on Geospatial Modeling and Analysis
 Attended Spring Banquet, 24 April 2010
 Champagne Barista, Champagne toast for graduating seniors, 12 May 2010
 Stage party member, Commencement, 15 May 2010
 Submitted successful nomination for SUNY Chancellor’s Award (Lynne Beaty)
 Science Advisor to NY Fish and Wildlife Management Advisory Board

James P. Gibbs

Coordinator, Conservation Biology Major
 Coordinator, Internships
 Member, Course and Curriculum Assessment Committee
 Member, Promotion and Tenure Committee
 Co-chair, Informal biology educator search (with Norton)
 Associate Chair

Charles A.S. Hall

President's committee on a carbon-neutral ESF
 Committee to set up a renewable energy minor at ESF
 Informal committee to generate a program in Ecological Economics

Thomas R. Horton

Search committee to fill the Smart/Kretzer lines. This led to the successful hire of Dr. Lee Newman.
 Early career mentor for Melissa Fierke and Martin Dovciak
 Took over responsibilities formerly covered by Larry Smart: Maintenance/operation of the water purifier,
 maintenance/operation of the two new growth chambers (5 and 6).
 GPAC committee.
 Review panel for choosing the firm that will build the new Biology building.

Robin W. Kimmerer

EFB Spring Awards Ceremony
 Mentor, Dr. Fierke
 Acting Director, CLBS July 21-27
 Search Committee, Informal Biology Education
 Director, Center for Native Peoples and the Environment
 Director, NSF UMEB Program
 Director, USDA Multicultural Scholars Program
 Friends of Moon Library, Board Member
 Promotion and Tenure Committee, Environmental Studies, Ad hoc
 Co-organizer with Multicultural Affairs, Native American Feast and Film Nov. 09
 ESF Foundation presentation at annual meeting at Moinnowbrook
 ESF Foundation, Feinstone Award planning
 Planning Committee, Native American Studies Minor
 Advisor, Primitive Pursuits Club
 Advisor, Kincentric Club
 Guest speaker, Conservation Biology Club
 SUNFAS, (Syracuse University Native American Faculty and Staff
 Native American Studies department, Syracuse University
 Fall Native Outreach Day, Syracuse University
 Spring Native Outreach Day, Syracuse University

Donald J. Leopold

Chair, Department of Environmental and Forest Biology
 Supervisor, Illick Greenhouse Manager
 SEFA Coordinator, Fall 2009
 Presenter (twice, on campus trees and shrubs) for annual Alumni, Family, and Friends BBQ, October
 2009
 Empire Innovation Program Committee to recruit and hire three faculty in Global Environment, Health
 and Sustainability

Presenter on GSA panel on Graduate School, April 2010
 Reviewer, McStennis proposal
 Chair, Faculty Committee on Promotion and Tenure, October 2007 through present
 Member, Advisory/Steering Committee for ESF Campus Master Plan Study (now Gateway Building),
 September 2007 through present.

Karin E. Limburg

Chair, Graduate Program Advisory Committee
 Member, Building and Space Committee
 Member, Wildlife Biologist Search Committee

Mark V. Lomolino

Participated in accepted student receptions and overviews of departmental programs in wildlife and conservation for visiting parents and students.

Gregory McGee

EFB CCAC
 ENB assessment team
 Coordinator, Freshmen Pre-Orientation Adirondack Experience
 Faculty Search Committee, Informal Biology Education
 CLBS Fellows Selection Committee, w/ C. Whipps
 Assisted with transfer student registration and advising, Jan 17
 Learning Community Management Team
 South Campus Housing Task Force
 Faculty Governance Committee on Instruction – Subcommittee on General Education.
 ESF Graduate Assistant Colloquium – facilitated workshops on Teaching Strategies for Laboratory and Field Experiences (w/ A. Stipanovich, 9/27/09); and Evaluating Written Work (8/28/09).
 McIntire-Stennis Proposal Review

Kathleen E. McGrath

Member, Selection Committee for the Burgess Award

Stacy McNulty

Editor of AEC newsletter, the Spruce Moose
 Organizer, Huntington Lecture Series
 Committee for Public Service (COPSCO)
 Council for Geospatial Modeling and Analysis (CGMA)

Myron J. Mitchell

Director of Council of Hydrologic Systems Science
 Co-Chair of Faculty Advisory Committee on Establishing a Joint ESF-SU Doctoral Environmental Program
 Consortium of Universities for the Advancement of Hydrologic Sciences, Incorporated (CUAHS), alternate representative for ESF (2001-present).
 NYSTAR Team Leader for Urban Ecosystems.
 Member of Board of Directors of New York Research Foundation
 Chair (through December 2009) and Member of Committee on Human Resources (through December 2009) of New York Research Foundation.
 Chair (beginning January 2010) and Member of Research Committee of New York Research Foundation.
 Member of Strategic Planning Committee for SUNY Research Foundation.
 Member (200) of SUNY Strategic Planning.

Member of Committee on Research for the New York Research Foundation
Member of SUNY Higher Education Advisory Committee
Reviewer Committee for SUNY Distinguished Professors
Member of SUNY Committee of Distinguished Professors

James P. Nakas

Director, SUNY Center for Applied Microbiology
Member, Radiation Safety Committee
Chairperson, Institutional Biosafety Committee (ESF)
Director, SUNY Center for Applied Microbiology
Advisory Committee, Biotechnology Research Center.

Tsutomu Nakatsugawa

Chair, Promotion and Tenure Committee
Member, Committee on the possible Environmental Health Option (John Castello, Chair)
Member, sub-committee on Global Environment, Health and Sustainability section in the Empire
Innovation Search Committee.
Member, Academic Integrity Hearing panel (Kenneth Tiss, Chair) May, 2010

Roy A. Norton

EFB Undergraduate Curriculum Director
ENB Curriculum Coordinator
Efb Curriculum, Course and Assessment Committee (member)
Responsible for maintenance of departmental Invertebrate Collection
Member, mentoring committees for Christopher Whipps and Gregory McGee
Co-chair of search committee for Informal Biology Education faculty member
Member, ESF Retention Committee
Service on CoI Subcommittee on Academic Standards
Member, ad hoc committee to evaluate academic dishonesty charges (Judicial Review)
Member, ad hoc committee to refine and streamline undergraduate-related procedures and forms.

Dylan Parry

Chair, EFB Course and Curriculum and Assessment Committee (CCAC)

William F. Porter

Coordinator, R. T. King Award
Member, Graduate Committee
Director, Adirondack Ecological Center
Director, Roosevelt Wild Life Station
Review Committee, Sussman Internship

William A. Powell

Chair of the search committee for Molecular & Cellular Biology Faculty position.
Faculty representative on ARB building Committee
Coordinator for the undergraduate Biotechnology major
Acting Chair when needed
Executive Chair of Faculty Governance
Director of the Council on Biotechnology in Forestry
IBC (Institutional Biosafety Committee) member

Neil H. Ringler

Advisor, Student Chapter, American Fisheries Society

Advisor, Alpha Xi Sigma Honor Society

Host/Coordinator: Faculty Mentoring Conference/Workshop: “Faculty Excellence and Maximum Impact” Drumlins January 6, 2010

Coordinator of College-wide research proposals for instrumentation, infrastructure, and bio-energy programs, including CNY Biotechnology Center and Syracuse Center of Excellence

“Research at ESF: Diversity with Focus” Presentation to Syracuse University and Brookhaven National Laboratory November 5, 2009

“Research at ESF” Presentation and participation, ESF visit to Institute of Ecology, Xalapa, Mexico March 14-18, 2010

“Research at ESF” Host and Presenter, for Entrepreneurs and Resource Managers from Russia, May 27, 2010

D. Andrew Saunders

Open Houses: Fall and Spring, Illick Hall Exhibit preparation and renovation, Coordinating Natural History and Interpretation major, including advising 42 undergraduate and graduate students.

Kimberly L. Schulz

Associate Professor member of EFB Promotion and Tenure Committee

Faculty mentor for Jacqui Frair, Greg McGee and Jesse Brunner

EFB Graduate Program Advisory Committee Member 2008-present; initiated Core Course for first year graduate students with John Farrell

Member of Phyllis Roskin Award Committee

Aquatic and Fisheries Science BBQ and mixer participant

Organized symposium for AFS majors and Marine Ecology undergraduates on getting into graduate school and other career options, spring 2010

Member of the Middle States steering committee

Coordinating effort to develop CIRTAS – Center for Integrated Research and Teaching in Aquatic Science, to find funding to develop a collaborative aquatic science experimental facility for teaching and research at ESF, and efforts to organize aquatics group in EFB

Co-ordinate college-wide AquaBreak seminar (formerly AquaLunch) and run seminar with graduate student Jacob Gillette

EFB representative to the Water Resources Minor

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

Member of ESF Scientific Diving Committee (being developed by Mark Teece)

Environmental Science advisor

William M. Shields

Field Studies Coordinator

Member, Graduate Program Advisory Committee

Acting Director, CLBS various dates.

Judge for EFB 202 presentations

EFB representative to Honors Council

J. Scott Turner

SU Senator (Fall 2009)

Alex Weir

Director, Cranberry Lake Biological Station, 08/06 –

Curator of the EFB Herbaria appointed 09/03-

Member, EFB Promotion and Tenure Committee

Member, Field Programs Committee EFB

Active participant in EFB majors for Forest Health, Conservation Biology and Natural History and Interpretation.

Member, Lowe-Wilcox Award Committee

Chair, Zabel Award Committee

Chair, Morrell Award Committee

Director, Cranberry Lake Biological Station, 08/06-

Christopher M. Whipps

EFB Space Committee (Feb 2008 - present). Chair: John Farrell.

EFB Curriculum Committee (Jan-Feb 2008, Aug2008-present). Chair: Dylan Parry.

EFB Graduate Program Advisory Committee (Aug 2008-present). Chair: Karin Limburg

EFB Cell and Molecular Biology Search (Nov 2009 - Apr 2010). Chair: Bill Powell

ESF Environmental Health Program Feasibility Program (Sept 2009-Jan 2010). Chair: John Castello

ESF Committee on Promotion and Tenure Policies and Procedures (Feb 2008 - present). Chair: Don Leopold

Appendix H. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

Larry P. Abrahamson

Answered numerous questions and inquiries from business people, landowners, students, and reporters regarding use of willow as a bioenergy crops and in production and use of biofuels throughout the year.

Exhibit on renewable energy and willow biomass project manned for ~16 hours at Empire Farm Days, Aug. 11-13, 2009, Seneca Falls, NY.

Member of the NYS Planning Committee for Survey and Management of Pests.

Member of Renewable Resources Extension Advisory Committee (RRER) at Cornell Cooperative Extension.

Member DOE Short Rotation Woody Crops Operations Group Steering Committee

Co-chair (with Tim Volk) of 8th biennial meeting to be held in October, 2010 in Syracuse, NY.

Member NYS Dept. Agric. Markets Plant Industry Advisory Committee.

Provide advice for the CTFANY New York State Fair booth and Exhibit (2-3 days)

Member Steering Committee for Ninth Symposium on Environmental Concerns in ROW Management

Member Steering Committee for Tenth Symposium on Environmental Concerns in ROW Management

Many inquiries handled on insect and disease problems related to government agencies

Provided training on pesticide use and environmental effects to Syracuse University personnel at their training sessions.

Member of the Greenhouse Gas Expert Panel of the Council on Sustainable Biomass Production for the meridian Institute for 2010 and 2011. Provide expertise on conference calls 4-6 times a year on sustainable energy crops.

Martin Dovciak

Jowonio School – ongoing consulting and management of toxic plants (poison ivy) along the trail system used by preschool children.

John M. Farrell

NYSDEC – water levels research and policy – service to inform managers of research outcomes regarding water levels management influences on habitat and fauna – Cape Vincent NY (February 2010)

IJC St. Lawrence River Board of Control – invited expert to two-day workshop regarding development of criteria for water levels regulation for environmental interest – Montreal Canada (30 attendees)

Thousand Islands Land Trust Zenda Farms Picnic, Provided live fish and poster displays as part of community event (June 2009; ~250 attendees)

Save The River, Clayton, NY, 2010 Winter Environmental Weekend Invited Speaker, Board of Directors, advisory roles on environmental issues (130 attendees)

Marcellus High School Career Day - Careers in Marine Biology (Aquatic Sciences) December 2009 (10 attendees)

Coastal Studies for Girls, A Science and Leadership School, Freeport ME, School group visited TIBS and experienced interpretive information and collected field data associated with fisheries research (April 2010, 9 participants)

Danilo D. Fernando

Judge, Best Poster (Graduate Student), Spotlight on Student Research, SUNY-ESF, April 12, 2010.

Melissa K. Fierke

Answered questions from the public on insects/arthropods through the reporting period.

Participated on the NYDEC scientific advisory response team for the emerald ash borer discovery.

Jacqueline L. Frair

Science Advisor, New York State Fish and Wildlife Management Advisory Board

James P. Gibbs

“Equipo Asesor en Herpetología/Advisory Team in herpetology” to Galapagos National Park Service, Member, appointed 1 year term, 10/10.

Instituto Ecologia/SUNY-ESF collaborative mission, Xalapa, Mexico, 3/14-3/17 (with 6 ESF faculty, subsequently appointed to Comité Externo de Evaluación del INECOL/external evaluation committee, for 6 year term).

Vice Chair, Altai Assistance Project (Wadhams, NY, USA/Gorno-Altai, Altai Republic, Russia), (elected 3/09, 2-year term)

Member, Chittenango Ovate Amber Snail recovery team (2002-present)

Nine Mile Creek Conservation Council, Council Member, Camillus, New York (2001-present).

Board member, The Wetlands Trust (2009-present)

Thomas R. Horton

Organized 1st Annual Mushroom Fair with CNYMS members, Beaver Lake Nature Center. September 2009. Facilitated by members of the Syracuse and Utica Mycology clubs and my Basidiomycetes class, ~150 visitors from public during the day long fair.

Robin W. Kimmerer

North American Association of Environmental Educators. Program development for incorporation of traditional ecological knowledge into NAAEE Annual Meeting

Neighbors of the Onondaga Nation, Co-organizer, Onondaga Land Rights and our Common Future educational series

Onondaga Nation Environment Office, environmental restoration strategies

Onondaga Nation School, science outreach

Seneca Nation of Indians, environmental education planning

Onondaga Lake Natural Resources Damage Assessment Trustee Council, presenter

Fabius-Pompey School District, outdoor education curriculum development

Syracuse University, Roots of Peacemaking event, 9./23/10

Neighbors of the Onondaga Nation, panel facilitator

Antioch University, graduate student research consultation

Trent University, graduate student research consultation

Cornell University, graduate student research consultation

Haskell Indian Nations University, Board, RED Center

Oregon Museum of Science and Industry, advisory board, NSF proposal for teaching Traditional Ecological Knowledge

Orion Society, Board of Directors

Donald J. Leopold

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

Karin E. Limburg

Member, Fisheries Subcommittee, Hudson River Estuary Management Advisory Committee. We met twice (December 2009 and April 2010) to discuss fisheries closures and other matters.

Gregory G. McGee

Preserve Management Advisory Committee, Finger Lakes Land Trust.

Conservation Area Advisory Committee, Chair, Town of Skaneateles.

Kathleen E. McGrath

Member, NYSDEC Fish Diversity Committee/Endangered Species Expert Panel
 ESF representative, Onondaga Lake Partnership Project Committee
 Member, Nonpoint Source Coordinating Committee, NYSDEC
 Instructor, Women In Nature Workshop, Camillus, NY

Stacy McNulty

Adirondack Biodiversity Project (All-Taxa Biodiversity Project) – an expert-driven, citizen science-based project to inventory all life in the Adirondack region and excite residents of and visitors to Adirondack Park

Myron J. Mitchell

Board of Directors of Upstate Freshwater Institute
 Member of Finance Committee of Upstate Freshwater Institute
 Review of Faculty for Tenure and Promotion in Department of Earth Sciences, School of Science of Indiana University, Purdue University, Indianapolis, Indiana.
 Review of Faculty for Promotion in Department of Geography and Earth Sciences, University of North Carolina at Charlotte, Charlotte, NC
 Member of Scientific Advisory Committee for International Acid Rain meeting to be held in Beijing, China (2011)

Roy A. Norton

24-hr consulting specialist on venomous arthropods for Syracuse Poison Information Center.
 Extension: regular fielding of calls and inquiries from general public and businesses regarding mites, spiders, ticks, and other pest arthropods.
 Collaborating specialist, USDA Insect Identification Service: mite identifications and dispensing of biological information.
 Collaborating specialist, USDA-APHIS: identification of mite specimens taken during routine quarantine inspections of plants.
 Complementary mite identifications and/or extended consultations relating to the following ecological/evolutionary/taxonomic studies of mites: (researcher, institution, project)
 D. Sandmann – University of Goettingen, Germany: Identification of mites from Ecuador rainforests.
 S. Seniczak and A. Seniczak - Univ. of Techn. & Life Sciences, Poznan, Poland: European species of the family Gymnodamaeidae and Damaeidae (2 projects).
 Z. Lindo – McGill University: Systematic and ecological studies of arboreal oribatid mites.
 S. Ermilov – Nizhniy Novgorod Medical Academy, Russia: 1) Ontogenetic studies of the mite family Gymnodamaeidae; 2) Ontogenetic studies of Russian Damaeidae; 3) New species of oribatid mites from Vietnam.
 D. Walter – The Royal Alberta Museum, Edmonton: Survey of Gymnodamaeidae of Canada.
 L. Hugo – National Museum of South Africa, Bloemfontein: Monograph of Gymnodamaeidae of South Africa
 J. Mourek – Dept of Zoology, Charles University (Prague): Revision of the oribatid mite genus Metabelba in Europe.
 K. Ghandi – University of Georgia: Effects of earthworm invasion on soil mite communities
 V. Behan-Pelletier – Agriculture Canada, Ottawa: 1) Review of oribatid mite genus Unduloribates in North America; 2) Monograph of mite genus Oribatella in North America.
 P. Monet – University of Toulouse, France; Identity of Iron Age fossil mite from archeological site.
 A. Gibelo – Complutense University, Madrid, Spain: Parasitic mites on fishes.

Dylan Parry

Member, New York State Invasive Species Advisory Council

Albany Pine Bush Preserve. I have continued a long-standing relationship with the Albany Pine Bush preserve. The director, Neil Gifford, and I have collaborated on numerous projects, and I provide consultation on the effects of management on insect species that are of conservation concern.

Although there is no direct compensation, we benefit through free labor from preserve staff and occasional housing for graduate students. Brian Hoven, in particular, was availed a significant amount of Pine Bush resources during the implementation of his project.

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

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

William A. Powell

Advisor to the NY chapter of The American Chestnut Foundation

Science advisory board member of the national American Chestnut Foundation

Reviewed two USDA APHIS BRS applications: Flowering field trails of cold tolerant transgenic eucalyptus and deregulation of virus resistant transgenic plum.

Neil H. Ringler

NYDEC Onondaga Lake Technical Committee (Littoral Habitat); presentations to Onondaga County and Onondaga Lake Fisheries Advisory Committee

D. Andrew Saunders

Gifford Zoo

Ed Smith Elementary School

St. Alban's Episcopal Church

Kimberly L. Schulz

Advised residents at Song Lake, Tully, NY and representative from the Kettle Lakes Association of New York about Cyanobacteria blooms in Song Lake. July 2009

Hosted high school student, Sarah Fellows, for 3 weeks of volunteer work in my laboratory

William M. Shields

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

Pro Bono consulting and expert witness for various individuals and entities including the Alliance of Families of MIA's and POW's, the Russian Orthodox Church, and the Innocence Project.

Alexander Weir

Poison Control Center, consultation with local physicians re: identification and treatment of mushroom poisonings (1 case Fall 09)

National Science Foundation Grant Application Reviewer (2 applications fall 2009/spring 2010)

Continued Liaison with Central New York Mycological Society
Participant NSF funded Assembling the Fungal Tree of Life (AFTOL) Program

Appendix I. Unfunded Service to Professional Societies and Organizations

Larry P. Abrahamson

Co-Chair, IUFRO group on short-rotation forestry (2008-2011).

Participated and Moderated in the NY Christmas Tree Grower's Association Winter Convention; January 29-30, 2010.

Participated in the 9th International Biorefinery Conference as special editor of publication in Biomass & Bioenergy; October 6-7, 2009.

Participated in the NE SunGrant Meeting held in Syracuse, NY, May 24-26, 2010.

Member, Christmas Tree Farmers Association of NY (CTFANY) Winter and Summer Meeting Program Committees.

Member, Christmas Tree Farmers Association of NY (CTFANY) Board, 2008-2010.

Member, Steering Committee of the Short-Rotation Woody Crops Operations Working Group.

Member, Steering Committee, 9th International Symposium on Environmental Concerns in Rights-of-Way Management held September 27- October 1, 2009.

Member, Steering Committee, 10th International Symposium on Environmental Concerns in Rights-of-Way Management to be held in 2014.

John M. Farrell

American Fisheries Society, Hutton Scholar Mentor for 2010 - applied to serve as mentor, sought applicants and an individual (Emily Churchill) was awarded an 8 week scholarship to assist with research at TIBS.

Board of Directors, Save The River Inc. – 1200 member Environmental Advocacy organization on the St. Lawrence River.

Melissa K. Fierke

Hosted two meetings (July and November) of the New York Forest Health Advisory Council (NYFHAC) at SUNY ESF.

Jacqueline L. Frair

NY Chapter of The Wildlife Society, Vice-President

Coordinated fall field meeting at Wanakena Ranger School (11-12 September 2009; 70 participants)

Coordinated annual meeting in Alexandria Bay (11-12 March 2010; 84 participants)

ESF student chapter of The Wildlife Society, Faculty Advisor

Thomas R. Horton

Chair - Program Committee, Mycological Society of America (2009-2010)

This a major responsibility: I am organizing the program for the 2010 meeting in Kentucky (June 28 - July 1) and write the program. We are expecting 350 to attend the conference.

Counselor – Ecology and Pathology (elected position, August 2009 – July 2011)

Robin W. Kimmerer

John Burroughs Association, Judge, Selection Committee, John Burroughs Medal Competition
SACNAS, Society for Advancement of Chicanos and Native Americans in Science,

Editorial Advisory Board

Past President, Traditional Ecological Knowledge Section, Ecological Society of America

Central New York Native Educators Association, Member

Indigenous Womens Science Network, founding member

Ecological Society of America, SEEDS workshop planning

Karin E. Limburg

Finished out my term (in June 2009) as Past President of the US Society for Ecological Economics

Mark V. Lomolino

Advisor, International Biogeography Society; development of a new journal – Frontiers of Biogeography

Stacy McNulty

Adirondack Research Consortium Board Member (2009-2012); Co-planner, ARC 2010 conference

Dylan Parry

Member, New York State Invasive Species Advisory Council

Instructor – Syracuse University Project Advance (see above under “unfunded service”).

William F. Porter

President, Adirondack Research Consortium

Chair, Science Advisory Committee, Shingle Shanty Preserve and Research Station

William A. Powell

I was the Chairman of the Symposium on transgenic research in Fagaceae. This is part of a meeting (Nov. 10-13, 2009) entitled, “Genomics of forest and ecosystem health in the Fagaceae (Beech Family) held at the Research Triangle park in NC. Approximately 40 attended.

Kimberly L. Schulz

Member of a subcommittee of the Education Committee of the American Society of Limnology and Oceanography. Participating in developing the ASLO Education website – particularly the image library and helping organize the first ASLO photo contest and calendar

Alex Weir

Member, Mycological Society of America Distinctions Committee.

Appendix J. Funded Service to Governmental Agencies, Industrial and Commercial Groups, Public Interest Groups, etc.

Larry P. Abrahamson

Niagara Mohawk/ National Grid, Provide advice on herbicide use on ROW in New York State.
 Environmental Consultants, Inc., Provide advice on herbicide use on ROW in the Northeast.
 Syracuse Environmental Research Associates, Inc., Provide advice on insecticide and herbicide use on forest and ROW areas.
 Christmas Tree Judge for New York State Fair

John M. Farrell

A Fish Habitat Conservation Strategy – Presented to the Fisheries Advisory Committee of the Fish Enhancement, Mitigation and Research Fund, USFWS Cortland Field Office April 2010 (20 attendees)
 Future Implementation Projects to Restore Fish Habitat – Multiagency Implementation Team Meeting USFWS Cortland NY February 2010 (15 attendees).

James P. Gibbs

National Environmental Management Council, United Republic of Tanzania/World Bank, Workshop on preparation of guidelines for reintroduction of Kihansi spray toad. Participant and Session Chair. Dar es Salaam, Tanzania. 2/25-27/10.
 General Electric Corporation, Inc.: Herpetological and colonial waterbird assessment on the Upper Hudson River (5/06 - present)
 Ecological survey of Oakenkroft property, Nelson Byrd Woltz Landscape Architects, 5/09 (w/ D.J. Leopold and 15 ESF grads and undergrads)

Robin W. Kimmerer

Moss Acres, Inc. developed moss workshop, consulted on development of sustainable harvest monitoring protocol

Donald J. Leopold

Assisted US ACE with updating of the National Wetlands Plant List

Myron J. Mitchell

Member of the EPA's Clean Air Scientific Advisory Committee (CASAC)

James P. Nakas

Institutional Biosafety Committee, Bristol Myers-Squib Inc., Syracuse, New York

William M. Shields

Consulting on Forensic DNA

Appendix K. Presentations to the Public

Lawrence P. Abrahamson

- Presentation on willow production to a NYDOT training session on living snowfences held at Tully (Heiberg Forest), May 26, 2009.
- Presentation on willow biomass program at SUNY-ESF to Expert Workshop – Initiating a Short Rotation Forestry Strategy for Eastern Ontario – Mar 10, 2009 Kemptville, Ontario.
- Meet with University of Chile visitors to talk about growing willow energy crops in Chile, Mar 18, 2009.
- Presentation on willow project at SUNY-ESF to the Central and Western Industry Liaison Group on campus Mar 19, 2009.
- Presentation on Renewable/Sustainable Energy – Energy 101 to SUNY system VP's of student Life on campus Mar 19, 2009.
- Oral presentation to landowners in Upper Michigan who are interested in growing willow biomass crops at KI Sawyer in Michigan July, 9, 2009.
- Meet with Michigan State Field station personnel to discuss willow crops for growing in Northern Michigan at Escanaba, MI July 13, 2009.
- Toured willow crop fields with John Gee of NYSTAR to discuss willow crops and how they are harvested at Auburn, NY July 17, 2009
- Presented talk on insect and weed pests and how to control them at the CTFANY Summer Meeting at Endecott, NY July 25, 2009.
- Attended Cornell energy crop meeting at Big Flats, NY to discuss willow crops on the field tour July 29, 2009.
- Empire Farm Days with Larry Smart and Double A Willow Nursery at Senec Falls, NY to answer questions about willow crops and the harvester on display, August 11-13, 2009.
- Provided talk on willow crops to US Forest Service visitors and provided tour of willow crops at Tully NY, August 16, 2009.
- Provided talk on willow crops and answered question on willow at Canadian SRWC biomass informal meeting in Kemptville, ON; December, 8, 2009.
- Part of the discussions for the GLSEC Bi-National (USA & Canada) meeting in Syracuse, NY March 12, 2010.
- Represented SUNY-ESF and the Willow Program at the NYSTAR meeting with Canada in Albany, NY March 15, 2010.
- Provided talk on willow crops and field tour of willow research at Tully, NY for Michigan State University on March 30, 2010.

Martin Dovciak

- Invited seminar, Department of Biology, Syracuse University, December 4 (~30 attendees)
- Invited public lecture, Syracuse Botanical Club, November 2, 2009 (~15 attendees)

John M. Farrell

- Kapuscinski, K. L. and J. M. Farrell. A comparison of diets of young-of-year muskellunge from the St. Lawrence and upper Niagara Rivers. Niagara Musky Association, March 2010.
- Kapuscinski, K. L. and J. M. Farrell. Rudd in the upper Niagara River: new threats from an old invader? State University of New York, College of Environmental Science and Forestry, Aquabreak Seminar Series, April 2009.
- Farrell, J.M. Recent Trends in the Upper St. Lawrence River Muskellunge Population and Update on the Walleye Research Program - Lake Ontario Fishery Coalition Meeting Watertown NY June 2009 (30 attendees)
- Farrell, J. M. The Thousand Islands Biological Station: A Great Lakes Research Link in the Upper St. Lawrence River - HSBC Volunteer Day Clayton NY September 2009 (10 attendees).

- Farrell, J. M. Fishes of the Upper St. Lawrence River: Unraveling Mysteries - Antique Boat Museum Homer Dodge River Lecture Series August 2009 (60 attendees).
- Farrell, J.M. Water Level Regulation and Effects on Habitat in the Upper St. Lawrence River – US Power Squadron Annual Meeting Syracuse NY October 2009 (50 attendees).
- Farrell, J. M. Fishes of the Upper St. Lawrence River: Unraveling Mysteries Finger Lakes Community College Invited Seminar – Mueller Field Station Honeoye NY (20 attendees)

Melissa K. Fierke

- M.K. Fierke. Plant/Insect Interactions: plant chemical defenses and communication. American Chemical Society meeting, Syracuse NY. 7/09. ~50.
- Going Green segments: Emerald ash borer: <http://www.esf.edu/center/goinggreen/ashborer.htm> & Channel 10 News Digger wasps: <http://www.esf.edu/center/goinggreen/ashborer2.htm>
- Syracuse Post Standard: 6/18/2009 “Beetle fatal to ash trees found in New York state”
http://www.syracuse.com/news/index.ssf/2009/06/beetle_fatal_to_ash_trees_foun.html
 Front page Sunday paper 11/15/2009 “How a tiny beetle can take down a mighty ash”
http://www.syracuse.com/news/index.ssf/2009/11/how_a_tiny_beetle_can_take_dow.html
 “Emerald ash borer killing ash trees” video:
http://videos.syracuse.com/post-standard/2009/11/emerald_ash_borer_killing_ash.html
- W.E. Hellman, M.K. Fierke. Biosurveillance: Using *Cerceris fumipennis* to detect emerald ash borer. 8/2009. SUNY-ESF Workshop, Syracuse, NY. 45.
- W.E. Hellman, M.K. Fierke. Biosurveillance, a community approach. 11/2009. Cornell Cooperative Extension In-Service Education Opportunity- Invasive Species, Ithaca, NY. 30.
- W.E. Hellman, M.K. Fierke. Being proactive about Emerald Ash Borer detection: Advances in monitoring. 12/2009. Society for Conservation Biology. SUNY-ESF, Syracuse NY. 5.
- W.E. Hellman, M.K. Fierke. A Promising Alternative Survey Method for Emerald Ash Borer Using the Wasp *Cerceris fumipennis*. 3/2010. North Eastern New York State Nursery Landscape Association Education Day and Trade Show, Cobleskill, NY. 10.

Jacqueline L. Frair

- Finger Lakes Institute at Hobart and William Smith Colleges (Oct 2009, ~30 attendees, all high school science teachers)
- The following public presentations on coyote research in my lab were given by R. Holevinski:
 Huntington Lecture Series, Adirondack Ecological Center (Aug 2009)
 Richmondville Historical Society (Oct 2009)
 Tioga County Trappers Association (Oct 2009)
 Finger Lakes Community College Wildlife Society (Dec 2009)
 National Wild Turkey Federation, NY Chapter (Jan 2010)
 Paul Smith’s College Fish and Wildlife Seminar Series (Feb 2010)
 Catskills Institute for the Environment – SUNY Ulster (Mar 2010)
- Poster produced for public meetings on deer management organized by NYS Department of Environmental Conservation, “Foraging ecology of coyotes in New York State” by R. Holevinski, J. Frair, G. Batcheller, and P. Jensen.

James P. Gibbs

- “Ecology, evolution and conservation of giant Galapagos tortoises,” invited College-wide “Ecology” seminar, University of Rhode Island, Kingston, RI, 12/7, ~60 attendees
- “Ecology, evolution and conservation of giant Galapagos tortoises,” invited College-wide “Ecology” seminar, Pennsylvania State University, State College, PA, 2/8, ~45 attendees
- “Ecology, evolution and conservation of giant Galapagos tortoises,” invited College-wide seminar, Paul Smiths College, Paul Smiths, NY 10/2, ~150 attendees

- “Update on tortoise research,” Association of Galapagos Guides, Pto. Ayora, Galapagos, 7/25, 12 attendees.
- “Synopsis of the “Charles Darwin Foundation: 50 years of Science for Galapagos” Symposium,” U.S. Embassy, Quito, Ecuador. 8/27, ~35 attendees.
- “Amphibians and reptiles,” Antique Boat Museum, Clayton, NY, 9/4, ~35 attendees.
- “Conservation in Siberian Altai: Starting from Scratch,” The Wildlife Society, ESF student chapter, Syracuse, NY, 12/8. ~ 25 attendees.

Charles A.S. Hall

- “Peak oil, EROI and your financial future” Ryerson College, Toronto, October 1
- “Oil, Nature’s premium fuel” PSC 318 Technology, politics and the environment. Syracuse University
- “Peak oil, EROI and your financial future” University of California at San Diego” February 22, 2010
- “Peak oil, EROI and your financial future” University of Alaska Anchorage February 8 2010

Thomas R. Horton

- Mushrooms of the Oregon Dunes. Central New York Mycological Society, Syracuse NY, 2009. ~15
- Mushrooms of the Oregon Dunes. Mid-York Mycological Society, Utica NY, 2009. ~25

Robin W. Kimmerer

- STANYS (Science Teachers Association of New York State) public lecture “Indigenous Science”. June 12, 2009

Donald J. Leopold

- What natural communities teach us to plant, Keynote, Indiana Native Plant and Wildflower Society 16th Annual Conference, November 2009, about 275 people in attendance.
- Neglected native plants, Indiana Native Plant and Wildflower Society 16th Annual Conference, November 2009, about 275 people in attendance.
- My favorite native trees, shrubs, ferns and wildflowers, Syracuse University 5th Annual Bookstore Break, about 25 people in attendance, March 2010, about 25 people in attendance.
- Central New York’s natural wonders: state protected species and ecologically significant areas, CNY Blooms, Keynote Speaker, Syracuse, NY; March 2010, about 175 people in attendance
- Wetlands of upstate New York, Great Swamp Conservancy, Canastota, NY, April 2010, about 25 people in attendance
- New York state native plants for the landscape, Buffalo/Erie County Botanical Gardens, Buffalo, NY; May 2010, about 100 people in attendance
- Trees and Shrubs in Oakwood Cemetery, Central New York Communitree Stewards (Cornell Coop. Extension), July 2009, about 40 people in attendance.
- Common and unique natural communities in upstate New York and characteristic plant species for the landscape, Men’s Garden Club of Syracuse, Syracuse, NY; September 2009; about 50 people in attendance.
- Neglected native species, Adirondack Chapter of the North American Rock Garden Society, Ithaca, NY; November 2009; about 60 people in attendance.
- State-protected plant species, Ithaca Garden Club, Ithaca, NY; November 2009; about 110 people in attendance.
- Natural Communities of Central New York, Syracuse Botanical Club, Syracuse, NY; December 2009, about 25 people in attendance.
- Natural communities as templates to guide planting of native species, Central New York State Nursery and Landscape Association Annual Trade Show and Education Day, Skaneateles, NY; February 2010, about 50 people in attendance.
- Using native plants in landscaping and restoration, internet presentation to NYS PRISM network throughout NYS, Syracuse, NY; February 2010, dozens participating.

New York state-protected plant species: Why they are listed and how to use them in the landscape, NYS DEC STNLA Annual Education Day, Owego, NY; March 2010, about 50 people in attendance.

Karin E. Limburg

Presented to and answered questions from the general public about anadromous fishes at “Hudson River Day,” Hudson River National Estuarine Research Reserve at Norrie Point State Park, Staatsburg, NY, Sept 12, 2009.

Mark V. Lomolino

Brown University – Guest Lecturer in General Ecology; Research Seminar on Evolution of Insular Body Size

Utah State University – Research Seminar on New Theories in Biogeography

Gregory G. McGee

“New York’s Once and Future (Unremarkable) Woodland Wildflowers.” SUNY-ESF “Naturally New York” Program, 10/15/09, ~30 in attendance

“Factors Influencing Native Forest Wildflower Diversity.” SUNY-Delhi Dept. of Liberal Arts and Sciences Lecture Series, 11/24/09, ~20 in attendance

Spring Wildflowers, public walk, Guppy Farm Conservation Area, Skaneateles, 5/1/10, 17 in attendance.

Tsutomu Nakatsugawa

Invited to give a lecture (30 minutes talk + 10 minutes Q&A) “Living our hazardous heritage – awareness of environmental carcinogens” @ 5th Annual Upstate Cancer Symposium, Oncenter, Syracuse, NY, Oct. 16, 2009

Invited to give a 1-hour talk “Hazardous heritage; awareness of environmental carcinogens” @ a local American Cancer Society gathering “Man to Man”, May 27, 2010

William F. Porter

Porter, W. Science, sustainability and Roosevelt’s doctrine of conservation. Keynote address: ESF Spotlight on Research, April 2010, 50 people.

Porter, W. The great experiment in conservation. Creekside Books. Skaneateles, NY, August, 2009, 20 people.

Skip, M. Habitat and fall-winter survival of ruffed grouse Montezuma Bird of the Month Series—Montezuma Audubon Center, Savannah, NY. November 8, 2009, 40 people.

William A. Powell

Going Green, The American chestnut, interview with Terry Ettinger (<http://www.esf.edu/center/goinggreen/chestnut.htm>) Sumer 2009

Going Green, Saving Heritage trees, interview with Terry Ettinger (<http://www.esf.edu/center/goinggreen/savingtrees.htm>) Fall Semester, 2009.

D. Andrew Saunders

Chittenango State Park. August 14, 2009. 25

Habitat Gardening in CNY. March 28, 2010. 35

Go Green Festival . April 24, 2010. 100

Kimberly L. Schulz

Speaker at Lake Ontario Stakeholders’ Workshop in Kingston Ontario, Canada sponsored by the Great Lakes Fisheries Commission, Cornell Biological Field Station, Ontario Ministry of Natural Resources, and N.Y. Sea Grant entitled “The Future of the Lake Ontario Ecosystem: Is there a Crystal Ball?” Invited topic, “Nutrients, Algae, and Zooplankton and Food Quality - new insights on

balancing nutrition and ecosystem health in the Lake Ontario Food web.” 18 July 2009.
Approximately 60 attendees.

Cornell Department of Natural Resources Seminar, “Nutrition and food webs: Diet determination, food quantity, food quality, and phylogenetic constraints.” 8 September 2009. Approximately 40 attendees.

“It’s element-ary, my dear – human alteration of N:P:Si entering aquatic ecosystems and its unexpected food web effects.” SUNY-ESF Alumni Day, Syracuse, NY 3 October 2009. 2 attendees.

Guest Presenter at the Cortland-Onondaga Federation of Kettle Lake Associations, Inc. (COFOKLA).

Topic, “Lake Ecology, Eutrophication and Algae” 19 October 2009. Approximately 15-20 attendees.

“Tails of two invaders: A continuing quest to determine the roles of two spiny predatory invertebrates in aquatic food webs” Ithaca College Environmental Science and Biology departmental seminar, 6 November 2009.

Speaker for Naturally New York Program run by Professor Andy Saunders of the Environmental Interpretation Program in the Department of Environmental and Forest Biology at SUNY ESF.

Topic, “The Secret Lives of Lakes and Ponds: The diversity of tiny creatures and why it can matter.” 1 April 2010. Approximately 15 attendees.

Steve A. Teale

“Alien Invasions” Presentation to the Fabius Historical Society (open to public), 20 Sept., 2009, Fabius, NY

J. Scott Turner

The Termite Cube (exhibition). Festival. The Art of Being an Insect. Royal Festival Hall. Southbank Centre, London, UK. <http://festival.org/> 5-8 September 2009. Attendance about 100,000.

Numerous informal presentations at Festival. The Art of Being an Insect. Royal Festival Hall. Southbank Centre, London, UK. <http://festival.org/> 5-8 September 2009. Typically 30 people at any event.

The Air Conditioned Termite Nest Revisited. Presentation at Festival. The Art of Being an Insect. Royal Festival Hall. Southbank Centre, London, UK. <http://festival.org/> 5 September 2009. App 200 people
Beyond biomimicry: What termites can tell us about realizing the living building. Namibia Institute of Architecture, Windhoek, Namibia. 31 May 2009.

Appendix L. Miscellaneous Publications and Outreach Activities and Materials

Lawrence P. Abrahamson

Willow Economic Model Fact Sheet - authored by T. Buchholz, T. A. Volk, L. P. Abrahamson, and L. B. Smart
 Fact sheet: "EcoWillow v 1.0 (Beta) – An Economic Analysis Tool for Willow Short-Rotation Coppice for Wood Chip Production" - published 5/2008 with a new version in 2009-10

Danilo D. Fernando

Fernando DD. 2009. Conifer Reproductive Biology: Invited Book Review. *International Forestry Review* 11(4):534-535.

Fernando DD. 2010. Conifer Reproductive Biology: Invited Book Review. *Plant Science Bulletin* 56(1): 32-33.

Melissa K. Fierke

M.C. Whitmore, M.K. Fierke. 2010. Emerald ash borer is now in New York: An update. *The New York Forest Owner*. 48:14-15.

Jacqueline L. Frair

J. Frair, E. Merrill, J. Allen, and M. Boyce. 2010 (Spring). Experience counts: improving translocation success of elk in Alberta. *Fair Chase*, the official publication of the Boone and Crockett Club, Missoula, MT.

Thomas R. Horton

Horton TR (2010) Book Review: *Phaeocollybia of Pacific Northwest North America*, by Lorelei L. Norvell, Ronald L. Exeter. *Inoculum* 61(1): 16.

Karin E. Limburg

Costanza, R., and K. Limburg. 2010. The Ecological Economics Review: an introduction to the inaugural issue. *Ecological Economics Review* 1 :vii-viii.

Gren, I.-M., and K.E. Limburg. 2010 (in press). Nutrient recycling and waste treatment from estuarine and coastal systems. To appear in *Ecological Economics of Estuaries and Coasts* (M. van den Belt and R. Costanza, editors).

Limburg, K.E. 2010. The Hudson River watershed: source to sink in eight days. *The Spruce Moose*, Spring 2010.

Breitburg, D., L. Davias, K. Limburg, and D. Swaney. 2010. Linking Nutrients, Hypoxia, Fisheries, and Fishes: Report from a Workshop. *LOICZ INPRINT* newsletter.

Myron J. Mitchell

Driscoll, C.T., K.M. Driscoll, M.J. Mitchell, D.J. Raynal, K. Roy. Human Impacts from Afar. 2009.

Pp.114-127. In: W.P. Porter, R.S. Whaley & J. D. Erickson (eds.). *Light from an Adirondack Prism: The Great Experiment in Conservation* Syracuse University Press, Syracuse, NY.

Roy A. Norton

Heethoff, M., Norton, R. A., Scheu, S., Maraun, M. 2009. Parthenogenesis in oribatid mites (Acari, Oribatida). Pp. 241-257 (Chapter 12) in: Schön, I., Martens, K. and van Dijk, P. (eds.), *Lost Sex - The Evolutionary Biology of Parthenogenesis*. Springer.

William A. Powell

Article on transgenic trees in the *Daily Orange*.

D. Andrew Saunders

Science Trails Connecting Classrooms to Nature. Robert Kiley, Anne Schlesinger and D. Andrew Saunders;

Exploring Morningside Nature Science Trail: Multidisciplinary Activities. Anne Schlesinger and D. Andrew Saunders

Kimberly L. Schulz

Schulz, K.L. 2009. Chemically-induced defenses in phytoplankton. In D. Müller-Schwartz (editor) Hands-On Chemical Ecology Exercises: Simple Field and Laboratory Exercises. Springer. pp. 85-90.

J. Scott Turner

The following are video productions created for EFB 200 Physics of Life.

Production videos		
<i>Succulents and Flow</i>	<i>The Reynolds Number and Flow Around Objects</i>	<i>The Maple Samara</i>
<i>Fireworks</i>	<i>The Falling Bodies Experiment</i>	<i>The Frill is Gone</i>
<i>The Structure of Natural Sounds</i>		
Full length lectures		
<i>Thermodynamics of Gaia</i>		
Video lectures		
<i>The Radiant Energy Budget</i>	<i>Waves</i>	<i>Light</i>
<i>The Reynolds Number</i>	<i>Density of Fluids</i>	<i>Solid and Fluid Materials</i>
<i>Flexural Stiffness</i>	<i>Fun with the Young's Modulus</i>	<i>Stress and Strain</i>
<i>Unit Conversions</i>	<i>Cantilevers in Animals</i>	<i>Rotational Motion</i>
<i>Moments of Inertia</i>	<i>The Maple Samara (2)</i>	<i>Cantilevers</i>
<i>Mass, Weight and Pressure</i>	<i>Forces Acting on Solids</i>	<i>Torque and Angular Momentum</i>
<i>Energy and Work</i>	<i>Center of Mass</i>	<i>Force, Work and Power</i>
<i>Units and Dimensions</i>	<i>Units as an Experimental Tool</i>	<i>Conservation of Momentum</i>
<i>SI Units</i>	<i>Newton's Laws of Motion</i>	<i>History of Unit Systems</i>

**Appendix M. Theses and Dissertations completed
(i.e., all requirements met and degree awarded)**

M.S. Theses

- Baier, Kathleen. 2009. Interspecific suppressive subtractive hybridization identifies a differentially expressed Chinese chestnut (*Castanea mollissima*) laccase-like gene (W. Powell).
- Boser, Christina. 2009. Diet and hunting behavior of coyotes in agricultural-forest landscapes of New York State (J. Frair).
- Brown, Brandeis. 2010. Using field experimentation to assess potential colonization of benthic macroinvertebrates in a polluted lake undergoing remediation (N. Ringler and K. Schulz).
- Eager, Patrick. 2010. An analysis of the *Sirex noctilio* Fabricus (Hymenoptera: Siricidae) – parasitoid complex in New York State (M. Fierke).
- Galante, Tera. 2009. Factors influencing dispersal of ectomycorrhizal fungi and establishment of ectomycorrhizae and host *Pinus contorta* seedlings in a primary successional ecosystem (T. Horton).
- Giencke, Lisa. 2010. Spatiotemporal dynamics of an Adirondack forest (M. Dovciak).
- Goldmann, Lauren. 2009. Position specificity in Laboulbeniales (A. Weir).
- Gross, Shana. 2009. Evaluation of Moss as a potential restoration tool along roadsides in the Sierra Nevada Mountains (R. Kimmerer).
- Haase, Catherine G. 2010. Characterizing thermal environments for moose (*Alces alces*) in the Adirondack Mountains of NY (B. Underwood).
- Hoven, Brian. 2009. Effect of fire interval in a managed pine barrens ecosystem on host plant quality and natural enemies of the barrens buck moth, *Hemileuca maia* (D. Parry).
- Letkowsky, Steve. 2009. Beech bark disease: The relationship between scale infestation and *Neonectria* formation in an aftermath forest (J.D. Castello and S. A. Teale).
- McEathron, Kimberly. 2009. Tree species and acid-base characteristics of Grass Pond Watershed in the Adirondack Mountains of New York (M. Mitchell).
- Meyer, Brienne. 2009. Heavy metal uptake in Adirondack mushrooms (A. Weir).
- Pitcher, Kathleen. 2009. Population genetic analyses of the ectomycorrhizal basidiomycete *Suillus spraguei* (syn. *S. pictus*) (A. Kretzer).
- Quinn, Sam. 2009. Factors influencing distribution of the eastern hellbender in the northern segment of its range (J. Gibbs)
- Skip, Megan M. 2010. Fall-winter survival, habitat, and long-term population change of ruffed grouse in New York State (W. Porter).
- Smith, Matthew C. 2009. White-tailed deer migration in the Adirondack Park: mechanisms and implications for spread of infectious disease (W. Porter)
- Tyszko, Steven. 2010. Assessment of black bass populations in a perturbed Lake, Onondaga Lake, New York (N. Ringler).
- Whritenour, Cheryl. 2010. Ecological stoichiometry of the salt marsh: Si:N and effects on the lower food web (K. Schulz).

Ph.D. Dissertations

- Dechen Quinn, Amy. 2010. Influences of movement behavior and space use in evaluating disease risk among white-tailed deer in central New York (W. Porter).
- Scanga, Sara E. 2009. Population ecology of the rare wetland plant *Trollius laxus* (Ranunculaceae) (D. Leopold).
- Serapiglia, Michelle. 2009. Variation in lignocellulosic biomass composition in segregating populations of shrub willow (*Salix* spp.) (L. Smart and A. Stipanovic).
- Sopacua, Ansye. 2010. Watershed characterization, management and policy implications: Towards a resilient human-ecosystem community with a case study from Krueng Aceh Watershed, Aceh, Indonesia (K. Limburg).

- Wickham, Jacob. 2009. Semiochemicals of the Asian Longhorned Beetle, *Anoplophora glabripennis* (Motschulsky) (Coleoptera: Cerambycidae) (S. Teale).
- Williams, David M. 2010. Scales of movement and contact structure of white-tailed deer in central New York (W. Porter).

Appendix N. MPS students who completed degree requirements

Bilello, Jacqueline (R. Kimmerer)
Cronk, Brittany (W. Powell)
Hughes, Jarrod (J. Farrell).
Knowlden, Samantha (T. Horton)
Ormerod, Kendra (A. Saunders)
Schlesinger, Anne (A. Saunders)

Appendix O. Faculty and Student Awards

FACULTY – REGIONAL, NATIONAL AND INTERNATIONAL RECOGNITION

Guy A. Baldassarre: elected to Fellow status in the American Ornithologists Union,
 Guy A. Baldassarre: Outstanding Alumnus Award from the Department of Wildlife Ecology, University of Maine
 Guy A. Baldassarre: Outdoor Life Magazine's "Outdoor 25" award (given annually to 25 people influencing hunting and fishing)
 Donald J. Leopold: George L. Good Gold Medal of Horticulture Award
 Stacy McNulty and Robin Kimmerer: 2009 Organization of Biological Field Stations Human Diversity Award

GRADUATE STUDENTS – DEPARTMENT AND COLLEGE RECOGNITION

Meredith Atwood	Edna Bailey Sussman Foundation Fellowship
Keith Bowman	NSF GK12 Fellowship (award determined by campus committee)
Shannon Buckley	NSF GK12 Fellowship (award determined by campus committee)
Katherine D'Amico	ESF Graduate Travel Grant Award
Katherine D'Amico	Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
	Robert A. Zabel Award
Stephanie Figary	Edna Bailey Sussman Foundation Fellowship
Jacob Gillette	Edna Bailey Sussman Foundation Fellowship
Lauren Goldmann	Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Suzanne Greenlawn	ESF Graduate Travel Grant Award
Daniel Gurdak	Maurice and Annette Alexander Wetlands Research Award
Daniel Gurdak	NSF GK12 Fellowship (award determined by campus committee)
Catherine Haase	ESF Graduate Travel Grant Award
Sara Hansen	Edna Bailey Sussman Foundation Fellowship
Warren Hellman	Edna Bailey Sussman Foundation Fellowship
Warren Hellman	Leroy C. Stegeman Award
Elizabeth Hunter	Pack Graduate Student Research Travel Award
Megan Kirschgessner	Edna Bailey Sussman Foundation Fellowship
Stephanie Kroll	ESF Graduate Travel Grant Award
Carrie Rose Levine	Edna Bailey Sussman Foundation Fellowship
Courtney LaMere	Edna Bailey Sussman Foundation Fellowship
Abigail Larkin	Edna Bailey Sussman Foundation Fellowship
Abigail Larkin	Pack Graduate Student Research Travel Award
Michelle Peach Lang	Edna Bailey Sussman Foundation Fellowship
Michelle Peach Lang	Betty Moore Chamberlaine Memorial Award
Catherine Landis	NSF GK12 Fellowship (award determined by campus committee)
Portia Osborne	Edna Bailey Sussman Foundation Fellowship
Christina Quinn	Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Jennifer Raino	Izen Ratzlaff Award for Exemplary Achievement in Natural History Interpretation
Brooke Reeve	ESF Graduate Travel Grant Award
Yazmin Rivera	Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Arnold Salazar	Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Sara Scanga	EFB Outstanding Doctoral Student
Anna Stewart	Leroy C. Stegeman Award
Samuel Tortellot	Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Jason Townsend	Robert L. Burgess Graduate Scholarship in Ecology
Sara Turner	ESF Graduate Travel Grant Award
Madeline Turnquist	1 st place, SUNY ESF Spotlight on Research poster session
Scott Warsen	Dr. Samuel Grober '38 Graduate Fellowship
Bo Zhang	Josiah L. Lowe-Hugh E. Wilcox Graduate Scholarship
Chengjun Zhu	ESF Graduate Travel Grant Award

GRADUATE STUDENTS – REGIONAL AND NATIONAL RECOGNITION

Meredith Atwood	Society of Wetland Scientist student grant
Meredith Atwood	Central New York Air and Waste Management Association scholarship
Keith Bowman	Alumni Association Memorial Scholarship (Graduate)
Matthew Distler	US EPA GRO Graduate Fellowship (renewal)
Anthony Eallonardo	US EPA STAR Graduate Fellowship (renewal)
Pat Eager	Second Place, Best Oral Presentation, Phylogenetics I Division, Entomological Society of American annual meeting
Daniel Gurdak	Sigma Xi Grant-in-Aid of Research
Catherine Haase	Travel Grant to North American Moose conference
Sara Hansen	American Wildlife Conservation Foundation grant
Will Helenbrook	Sigma Xi Grant-in-Aid of Research
Robin Holevinski	Outstanding Graduate Student Award, NYS Chapter of The Wildlife Society
Robin Holevinski	Best Student Poster Award, NYS Chapter of The Wildlife Society annual meeting
Jaime Jones	Travel grant, The Wetland Foundation
Megan Kirchgessner	Dorothy Bertine Internship from Edna Bailey Sussman Fund
Kapil Mandrekar	Sigma Xi Grant-in-Aid of Research
Rita Monteiro	NOAA National Estuarine Research Reserve Graduate Fellowship (renewal)
Christopher Nack	NOAA National Estuarine Research Reserve Graduate Fellowship (new)
Kathleen Pitcher	Best Poster Award, Mycological Society of America annual meeting
Patrick Raney	National Geographic Young Explorer's grant
Brooke Reeve	Sigma Xi Grant-in-Aid of Research
Yazmin Rivera	Best Poster Award (co-author), Mycological Society of America annual meeting
Yazmin Rivera	Mycological Society of American Mentor Student Travel Award
Sara Scanga	US EPA STAR Graduate Fellowship (renewal)
Katherina Bendz Searing	American Museum of Natural History Theodore Roosevelt Memorial Grant
Caitlin Snyder	American Museum of Natural History Theodore Roosevelt Memorial Grant
Caitlin Snyder	2010 Walker Fellowship from SUNY Potsdam Center for Lifelong Education and Recreation
Anna Stewart	Ecological Society of America's Outstanding Undergraduate Student Research in Ecology
Anna Stewart	Inter-American Institute for Global Change Research, Knowledge Innovation at the Science-Policy Interface Colloquium participant
Anna Stewart	Sigma Xi Grant-in-Aid of Research
Anna Stewart	PLACA (Program in Latin America and the Carribean) summer research grant
Anna Stewart	Fulbright IIE Fellowship to Ecuador
Jason Townsend	Wilson Ornithological Society's Lynds Jones Award for best poster at annual meeting
Jason Townsend	US EPA STAR Graduate Fellowship (renewal)
Cheryl Whritenour	Garden Club of America Wetlands Award
Cheryl Whritenour	NOAA National Estuarine Research Reserve Graduate Fellowship (new)
Juan Carlos Alvarez Yepiz	PLACA (Program in Latin America and the Carribean) summer research grant
Chengjun Zhu	American Society of Microbiology Travel Grant award

UNDERGRADUATE STUDENTS – DEPARTMENT, COLLEGE, AND SUNY RECOGNITION

Rachel Abbott	Outstanding Undergraduate Teaching Assistant
David Andrews	Cranberry Lake Biological Station Undergraduate Fellowship
Lynne Beaty	Distinguished Biology Scholar Award – Wildlife Science
Lynne Beaty	SUNY Chancellor's Award for Student Excellence
Lynne Beaty	1 st place, SUNY ESF Spotlight on Research poster session
Lynne Beaty	Marine Resources Population Dynamics Workshop Invitee
Lynne Beaty	EFB's Departmental Scholar
Anna Conrad	Distinguished Biology Scholar Award – All Majors
Anna Conrad	Distinguished Biology Scholar Award – Environmental Biology
Andrew Cortese	Cranberry Lake Biological Station Undergraduate Fellowship
Sean Fagan	Savel B. Silverborg Memorial Award
Amy Fox	Patricia D. and Jeff J. Morrell Scholarship
Nicholas Griffin	Cranberry Lake Biological Station Undergraduate Fellowship
Erik Gustafson	Distinguished Biology Scholar Award – Forest Health
James Johnson	Joseph and Ruth Hasenstab Memorial Scholarship
Kelly Brie Klingler	Distinguished Biology Scholar Award – Conservation Biology
Kelly Brie Klingler	Alumni Association Memorial Scholarship (Senior class)
Kelly Brie Klingler	SUNY Chancellor's Award for Student Excellence
Meng Lin	2 nd place, SUNY ESF Spotlight on Research poster session
Cara Love	Ralph T. King Memorial Award
Katherine McKissick	Alumni Association Memorial Scholarship (Soph. class) Honorable Mention
Katelynn Overton	Distinguished Biology Scholar Award – Natural History & Interpretation
George Prounis	3 rd place, SUNY ESF Spotlight on Research poster session
Lee Scriber	Distinguished Biology Scholar Award – Biotechnology
Nathan Setter	Distinguished Biology Scholar Award – Aquatic & Fisheries Science
Andrea Westerband	Phyllis Roskin Memorial Award

Honors Program Medal

Kelly Brie Klingler, *Paleoecological investigation to compare imperiled inland salt marshes in Michigan and New York* (Dr. Donald J. Leopold, Honors Advisor)

UNDERGRADUATE STUDENTS – REGIONAL & NATIONAL RECOGNITION

John Vanek	Outstanding Undergraduate Student award, NYS Chapter of The Wildlife Society
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