

InsideESF

Winter 2010

The Magazine of the SUNY College of Environmental Science and Forestry



Meet the Mascot

The newest member of the ESF community met the public as the spring semester got under way. See Page 4.



The Mighty Oaks' Adam Lavelle ERFEG '10 goes up for the ball in a game against a team from SUNY Cortland this past fall. The men's team, which tied Cortland 1-1, was undefeated in the regular season, losing only in the Collegiate Club Soccer League finals. For more about the ESF athletics program, see Page 4.

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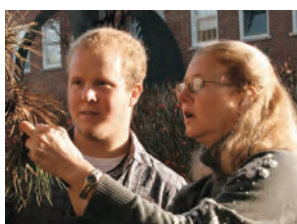
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What do you get when you combine a former Marine and a three-wheeled bicycle? Greener mail delivery at ESF.



Photograph | Kallistia Ann Giermek

Ten ESF students and one faculty member spent a week of their winter break in New Orleans helping the victims of Hurricane Katrina put their lives and neighborhoods back together. One group of students – Becca Osborne, Emily Wilmott, Felicia Culverwell, Chelsea Geyer, Jamila Slade, Tivona Renoni, and Tia Giermek – made the trip with Operation Southern Comfort, a Central New York organization that has taken more than 25 trips to Louisiana and Mississippi to help rebuild homes and a museum, tutor school children, and recently, plant trees. Another group of 15 volunteers made the trip with the Protestant Campus Ministry at Syracuse University and ESF. ESF students in that group were Samantha Brooks, Erik Jacobsen, and Nathan Roser. They were accompanied by ESF Associate Professor Douglas Daley. You can read more about the trip and watch a video online at www.esf.edu/communications/view.asp?newsID=324.

InsideESF

SUNY College of Environmental Science and Forestry

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LETTERS TO THE EDITOR

We invite letters to the editor.* You can email your comments to InsideESF@esf.edu or mail them to us at:

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*Inside ESF reserves the right to edit letters for content or length.



P i led Paper

A Word about the Past – and Future – of ESF

In just over a year — on July 26, 2011 — ESF will mark the completion of its first century as a leader in environmental education.

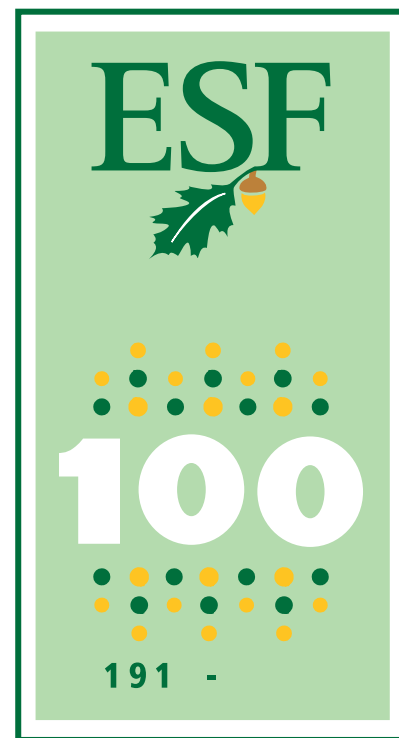
Plans for the College's centennial have been underway for several months, with a steering committee representing the administration, faculty, staff and students discussing ways for the College to celebrate ESF's rich history while educating the broader public about the College, increasing its visibility and providing opportunities to help support the important work of the College. The ESF Centennial Steering Committee co-chairs are Robert French, vice president for enrollment management and marketing, and Betsy Elkins, director of college libraries, emeritus.

The centennial celebration is being planned around the theme, "Environmental Leadership for a Second Century." This theme describes the core qualities of ESF and its history, and it highlights the important role the College will continue to play in the future in matters involving education and the environment.

A slate of activities will be planned throughout 2011. They will be formal and casual, academic and social, on campus and at alumni gatherings around the globe. They will include students and alumni and their families, current and former faculty and staff members, neighbors, friends and partners.

We invite the readers of Inside ESF to follow the College's centennial plans online at www.esf.edu/centennial. We also invite you to send us a brief note about your most memorable ESF experience, influential professor or unforgettable friend. If you simply have a thought about what makes the SUNY College of Environmental Science and Forestry unique, please share it with us. We'll post some of the stories online during the centennial year and consider others for publication in Inside ESF. You can email your thoughts to insideesf@esf.edu or mail them to: Editor, Inside ESF, SUNY-ESF, 122 Bray Hall Syracuse, N.Y. 13210

We look forward to hearing your ideas.
Claire B. Dunn, Editor



N.Y. Gov. David Paterson and Syracuse Mayor Stephanie Miner

N.Y. governor calls ESF 'catalyst of the green economy'

N.Y. Gov. David Paterson chose ESF in January as the venue for an announcement about a major energy initiative through which some 100 megawatts of solar photovoltaic systems will be installed at public buildings throughout the state.

Paterson said the photovoltaic arrays will be installed in schools and government buildings by 2014, increasing by five times the amount of solar energy currently produced in the state.

"ESF is the catalyst of the green economy here in Central New York," the governor said. "Today we are actually going to make history as we embark on an unprecedented clean-energy initiative."

Richard Kessel, president and chief executive officer of the New York Power Authority, said work on the project should begin by the end of the year. Kessel said the initiative will help protect the environment and create jobs and position New York as a leader in the development of sustainable and renewable energy sources.

Dozens of elected officials and business and civic leaders gathered in ESF's Bray Hall rotunda for the announcement. ■

Energy secretary tells students, staff: 'Believe in what you are doing'

U.S. Secretary of Energy Steven Chu and Congressman Daniel B. Maffei (NY- 25) visited ESF in October for a tour of the College's sustainable energy facilities.

Chu, who is also a Nobel laureate, and Maffei met with ESF President Cornelius B. Murphy, Jr., and other dignitaries for a tour of the College's pilot biorefinery plant, where work is being done to develop the use of wood as a source of sustainable energy.

"The people I've seen at this university should believe in what you are doing because it's the right thing," Chu said during a news conference in the Bray Hall rotunda. "The enthusiasm of the faculty and students is leading the charge to new technology for the environment."

Chu was co-winner of the Nobel Prize for Physics in 1997. He has devoted his recent scientific career to the search for new solutions to energy challenges and stopping global climate change.

He jokingly acknowledged the news, reported earlier in the day, that President Barack Obama had won the Nobel Peace Prize.

"It's great news," Chu said. "I get to teach him the secret handshake." ■



U.S. Secretary of Energy Steven Chu

Fish populations reveal ‘shocking’ declines

Populations of numerous migratory fish species in the North Atlantic have declined by more than 95 percent, threatening not only food supplies and economic systems, but also the way humans perceive the health of the planet’s ecosystems, according to a paper published in December in the journal *BioScience*.

“It’s shocking,” said Dr. Karin Limburg, a fisheries ecologist at ESF, who is the paper’s lead author.

Limburg and her co-author, Dr. John Waldman of Queens College of the City University of New York, report that a complex combination of habitat loss caused largely by the construction of dams that prevent fish access to traditional spawning areas, urban sprawl, overfishing, pollution and climate change have led to the precipitous decline. Compounding the problem, they say, is the evolving knowledge of the humans who make decisions about how natural resources are managed.

“We’re looking at shifting baselines here,” Limburg said. “Every human generation gains knowledge about the world and establishes a baseline for what’s normal. But there is no institutional memory about how things used to be.”

As an example, Limburg pointed to a graph that depicts the status of the American shad between 1887 and 1997.

It indicates the species was more than ten times as plentiful during most of the early years of that period as it was during the middle of the 20th century. But a second chart shows that the levels in the 1880s were just 10 percent of what they had been 50 years earlier.

In their findings, the authors wrote: “Loss of historical baselines contributes to marginalization of the species, as social customs relating to bygone (collapsed) fisheries also perish, and ecosystems unravel at rates that go unnoticed.”

“We want to put this in the context

of the new way many ecologists are now thinking, to say that ecosystems have a value by themselves,” Limburg said.

In particular, she said, the study highlights the interwoven relationship between marine and freshwater ecosystems. The two are linked in the North Atlantic by the 24 species of fish whose populations were analyzed; they are migratory fish that move between freshwater and saltwater during the course of their lives. “Sadly, the links are largely broken today because of the enormity of declines in abundances,” she said. ■



Photograph | Courtesy of Karin Limburg

Wind turbine to provide power at Heiberg Forest

ESF began testing a new “homeowner-sized” wind turbine to provide power for remote classrooms at the regional campus at Heiberg Forest in Tully, N.Y.

As part of ESF’s commitment to service learning, a group of students analyzed various locations for a wind turbine, and their work helped locate the turbine at Heiberg. Another student worked to assemble and erect the turbine. With testing complete, plans call for the turbine to be connected with National Grid and begin producing electrical power.

The College has introduced a minor in renewable energy as part of its environmental science programs, and the turbine will be integrated into the program.

The turbine will augment the technologies ESF has already adopted in an effort to make the College’s

practices more sustainable: a fuel cell, photovoltaic arrays, a green roof and campus biodiesel production. The Endurance S-250 grid-tie turbine with a peak power rating of 5 kilowatts has been installed at Heiberg Forest on a 126-foot monopole. The system is expected to generate 6,000 to 9,000 kwh per year, based on the 12 mph average wind at the site. The turbine will provide a significant portion of the electricity required to power the two classrooms there and is similar to a turbine that would meet the needs of a rural residence.

In addition, the system will take advantage of New York state’s net metering rules so any power generated in excess of the classroom needs during parts of the year will be credited to other periods of the year when usage exceeds the turbine production.

The turbine is another step in ESF’s commitment to achieve a carbon neutral campus by 2015. ■

Unwelcome newcomer poses threat to state's ash trees

The destructive emerald ash borer, which was found earlier this year in ash trees near Randolph, N.Y., 60 miles south of Buffalo, has the potential to cause severe damage, both ecologically and economically, throughout the state, according to an ESF entomologist.

"This introduced wood-boring beetle has the potential to cause severe economic and ecological damage in New York forests as it has been associated with 100 percent ash mortality near Detroit, Mich., where it was first found in 2002," said Dr. Melissa Fierke, assistant professor of forest entomology in ESF's Department of Environmental and Forest Biology.

"The economic impacts have potential to be tremendous in urban areas where green ash has been widely planted as street trees," Fierke said. "Specialty industries that rely heavily on ash, such as manufacturers of baseball bats, ash furniture and tool handles, and related horticultural endeavors could be severely impacted by quarantine restrictions and the eventual complete loss of ash."

Ecological effects of the emerald ash borer will likely be the greatest in areas where ash is most abundant, such as along streams and rivers dominated by green ash, and in northern wetlands, where black ash is common. Upland forests will also be affected because white ash can be an important component of these forests.

New York state Agriculture Commissioner Patrick Hooker and state Department of Environmental Conservation Commissioner Pete Grannis announced early this past summer that an emerald ash borer infestation had been found in the Cattaraugus County community of Randolph. It is the first such discovery in the state. ■

The destructive emerald ash borer leaves a pattern of squiggly lines behind when they infest a tree.

Photograph | Art Wagner, USDA APHIS PPQ, Bugwood.org



Oakie hangs out with some of the many students who cheered the mascot's first public appearance on campus.

ESF Launches Intercollegiate Sports; Mascot 'Oakie' Debuts on Campus

Oakie the Acorn, the official mascot of the ESF Mighty Oaks athletic program, debuted on campus this winter, meeting students and members of the faculty and staff one day and dropping in on an alumni gathering the next day.

Oakie, who was chosen as the mascot by the ESF student body, will represent ESF's growing athletic program.

The College's soccer, golf, cross country and timber sports teams compete as the Mighty Oaks, a name linked to both ESF's deep roots in the field of forestry and one of the most identifiable landmarks on the ESF campus: the Robin Hood Oak. The stately oak was the first tree to be listed on the National Register of Historic Trees in the United States. The tree grew from an acorn obtained by an ESF professor who brought it back from England's Sherwood Forest around 1926. According to legend, the Major Oak sheltered Robin Hood and his men from their enemies.

Oakie met the public as ESF became an official member of the National Association of Intercollegiate Athletics (NAIA), marking the College's first participation in officially sanctioned intercollegiate sports.

"We are pleased to complete the establishment of ESF's first official athletic program," said ESF President Cornelius B. Murphy, Jr. "This is an important step in the expansion of opportunities for our students."

NAIA, headquartered in Kansas City, Mo., is the governing body for athletic programs at nearly 300 colleges and universities throughout the United States and Canada. Many NAIA members are smaller colleges like ESF. NAIA membership provides the guidance and regulatory framework needed to move the College's athletic programs from a club sport level to an intercollegiate schedule of competition beginning in the fall of 2010.

ESF currently has teams in men's and women's soccer, men's and women's cross country, and golf. In addition, the longstanding Woodsmen's Team participates in traditional timber sports. The College is developing a five-year plan for athletics that will likely lead to additional teams being added in the next few years. ■



'Take us where we need to go,' president tells newest alumni

More than 100 new ESF graduates and two alumni were honored during the College's annual December Convocation.

Some 115 degrees were awarded, including 10 Doctors of Philosophy during the ceremony in Hendricks Chapel on the Syracuse University campus. The College also presented Graduate of Distinction awards to Dr. Robert Lenz '56 and Joe Martens '81.

President Cornelius B. Murphy, Jr., pointed out the timeliness of the graduates' first day as ESF alumni: It was also the fifth day of the U.N. climate conference in Copenhagen. The international news coming out of Copenhagen underscores the need for the world's future leaders to understand the challenges that face the planet in the areas of climate change, biodiversity preservation, and access to natural resources, Murphy said.

"You graduates need to take us where we need to go," he said. "There needs to be a green revolution. We honor you and we ask for your future leadership."

Martens (MS '81, resources management), who is president of the Open Space Institute (OSI), urged the graduates to get involved in volunteer work, seek out internships and expand their experience through travel so they can learn to apply their education to the real world.

"Your education at ESF has given you the tools. Now it's up to you to build something," he told the graduates.

Lenz (Ph.D. '56, chemistry), a pioneer in the field of polymer chemistry, recalled his own years at the college, saying, "There were great educators, there were great professors, there were great researchers."

Faces at Convocation: top left, Courtney Gomola EFB, Cara Love EFB and Lindsay Perez EFB; top right, ESF Director of Alumni Relations Justin Culkowski and Joe Martens MS '81; above left, Charles Angst FNRM gets ready for Convocation. Center, Dr. Robert Lenz Ph.D. '56; above right, graduate students Zihai Ma FNRM, and his wife, Wenhua Zhang ERFEG.

"The education that you have gotten here prepares you for anything you want to do," he said. "You got a world-class education."

At the December Soiree the same evening, Murphy presented the President's Award for Community Service to Karen Bergamo Moore, special projects coordinator in the Office of Communications; student Erica Brown ES '11; and the College chapter of Habitat for Humanity.

Moore is in charge of planning ESF's presence at numerous public events, all of which are staffed by volunteers from among the student body, faculty and staff. Those events include the New York State Fair and the Syracuse St. Patrick's Parade, and business-oriented events such as the Greater Syracuse Chamber Show.

Moore joined the College staff in 2001. She earned her bachelor's degree from the SUNY College at Oswego.

Brown, a native of Brookhaven, N.Y., is a frequent volunteer with the New York State Office of Parks, Recreation and Historic Preservation, helping with cleanup and invasive species removal projects. She is co-chair of the campus Insomniacs group, which provides alcohol-free late-night programming, and will be one of two students in charge of the Orientation Leaders in the fall of 2010.

Students in the Habitat for Humanity group are at work constructing their fourth home for a family that needs affordable housing.

525 New Students – A Record

ESF welcomed 287 freshmen and 238 transfer students to campus this fall. The combined total of 525 represents ESF's largest entering class ever.

The College received a record number of applications for admission this year and accepted only 43 percent of its freshman applicants and 39 percent of its transfer applicants. Those are among the lowest acceptance rates in SUNY this year.

"As a result, the entering class is the best qualified class we have enrolled, setting new records for high school grades (a 92 percent average), test scores and class rank," said Dr. Robert C. French, vice president for enrollment management and marketing.

Said French: "It is also a diverse class, with 20 percent of the freshmen

coming from outside New York state, and 11 percent representing minority populations. It is the first freshman class in ESF history to enroll more women (53 percent) than men (47 percent)."

The new students were able to make many interpersonal connections prior to their arrival at ESF through a social networking site developed specifically for accepted students. The site encouraged them to connect with potential roommates and friends beginning last March.

"In fact, we are confident that this is ESF's most 'connected' group of new students ever," French said. "And we believe that this will make their transition to college much easier than it may have been for previous classes." ■



ESF Ranks 17th on U.S. News 'Great Schools, Great Prices' list

For the ninth year in a row, ESF earned a place among the top universities in America, as ranked by U.S. News & World Report.

In the "Great Schools, Great Prices" category of the 2010 edition of America's Best Colleges, ESF is ranked 17th. The formula used in that category relates a school's academic quality to the net cost of attendance for a student who receives the average level of need-based financial aid. The magazine states: "The higher the quality of the program and the lower the cost, the better the deal."

ESF is the only SUNY institution on the list.

ESF is listed at 37 among the top public national universities, tied with SUNY Binghamton. In the Best National Universities category, which includes both public

and private national universities, ESF is ranked at 80, tied with SUNY Binghamton and Northeastern University. ESF and Binghamton are the highest-ranked SUNY institutions on the list. The national universities group consists of the 262 universities that offer a wide range of undergraduate majors along with master's and doctoral degrees.

"As an institution, we are extraordinarily pleased at the recognition," said ESF President Cornelius B. Murphy, Jr. "The rankings are a validation of our values, our philosophy toward education and the wonderful students and faculty that we have."

ESF earned praise from other institutions this academic year:

ESF earned a place on the 2009 Sierra Club list of "Cool Schools," earning a rating that puts the College in a tie for 33rd place. The Sierra Club surveyed hundreds of colleges and universities to gather information about campus environmental practices, green initiatives and quality of sustainability-oriented education. The information was used to rank 135 colleges and universities.

ESF is the highest-rated SUNY campus on the Sierra Club list this year. The list also includes SUNY Binghamton and SUNY Albany.

ESF is listed among the 10 best college environmental programs in the nation by Treehugger.com, a Web site devoted to sustainability and environmental news. Treehugger states the colleges on the list "earn an A-plus for the education, experience and research opportunities they provide." ESF, which is second on Treehugger's list, is highlighted for its extensive network of field stations.

Washington Monthly magazine ranked ESF 87th among 258 national universities ranked by the magazine. The SUNY centers at Binghamton (73) and Stony Brook (78) were higher, while Albany and Buffalo were lower. The magazine reported that it ranked colleges based on their "contribution to the public good" in three broad categories: social mobility (recruiting and graduating low-income students), research (producing cutting-edge scholarship and the number of science and engineering Ph.D.s awarded) and service (encouraging Peace Corps and ROTC participation, and community service). ■



'Murphy 2' Says Sense of Community Sets ESF Apart

Q & A: Erin Murphy

Age: 22

Hometown: Rochester, N.Y.

Year: Senior

Major: Natural history and interpretation

Are you related to President Murphy?

"No. But he started calling me Murphy 2 when I came to campus. I've met him a bunch of times and I've been to his house a lot for leadership dinners and I know his wife really well, too. So I'm a de facto member of the family."

What leadership activities have you been involved in?

"The Baobab Society; Undergraduate Student Association; Student Activities Programming Board; Alpha Phi Omega, the coed service fraternity; ESF Ambassador."

Why are you an orientation leader?

"My orientation experience was interesting. I was definitely a loner when I came here. It was culture shock after being at a very diverse high school, and it was hard to explain that to people. A couple of orientation leaders pulled me out and got me involved in things. I basically wanted to do for other people what they had done for me. I probably would have left if it hadn't been for them reaching out to me."

What's the best thing about ESF?

"The people: the faculty, the staff, the students. You have to be a certain caliber of person to come here and spend four years learning how to improve the world. It's the sense of support, the sense of community, the sense of purpose that you're doing something to improve the community and the world. Without that sense of community, I would not be in college right now. If I'd gone to a big university, I'd have just crawled into the shadows in the corner and I'd still be there."

What is your favorite... ...class?

"Urban Environmental Literature with Janine DeBaise. It involved slam poetry, urban literature, reading a bunch of books about people's perceptions of the city and what's a 'natural' environment. It really opened my eyes about things and combined the left and right sides of my brain. I got to use the 'sciencey' side that wants to analyze everything and the very flowy, artsy side at the same time."

...dining hall food?

"Sal's Sassy Sauce Chicken from Sal's Birdland in Schine Student Center. It tastes really, well, sassy and like something you'd get in the city."

...movie?

"I can watch 'WALL-E' over and over again. I'm not gonna lie. It combines the environmental consciousness and my love for Disney. That would be my fave movie of the week, anyway."

...book?

"I really dig this book called 'Automated Alice' (by Jeff Noon). It takes 'Alice in Wonderland' and flips it to make you think differently. 'Last Child in the Woods' (by Richard Louv) is also a great book. Most people at this school have already read it."

What's on your iPod?

"I have so much random music. I just listened to a group, the song is in Swedish. They are a Swedish hip-hop, jazz, swing band. They're called Movits! and the song is 'Apple-Stealing Thief'. Of course, I also have stuff like 'N Sync, 'Phantom of the Opera' and Lil Wayne. I have a lot of different stuff. I don't want to be limited."

What should people know about you?

"I'm very compassionate. As loud, as exuberant, as enthusiastic as I can be, it's all because I'm compassionate for everything and everyone around me. I have two volumes: loud and louder. But once people accept that, they will like me. Until then, I can be a little intimidating."

Erin Murphy EFB '10, Eugene Law FOR '12 and Ryan Henry LA '11 show some school spirit as ESF freshmen wait to enter the Carrier Dome for an orientation event. To watch a video of orientation activities, go to www.esf.edu/communications/view.asp?newsID=258.



Write Away

An infusion of energy and ideas takes ESF's writing program in a direction it's never gone before.

by Tracy Kinne

ESF's writing program, which began 19 years ago as a handful of technical courses, has expanded dramatically over the years and is again growing.

"We're bringing writing into the mainstream of environmental studies, and we're defining writing broadly to include rhetoric, communication, literature," said Dr. David Sonnenfeld, chair of the Department of Environmental Studies, which is home to the writing program.

Changes include a new class, CLL 300: Survey of Environmental Writing; a newly structured option, or area of concentration, to include writing; and an effort to offer a minor in writing, perhaps as early as fall 2010.

"Many of our students have been asking for a writing minor and courses they could take in writing. There's a genuine need and an interest in it," said Dawnelle Jager, who coordinates the College writing center. The center offers tutors, books and other resources to help students write papers and improve their communication skills.

"Communication is the number one skill employers look for," Jager continued. "They want employees who are well-rounded and can communicate."

Students need strong skills as scientists, but they also must be good communicators, said Benette Whitmore, director of the writing program. "Scientists have to write," she said. "People need to write and communicate to perform their work, and I can't think of a field where that isn't true."

"The research shows that people who succeed, who rise to the top, are good communicators," she said. "You might have a lot of disciplinary knowledge, but if you can't communicate to the different audiences, it really doesn't have much meaning."

Especially today, scientists need to be able to convey information to a broad audience, Sonnenfeld said. "The whole area of scientific communication is huge these days," he said. As science gets more technical, researchers must explain — to policymakers and the general public — complex issues that range from global warming to food safety to modes of transportation, he said. "We want our research to be read and understood by as many people as possible," he said. "Writing is critically important at ESF."

Some of the changes in the writing program are:

- The new class, Survey of Environmental Writing. This class is taught by Patrick Lawler, who directed the writing program from 1990 until May, when Whitmore assumed that role. The class explores such forms of writing as journalism, poetry, memoir, field notes and natural histories.

- The newly structured writing option: Environmental Communication, Culture and Writing. Students will develop public presentation skills, explore the way nature is viewed in various cultures, and consider emotional and artistic expression as it relates to nature.

Faculty members are also working on making a minor in writing available and have received approval at the departmental level, Whitmore said.

A Trio of ESF Literati

by Karen B. Moore



Janine DeBaise, Benette Whitmore and Patrick Lawler take a moment to relax in Moon Library.

A trio of talented writers graces ESF's Writing Program. Each of the writers — Patrick Lawler, Janine DeBaise and Benette Whitmore — approaches writing differently, but it's what they have in common that sets them apart. They all believe in and learn from the students they teach.

'I became a better writer' at ESF

Patrick Lawler does not have a 4-inch nail in his head.

But if you Google "Patrick Lawler," you get hundreds of hits about Patrick Lawler, the Colorado construction worker who accidentally fired a 4-inch nail into his head, and a few about Patrick Lawler, the poet, associate professor and former director of the Writing Program at ESF.

However, ESF's Lawler does speak of his injured namesake in class introductions as an icebreaker and has produced a collection of work called "Patrick Lawler Remembers Patrick Lawler," which includes an image of an X-ray of the Lawler who became national news when a nail gun backfired in 2005.

Namesakes and nail guns aside, his poem "Living on Burrowed Time" was nominated for the Science Fiction Poetry Association's 2009 Rhysling Award for Best Poem of the Year (long form). The work is included in a collection of poems by several writers; all the poems have a connection to campus, Lawler said. The collection, "Book Content to Stay Inside the Tree," deals specifically with environmental issues within a political context.

"Living on Burrowed Time" looks at mortality. "I was seeing my father-in-law—who died several years ago—riding in a Pinto and I wanted to warn him it's a Pinto and he should be careful," Lawler said, referring to the 1970s Ford subcompact that had a reputation for bursting into flames in rear-end collisions. "Then I remembered he's dead and part of the pleasure of being dead is you don't have to worry anymore."

The Rhysling Award both "amuses and bemuses" Lawler. "I like to blur genres. It entered the realm of the surreal, but it has some basis in reality and our fears about death."

Over the last 20 years, Lawler has written four poetry books inspired by the four elements—earth, wind, fire and air. One of the books, "Feeding the Fear of the Earth," contains a dedication page that includes ESF students: "Without you there would be no need to write."

"I have learned so much from ESF students," Lawler said. "When I started teaching at ESF in 1982 I was amazed at all the stuff students knew about and issues that I knew nothing about. I became a better writer, more aware of critical issues of our time."

Lawler, who had served as director of the Writing Program since 1990, recently stepped down from that post. When Lawler came to ESF, the Writing Program focused on technical writing. Under his direction it expanded into composition, rhetoric and environmental communications.

"I had accomplished what I wanted to and thought it was time to have a new vision," he said. That vision will come from Benette Whitmore, the new director of the program. "Benette's the perfect person for the job. She can add her own touch to things. It will be exciting."

Lawler will now concentrate on his "creativity and publishing" and focus on other possibilities on campus, including the expanded environmental studies opportunities, he said.

Her pen is mighty; her ax is, too

When Janine DeBaise challenged her students to branch out and try writing poetry, one student issued a challenge of his own.

"I tell them, 'Don't be afraid to experiment and have fun with it.' And because I tell my students to move outside of their comfort zone, one student challenged me to use an ax."

DeBaise did not back down. She now owns an ax and steel-toed boots and can do a vertical and horizontal chop. Her student, in turn, learned to write poetry.

"I've learned so much from them (students)," she said. "That's why it's a great campus to teach on... students bring so much to the classes."

Talk about science In 17 syllables We might publish it

We invite Inside ESF readers to write their own haiku about ESF. Let your creativity flow and capture the essence of the College in poetry.

Haiku is a traditional form of Japanese poetry consisting of three lines and a total of 17 syllables. The first line has five, the second line has seven, and the last line has five. Haikus often have an element of nature or emotion.

E-mail your entries to insideesf@esf.edu.
The best of the submitted ESF haiku will be published on the ESF website.

DeBaise's poetry can be found in her book of poetry, "Of a Feather," and the Magnetic Poetry that covers her office door, or during a stroll through downtown Syracuse. There you will find her haiku about having coffee with a friend, which has been illustrated as part of the Syracuse Poster Project. Each poster features a haiku about downtown, the city or the nearby countryside. The poems are written by community poets and illustrated by Syracuse University artists.

"I like the idea of combining poetry and art," DeBaise said. "It's really exciting when you see your poster and see the artwork they pull out of your poetry."

This is the fourth year one of DeBaise's poems has been chosen for the Poster Project. DeBaise, who teaches contemporary nature literature at ESF, said, "It's funny because I tell people I don't write form poetry but I've had four (haiku) poems turned into posters."

DeBaise would like to see ESF have its own version of the Poster Project. "The scientists would provide the fact, the poet writes about it and an artist has to illustrate it."

DeBaise's connection with her community is reflected in more of her writing than 17-syllable Japanese poetry alone. She is working on a manuscript of personal essays with a connection to upstate New York. "It has a kind of subtle ecofeminist slant," she said. "I've lived my whole life here," the East Syracuse native said.

She started teaching urban environmental literature in 2002. "It was sort of new then," DeBaise said. "Now it's being taught more and more as people realize we have to look at the consequences of environmental issues in urban areas."

The students respond well to the literature courses. "They love that they can be creative and read, and I love that they bring science and landscape architecture to it. I've learned so much from them," she said.

Her work spans many genres

Television scripts, children's counting books, a young adult novel, a children's play — Benette Whitmore has written in numerous genres to share her stories with young readers.

Even as she takes over the duties of director of the ESF Writing Program, Whitmore is also writing her own dissertation, delving into children's literature and issues involving literacy. It is a topic she is well acquainted with as a writer for young adults.

This past summer, Whitmore had her children's play "Rain-forest Rhythms and the Jungle Jive" performed in a children's theater outside Boston, Mass. "That was fun to see it performed," she said. "I like to write dialogue and scripts."

In 1992, Whitmore wrote her first children's book, "A Quilt for Elizabeth," which deals with a child coping with her father's death. The quilt serves as a metaphor for Elizabeth putting together memories of her father. "I think my journalism background helped," she said. "I learned to be concise, to use words

sparingly and make good choices when it comes to language.

"I wrote the story not knowing what a long shot it is to get published," she said. "If I had known what a long shot it is, I probably would not have pushed."

In response to her efforts to get it published, she received rejection letters, but they came with suggestions, which is unusual in the publishing world. Most rejections amount to a curt "No, thanks." Whitmore took some of the suggestions, revised her manuscript and eventually found a publisher.

"I felt excited about writing once the first book came out," she said.

The book was optioned by Filmfair Communications to be turned into a short animated film. Although the film was never produced, Whitmore said, "It's a great accomplishment to have something optioned."

Although she has not yet made it to the big screen, she is no stranger to the small screen. Whitmore wrote more than 35 episodes of the award-winning children's show "Pappyland" in the mid-1990s. In the show, artist Michael Cariglio played Pappy Drewitt, who taught children how to draw while he and his friends imparted important life lessons, such as sharing and cooperation. The show aired in 165 markets on PBS and The Learning Channel and has a fan page on Facebook. The show, produced by WCNY in Syracuse, was honored by TV Guide as one of the 10 Best New Kids Shows when it first aired.

Whitmore's latest book, "Shelter," the story of a family's disintegration as seen through the eyes and video camera of 16-year-old Skyler, is her first novel. "It's something you really have to commit yourself to. To write a long piece, it means you put a lot of time into something that may never get published."

For now, Whitmore is focusing on more academic applications of her talent. "I'm currently thinking of ideas but holding off to focus on scholarly work," she said. That focus includes new writing options to be offered through the Department of Environmental Studies.

Currently in the proposal stage is a communications minor that would be open to all students. "We've noticed there are students who not only enjoy writing, but see the value of writing skills," said Whitmore. "All disciplines need good writers. The good communicators are the ones who become more successful through writing or public speaking."

"I love the students here. They're very passionate about their interests and very willing to get involved with projects and issues. I like that it feels like a smaller college environment where you feel connected to other people on campus that aren't in your department, and I think the writing program offers something that enhances other areas of the College. It's useful and valuable to the students and faculty."

Said Whitmore, "When you love what you do, it's easy to go to work."



ESF Envisions

Carbon Neutral Campus by 2015

ESF will be completely carbon neutral in just six years, according to the College's recently Climate Action Plan, which outlines a combination of renewable energy projects, sustainable construction, energy conservation and managed forest land to eliminate net greenhouse gas emissions by 2015.

ESF took the unusual step of involving students in the formulation of the plan, which was submitted Sept. 15 to the Association for the Advancement of Sustainability in Higher Education as part of the American College & University Presidents' Climate Commitment (ACUPCC).

"Most educational institutions hired consultants to assist in the formulation of their plans," said ESF President Cornelius B. Murphy, Jr. "We relied largely on our students, faculty and staff. Our final action plan was actually synthesized by a student and framed by a student."

Undergraduate Justin Heavey, a junior majoring in environmental studies (environmental policy, planning and law) and minoring in renewable energy, worked with ESF staff members to put together the 92-page report that will be submitted in accordance with ACUPCC requirements.

"The commitment and ESF's own institutional goals are about more than just reaching these goals," Heavey said. "It's about integrating these goals into everything we do."

The report spells out a fivefold path toward driving the College's net CO₂ emissions to zero by 2015. Some 40 individual initiatives are included in those five major areas:

- energy conservation measures, including energy audits, renovations, technology and facility upgrades;
- alternative energy projects on the main campus and regional campuses, designed to deliver clean and renewable energy to existing structures, including biomass heat, photovoltaic arrays, wind turbines, and the production of biodiesel from waste cooking oil to help fuel the College fleet;
- new construction that will focus on energy-efficient design and systems that produce heat and power from sustainable sources for new and existing buildings;
- campus action to engage ESF to increase awareness and reduce waste in all aspects of College operation, including travel efficiency and standardized temperature settings;
- forest carbon sequestration, centering on proper designation and management of ESF's forested properties, in keeping with Chicago Climate Exchange and Greenhouse Gas Protocol standards.

"Other colleges and universities purchase carbon offset credits," Murphy said. "At ESF, we grow our own."

Michael Kelleher, ESF's director of renewable energy systems, said, "We're doing this without purchasing carbon offsets. We're actually deploying projects that will reduce our carbon emissions and increase our ability to meet our carbon-neutrality goal. We're taking real actions."

Robert Davis, ESF's director of forest properties, said only a portion of the College's 25,000 acres of forested properties across New York state is included in the action plan. Specific management techniques will be used to maximize the forest's carbon sequestration abilities, he said.

Kelleher noted the College's ability to manage its properties to the greatest advantage is building on nearly a century of work in environmental sustainability and sustainable forest management. The involvement of current students in developing the climate action plan ensures that that knowledge will continue to grow, he said.

"I took renewable energy systems with Mike Kelleher and I also took Dr. (Richard) Smardon's class in environment and energy auditing," Heavey said. "Those two classes were the prime foundation for this project. They taught me some real-world applications. Not just the world, but specific things about ESF, too."

In addition to Heavey's work on the plan, former student Brennan Marks, a forest and environmental resource engineering major who graduated in 2007, and student Eric Jones were involved in the planning and installation of the Heiberg wind turbine. Student Jessica Bohn manages the biodiesel production facility and is fostering the development of a student-run energy cooperative.

One of the centerpieces of ESF's action plan commitment is the planned construction of an extremely energy-efficient building that will serve as a gateway to the campus. A cutting-edge combined heat and power system will produce more energy than the building consumes. The College will seek LEED Platinum designation for the building, which will serve as a campus hub that accommodates the admissions and outreach offices, special event space and the College bookstore.

Energy for the Gateway building will come from renewable, local biomass. The system will include a 6,000 MBtu wood pellet steam boiler, a 200 kW back-pressure steam turbine, a 30 kW biodiesel micro-turbine, dual 65 kW natural gas micro-turbines and a 50-100 kW photovoltaic array.

Over the past six years, ESF has taken significant steps toward sustainability, including development of a biodiesel production facility and an alternative-fuel vehicle fueling station, the installation of a wind turbine on the College's Heiberg Forest campus in Tully and the installation of Flexi-Pave walkways, a bioretention basin and a green roof on Walters Hall on the main campus.

The plan states that with an initial investment of \$11.7 million, the anticipated annual savings of \$1.3 million and an additional \$3.9 million in expected grants and incentives, the payback period for the plan is six years.



They have led inner-city children out of their neighborhoods for the first time, taken them kayaking through marshes 450 miles from their homes, supervised the spontaneous filleting of a trout during a class that was supposed to be about invertebrates and grossed out squeamish middle-school children by gulping down supposed "sewer lice."

They are the 600 ESF alumni who identify themselves as teachers.

They work in classrooms all over the United States, working with children in a variety of schools — urban and rural, public and private, traditional and nontraditional — passing on the same kind of lessons they learned at ESF.

ESF's Dr. Tom Horton, a mycologist whose research interest is plant succession, acts as adviser to students who are planning on careers as elementary or high school teachers. Some ESF students take advantage of the Joint Program in Science Teaching, which is offered in conjunction with Syracuse University and leads to teacher certification. Others choose to focus on a bachelor of science degree and follow up with a master's in education.

"Either path works," Horton said. "It just depends on which way they want to go."

Horton, whose career path was inspired by an engaging middle school science teacher in the San Fernando Valley, said the students who are brimming with enthusiasm and energy are the ones most likely to make good teachers.

"The people who are the good teachers love what they do," he said. "They do it more for the kids than anything else. They get their energy from the kids. The ones that don't get energy from the kids just burn out."

He said ESF's organismal approach to science helps give students a strong foundation that translates well into whatever subject they might be called upon to teach in a K-12 setting.

ESF graduates then take that approach with their own students, he said, taking the students outside and making science relevant to their lives.

"At the high school level, test tubes are great, but really it's holding the plant that's great for a kid," Horton said.

Gary Lipp guides his students through a lesson at Roxboro Middle School, Mattydale, N.Y.

CULTIVATING Young Mi

**In classrooms nationwide, ESF alumni
share their wealth of knowledge.**

by Claire B. Dunn, Karen B. Moore and Tracy Kinne

“Every day is different, every year is different because you get a different batch of kids,” Schoellkopf said. “It’s not humdrum. The kids make it fun. You can actually mold minds. How awesome is that?”

Inside ESF talked with graduates from across the decades about what they teach and why they love to do it.

Lessons go beyond books

Getting children interested in science, Beth Schoellkopf ES '90 said, is all about getting them outside to see and touch things.

Sometimes it's literally a stroll in the park to teach them that bugs and rodents or native flowers and trees grow in their own neighborhoods.

On other occasions, the outing can be grand, such as the time she took 50 inner-city children from Buffalo to Parker River National Wildlife Refuge on a barrier island off the northeastern coast of Massachusetts. They went kayaking during marsh studies, walked on sand dunes to learn about erosion and did bird banding in the refuge, which was established to provide habitat for migratory birds along the Atlantic Flyway.

“You’re not going to get that out of a book,” Schoellkopf said.

Schoellkopf's job as a fifth-through-eighth-grade science teacher at Tapestry Charter School in Buffalo puts her in an environment where “expeditionary learning” is the guiding principle. The mission, she said, is to engage children in “hands-on learning by doing, with a purpose.” On the Parker River trip, that meant the children took the information they gathered in the marshes and dunes and brought it back to

Buffalo, where they held an event at their school and taught their parents what they had learned, such as the difference between invasive and non-invasive species.

Schoellkopf worked briefly as a junior planner in Erie County before earning her master's degree in education at Canisius College and moving into teaching.

“You’re with kids all the time. Every day is different, every year is different because you get a different batch of kids,” she said. “It’s not humdrum. The kids make it fun. You can actually mold minds. How awesome is that?”

Schoellkopf said she relies on some of the same teaching techniques her ESF professors used, particularly Dr. Peter Black, now a Distinguished Teaching Professor Emeritus of water and related land resources. She remembers him as dynamic, funny and personable. “He went to conferences and taught other people, too,” she said. “He was really engaged in the subject.”

Schoellkopf said the science education she received at ESF was rigorous enough to prepare her for her subsequent master's work so she could obtain the necessary teaching credentials.

“What I teach now is all science. What I learned in grad school had nothing to do with science,” she said. “The ESF teachers were totally into it and they knew their stuff. They were actively involved and knew the material. They seemed to have a passion for it, instead of acting like they were just going in to work.”



Beth Schoellkopf shows her students what field work looks like.

She lives for the 'Aha!' moment

Whether the boy had taken the fishing rod apart and hidden it in his clothes or stashed it in the creekside bushes ahead of time, Heidi Wilson Busa EFB '80 never knew.

But when the avid young fisherman deftly hooked a brown trout during a class period devoted to water quality on the banks of Nine Mile Creek just down the hill from Marcellus Central High School, Busa seized the moment.

“We took it up to the classroom and he filleted it very neatly,” she said. “The kids all got to see what a fish looks like inside.”

“You’ve got to go with whatever happens,” said Busa, a former member of the ESF board of trustees who has been teaching for 27 years, including 17 at the high school in her hometown outside Syracuse. “If you’re out in the field and something



Schoellkopf and her students kayak off the coast of Massachusetts.

Photographs | Courtesy of Beth Schoellkopf



Marcellus High School students Ellen Brooks and Jonathan Quick examine a bird's nest outside the high school with teacher Heidi Busa.

happens and the kids are all enthralled, you just go with it."

Busa teaches sophomore-level living environment and two electives for seniors: environmental studies, and biomedical and chemical technology. In addition, she was one of the first high school teachers to offer ESF's college-level Global Environment course to 12th-graders as part of the ESF in the High School program, and she continues to teach it every year.

Busa started at ESF as a landscape architecture major because she enjoyed the outdoors and had an aptitude for spatial relationships and design. But a first-semester botany course sparked an interest in biology, and she quickly migrated into what is now the Department of Environmental and Forest Biology.

After graduation, she taught in an environmental program in Maine but soon became frustrated by the truncated nature of her contact with the students. Wanting a more lasting connection with her students, she returned to Syracuse and earned her master's in education at Syracuse University. She taught in Syracuse city schools for 10 years before relocating to Marcellus.

She said ESF gave her a strong science background and taught her to ask questions about the natural environment.

"ESF really challenges you," she said. "I couldn't teach the way I teach if it weren't for ESF."

In particular, she said, Dr. Edwin Ketchledge got her excited about bryocology, the study of mosses and liverworts. Ketchledge, a member of ESF's Class of 1949 and a long-time faculty member at the College, focused

his career and retirement on protecting the Adirondack high country.

"We spent eight weeks in the lab, then eight weeks outside, mapping the plants at a site," she said. "We learned about the moisture and the pH, all sorts of things. It was like, 'Wow!' I was actually applying the science I had learned."

She uses the same hands-on approach with her high school students.

"If kids can touch things and see things and experience things that they maybe wouldn't have otherwise, it's going to give them that 'Aha!' moment," she said.

To that end, Busa takes her students into the woods and fields around the high school and to Nine Mile Creek, which runs along the edge of the school's property. Sometimes, a student casually informs her he is allergic to bees as they are surrounded by buzzing insects in a sunny field. Sometimes, a student catches a fish and sparks an impromptu ichthyology lesson.

"You have an ability to impact the future," Busa said. "Sometimes a student will say to you later, 'You made an impact on me.' And that just means everything."

A 'gross' lesson in skepticism

Dark little globs bobbed slowly up and down in an icky-looking concoction the day Mike Rudolph EFB '91 told his young students about the "sewer lice" that live in the underground pipes that direct the flow of wastewater.

"You have an ability to impact the future," Busa said. "Sometimes a student will say to you later, 'You made an impact on me.' And that just means everything."

Then he rinsed off a couple of the squishy blobs, declared they could be the answer to world hunger and popped them into his mouth.

"They were all completely grossed out," Rudolph said of his students at St. Patrick's School in Marin County, Calif.

They were also shocked into attention and Rudolph took advantage of their interest by launching into a lesson about the scientific method and the need for scientists to be skeptical and ask good questions about what they are observing. If they'd asked the right questions, the students learned, they might have figured out that the "lice" were raisins and the liquid was a carbonated beverage. "They love any lesson that has to do with food and candy," said Rudolph, who teaches science to students in grades four through eight. "They like gross stuff. They usually love anything that involves animals, bugs and fish. And they love anything with a little shock value."

Rudolph brought an associate degree from SUNY Farmingdale to ESF and later moved across the street to Syracuse

Read Inside ESF Online for stories about more ESF alumni who are teachers. Go to www.esf.edu/insideesf.

Chuck Buxbaum FNRM '94

His high school students at Sandia Preparatory School in Albuquerque, N.M., are learning about installing photovoltaic panels.

Andrew Holz ES '04

He never fails to be surprised by his seventh and eighth-grade students at Queens Valley School of the Arts in New York City.

Mary Kiernan CHE '81

She took a "terrific" college experience into a classroom at Island Trees School District in Levittown, N.Y.

Lindsay Oura EFB '03

Her students at Woburn Memorial High School in Woburn, Mass., learn about macromolecules using a song Oura wrote and recorded herself. You can hear the song at www.esf.edu/insideesf.



Mike Rudolph and his students enjoy a lesson along the scenic California coastline.

University as a teaching assistant in the education program. He earned his master's degree in education and then indulged his love for the outdoors by skiing, working as a whitewater rafting guide and leading sea-kayaking tours for several years. When he settled in Larkspur, Calif., 30 miles north of San Francisco, he began teaching at St. Patrick's and he is now in his sixth year at the school.

He has taken seventh- and eighth-graders on overnight trips to experience some of California's environmental splendor, such as the 1,200-square mile Yosemite National Park, which was one of the first wilderness parks in the United States.

He said faculty members in the Department of Environmental and Forest Biology are part of the reason he went into teaching.

Rudolph is trying to follow their lead as he teaches the current generation of elementary school pupils.

"I'm beginning to get feedback from the kids that they are learning something and enjoying my class," he said. "I want to help them learn about the world. I love it. That's why I do it."

His students learn by doing

Crayfish and minnows have returned to the waters of Bear Trap Creek, a northern tributary of Onondaga Lake, and it's hoped the work of Gary Lipp's students will one day see a return of trout to the tributary.

"Over the years I've learned the specifics of the curriculum aren't as important

as making ties with the students," said Lipp EFB '86, a seventh-grade life sciences teacher at Roxboro Middle School in Mattydale, just north of Syracuse. It's through hands-on experiences, like the Bear Trap Creek project, that he hopes to make an impression on the kids.

In the summer of 2006, Lipp received a mini-grant from the Onondaga Lake Partnership (OLP) to undertake a limited stream study and restoration project in a section of Bear Trap Creek between the middle school and Interstate 81 in Mattydale. In an effort to improve the habitat diversity within a section of the creek, Lipp's students placed several truckloads of stone cobbles in a 25-yard section of the stream that summer. In the years since the stone cobbles were placed, surveys have shown an increase in macroinvertebrate populations in the rock-filled study area. There is now also an enhanced population of crayfish and minnows, including tessellated darters and brook sticklebacks.

Lipp's students helped monitor water quality in the stream section behind their school in conjunction with the Izaak Walton League's Project Watershed stream monitoring program. League members, including ESF alumnus Les Monostory, showed students how to do the chemical analysis of the creek.

"It's a small world," said Lipp. "I run into alums all over the place."

"I try to do as much hands-on stuff as possible," Lipp said, including using microscopes, drawing, manipulating puzzle pieces and building models. He noted some projects aren't always a hit at first. "At

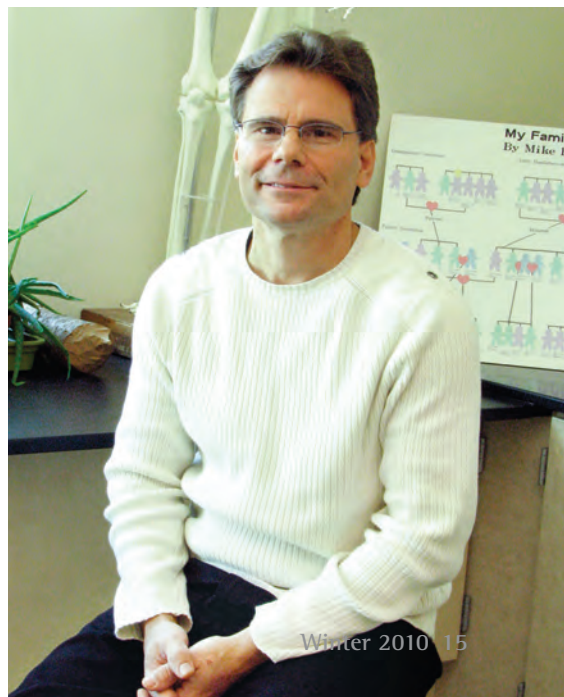
the beginning of the dissection of worms, the students all go, 'Eeeuuuh! I'm not touching a worm!' but by the end they get into it," he said.

Lipp takes his teaching cues from Dr. Edwin Ketchledge, ESF professor emeritus of dendrology.

"He was the best teacher I have ever had," Lipp said. "He was personable but not over the top. I like the way he organized courses. They were to the point and understandable."

"That's how I teach my classes. I have the kids fill in the information as they find it on their own," Lipp said. "I want them to be more independent. Life is not easy, and the more you are individually prepared, the better."

Gary Lipp





Samson Lau pilots a boat at the Adirondack Ecological Center, where he researched the effect of pH levels on zooplankton and fish populations in Adirondack lakes.

A Diversity of Talent **Takes to Fieldwork**

Mentor program benefits underrep- resented students

Story and Photographs
by Claire B. Dunn

A father in need of a scuba-diving buddy could be the reason a young man from Brooklyn spent his summer constructing and monitoring miniature ecosystems in a pair of Adirondack lakes.

Pavel Dimens, an ESF junior majoring in aquatics and fisheries, built 24 enclosed structures called mesocosms in Wolf and Deer lakes, both part of Huntington Wildlife Forest at the College's Adirondack Ecological Center (AEC) in Newcomb. Supported by bright pink swimming noodles, the structures were part of Dimens' efforts to determine how Deer Lake may have been affected by the fact that it was once stocked with game fish.

"I have an interest in food web dynamics," Dimens said as he stood in a steady drizzle one summer day, shortly after stepping out of a boat on the shore of Deer Lake. "I want to be able to see how the addition of fish affects how the food web develops."

A native of Minsk, Belarus, Dimens has lived in Brooklyn most of his life. He said his interest in aquatics developed in one of the world's most urban areas because his father, a computer programmer whose hobby is scuba diving, wanted a companion for his diving expeditions. He sent his son to get his diving certification at the age of 10.

Pavel Dimens has since gone diving in the waters off New York City, South Carolina, Florida, Costa Rica, Mexico and Thailand. He also volunteered as a docent at the New York Aquarium, where he met a future ESF classmate, Samson Lau, who joined him at the AEC this summer to study how pH levels affect zooplankton and fish populations in Adirondack lakes.

Dimens and Lau were two of the 10 ESF undergraduates who spent the summer at the AEC, doing field research under the auspices of a National Science Foundation-funded program called Undergraduate Mentoring in Environmental Biology (UMEB). The foundation has invested \$600,000 in the program, which focuses on retaining underrepresented students in environmental biology and encouraging participants to pursue graduate study and a career in the field.

"These students may belong to an ethnic group not well-represented in field biology. They may be urban students as opposed to the students from more rural communities that ESF traditionally drew from," said Stacy McNulty, an AEC researcher who is co-principal investigator on the UMEB project.

The UMEB students are matched with faculty mentors, provided with academic support and given access to guest speakers on campus and networking opportunities with professionals within their fields of study. They interact with graduate students and form a tightknit community within the student body.

"I wish we could do this with more than 10 students. I wish we could do this with every ESF student," McNulty said. "This is really where it's at for undergraduate intensive research."

"The program helps students overcome barriers to staying in biology. We try to help these students see: ESF is a place for you, and you can go on to do more after graduation and bring what you learn back home," McNulty said. "We connect the students with active scientists in the environmental field. They might be working at nonprofit, conservation-based organizations or government agencies. This stewardship component provides a greater understanding of why students' work matters in the big picture for the Adirondack ecosystem."

ESF's participation in the program earned recognition this year from the international Organization of Biological Field Stations, which presented its 2009 Human Diversity Award to the AEC and the Cranberry Lake Biological Station. The award honors member field stations for "unique activities, programs, or approaches (funded or unfunded) that increase the involvement,

engagement and sustainability of underrepresented groups in field science."

McNulty accepted the award during the organization's annual meeting in Costa Rica in September.

"We hope that the students will bring their unique life experience and cultural perspectives into the research



Pavel Dimens

questions that they ask. Their diversity enables us to do better science, especially at the interface of science and stewardship, which is so important in the Adirondacks," said Dr. Robin W. Kimmerer, an ESF botanist who is the project's principal investigator at ESF.

The students are also immersed in fieldwork, an ESF hallmark. "I wish we could do this with more than 10 students. I wish we could do this with every ESF student," McNulty said. "This is really where it's at for undergraduate intensive research."

Typically, UMEB students first spend a summer at the Cranberry Lake Biological Station (CLBS). The following summer, they use CLBS or the AEC at Huntington Wildlife Forest (HWF) as a base of operations, each pursuing an individual research project of his or her own design.

"When it comes to hands-on research, ESF knows how to do that well, with all the Adirondack facilities," McNulty said.

"The students work on their research projects for two years, with the Adirondack experience as the centerpiece," Kimmerer said. "It's amazing to see their growth as young professionals that comes with the intensive teamwork in the field. The UMEB experience really cultivates leadership."

One weekday in July, several of the UMEB students were busy illustrating McNulty's point about the unique opportunities provided by the field station.

Niazuddin Ahmed, a senior environmental biology major from Brooklyn, was trapping crayfish in streams around Arbutus Lake so he could eventually compare them with the invasive rusty crayfish found downstream in the Hudson River. Backed by decades of water chemistry research at the AEC, he was measuring crayfish bodies, claws and tails to determine what traits were most

common and what traits made it easier for certain species of crayfish to survive in one area as opposed to another.

Three miles away, on Catlin Lake, Lau was motoring around in an aluminum boat, checking traps he had set for panfish. He is researching how changing pH levels affect fish and zooplankton communities in the lakes. Part of his work involves comparing the conditions at Catlin Lake with those of Cranberry Lake, 60 miles away in the northwest Adirondacks. Lau has been interested in marine science since his childhood in Brooklyn, where he grew up near New York Bay.

Jennifer Ma, a junior majoring in wildlife science, is another Brooklyn resident who spent the summer in the heart of the Adirondacks. She rose by 5 a.m. most mornings to spend three hours listening for songbirds. She was studying how the varying levels of calcium in the soil might affect the richness of bird species and overall biodiversity.

"The hypothesis is that higher calcium in the soil supports higher biodiversity," she said. "Birds need calcium for their eggshells. More calcium might mean more snails, and birds eat snails and other invertebrates. And calcium also means more salamanders because salamanders like calcium."



Larissa Bishop-Boros

Ma developed an appreciation for birds because her Brooklyn neighborhood near Coney Island otherwise lacked appreciable fauna. She indulged her interest in environmental science as a volunteer at Brooklyn Botanic Garden and with an internship with the Wildlife Conservation Society, which operates the Bronx Zoo and the New York Aquarium. She majored in environmental science at the highly ranked Brooklyn Technical High School.

"ESF was my top school," she said. "I got accepted and I knew I was going to go there. Just the name drew me to it. It wasn't that far from home, and I liked that it was a SUNY school."

Occasionally, Ma was accompanied on her early-morning forays by her friend Chris Lang, of Ross, Ohio, a junior majoring in forest ecosystems science.

"I'm really drawn to and by the necessary balance between forestry and environmental biology," Lang said. "You need a little bit of knowledge of both fields."

Lang spent the summer examining the connection between beaver populations and the distribution of the aquatic plants they eat during the summer. "The best way to do that is just watch them all the time and see what they eat," he said.

Other students working at the AEC this past summer:

■ Larisa Bishop-Boros, a senior conservation biology major from Greece, N.Y., studied the effect of ultrasound on bats. Her hope was to collect information that could help researchers determine if it is possible to establish sound fields around wind turbines to reduce the number of bats that are killed when they are hit by blades. Bats caught her interest because of the current concerns about white-nose syndrome, which is killing them in large numbers. "That syndrome, combined with the mortality from wind turbines, means the bat population is just getting hammered," she said.

■ Chelsea Reyes, a junior wildlife science major from San Antonio, Texas, trapped chipmunks at various locations to determine how human development affects their physical condition and abundance. She collected data at the Visitor Interpretive Center (VIC), at a site near Arbutus Lodge and in a natural (unmanaged) area on HWF. "There were a lot more chipmunks at Arbutus than the VIC," she said. "Maybe because there is more vegetation and fewer humans at Arbutus."



The UMEB students at the AEC gathered after dinner one summer evening. Sitting on the wall, from left: Joelle Chille, Chelsea Reyes, Pavel Dimens, Larisa Bishop-Boros, Niazuddin Ahmed, and Carlos Rosales-Zelaya. Standing in the middle row: Samson Lau, left, and Jennifer Ma. First row, on the ground, Eric Ungberg, left, and Chris Lang.

■ Carlos Rosales-Zelaya, a senior environmental biology major from Hempstead, N.Y., researched the mercury movement from one ecosystem to another by collecting insects in emergence traps and analyzing their mercury level. “Mercury affects organisms on so many levels,” he said. “As the insects emerge, they have only the mercury content they are born with. That makes them interesting to study.”

■ Joelle Chille, a junior forest health major from Niagara Falls, studied biocontrol of beech scale, an insect that feeds on beech trees and provides an opportunity for attack by fungi that cause beech bark disease, which eventually kills the trees. Chille exposed the insects to a species of beetle called the double-spotted ladybug to determine how the beetle affected the density of beech scale. “Nobody has really looked into this kind of control very much,” she said.

■ Eric Ungberg, a senior conservation biology major from Ithaca, N.Y., researched mercury deposition in carnivorous pitcher plants, comparing the concentration of mercury and methyl mercury in them with similar concentrations in non-carnivorous plants that grow in the same area. “I think it has potential to have higher levels because it has insects as a nutrient source,” he said. “We know mercury levels are higher in animals that are higher in the food chain, and I’m looking to see if it happens in plants, too.”

The UMEB students will spend the next year summarizing and presenting their research to the scientific community, as well as designing an outreach project that reaches inner-city high school students, the Native



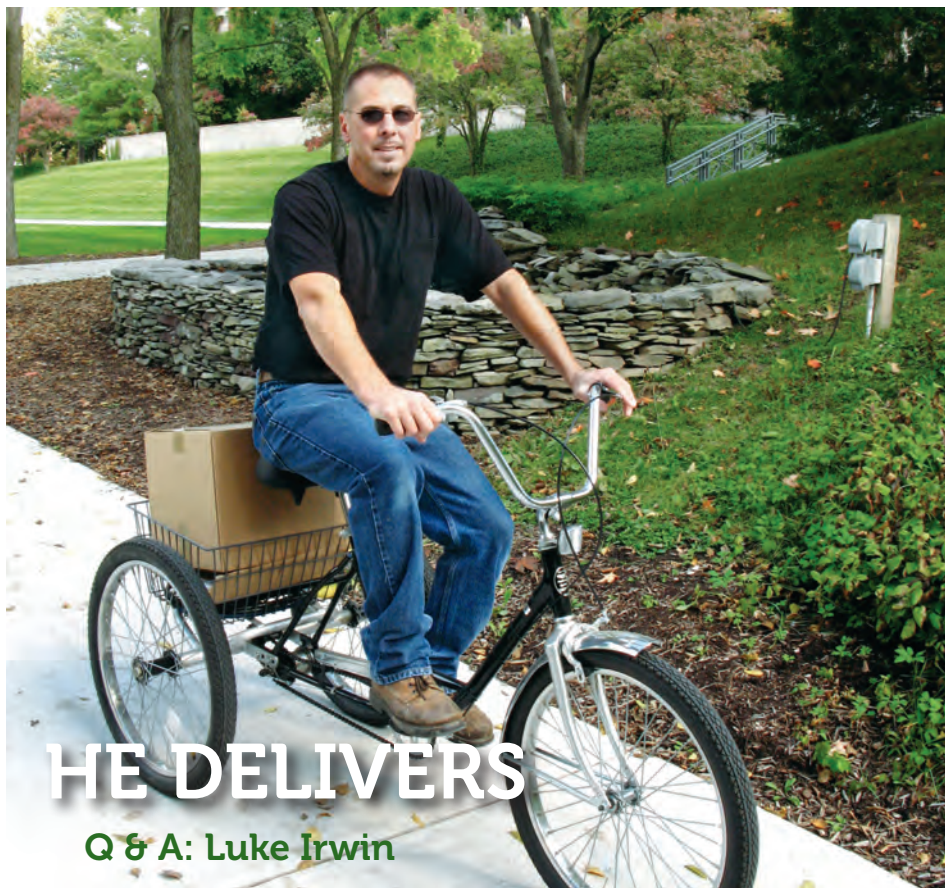
Carlos Rosales-Zelaya

American community in northern New York or native Adirondackers.

“Armed with the experience from their participation in the UMEB program, these ESF students will be ready to address environmental issues in their own communities,” McNulty said.



Niazuddin Ahmed checks a crayfish trap in a stream near Arbutus Lake.



HE DELIVERS

Q & A: Luke Irwin

ESF practices what it teaches. Perhaps no one on campus has taken that to heart more than Luke Irwin. Irwin, a stores clerk in the receiving department, shrinks his carbon footprint by putting his foot down—on the pedal of a three-wheeled bicycle he uses to deliver packages to campus.

Before joining the staff at ESF, Irwin, a native of Syracuse's Valley neighborhood, worked in the mailroom at SUNY Upstate, "took a three-year vacation with the United States Marines," climbed Mount Fuji and worked as a baker at Williams Bakery in North Syracuse.

How did you start using the bike for deliveries?

"I was looking at Craigslist and saw someone was selling a three-wheeled bike and thought that would be cool for delivering packages on campus. I suggested it to my bosses. They liked the idea and said they'd get a new bike, not a used one. It fits in pretty good with the green theme of the College. Now we (the mailroom) have a natural gas van, a propane forklift and a pedal-powered bike."

How many miles do you log daily?

"Not many miles. It's just the hills that kill you. After the fourth trip up the hill it starts to get old."

You've got a reputation on campus as being quite the baker. When did you start baking?

"I was a baker in the Marines. I wanted to learn other trades but I found out I was colorblind, so I became a baker. I could've gone into the infantry, but I wanted a job and a skill when I got out. They actually have a pretty good (culinary) school there."

What's your favorite thing to bake?

"It's probably baklava or cannolis but I'm always open to suggestions, always looking for something new."

Have you ever made either for your co-workers?

"No, but I've got a feeling I'm going to be bringing some in pretty soon, though."

What book would you recommend?

"The Dinosaur Bar-B-Que cookbook ('Dinosaur Bar-B-Que: An American Roadhouse'). I don't think there's a bad recipe in it. It's really good."

What's your favorite style of music?

"Anything roots-based: blues, bluegrass, folk, zydeco; singer-songwriter stuff."

What's one thing people would be surprised to learn about you?

"I'm a grandfather. Daymon turned 1 in August."

IN MEMORIAM

Clarence Petty

ESF alumnus Clarence Petty, who devoted most of his life to preserving his beloved Adirondacks, died in December at the age of 104.

Mr. Petty was a member of the College's Class of 1930. He worked as an Adirondack Park ranger and served as a liaison between the New York State Conservation Department (now the Department of Environmental Conservation) and the State Legislature. In 1975 he helped found the Adirondack Council, a nonprofit environmental group, and became its first director.

Mr. Petty was active in environmental matters into his 90s, speaking at public hearings and corresponding with legislators.

Mr. Petty's wife of 56 years, the former Ferne Hastings, died in 1994. He is survived by sons Ed and Richard; a brother; and several grandchildren and great-grandchildren.

Dean Emeritus Bradford G. Sears

ESF Dean Emeritus Bradford G. Sears died in February after a short illness, with his caregiver, Jennifer Katz, at his side.

Mr. Sears was 94.

He was widely known and respected in the field of landscape architecture. He graduated from ESF in 1939 and joined the landscape architecture faculty in 1941. He was affiliated with the college until his retirement in 1976.

As a practicing landscape architect, Mr. Sears worked on projects that included several public campsites and parks in New York, and more than 100 conference centers and camps in 25 states for various church, scouting and youth organizations. His professional memberships included the American Society of Landscape Architects, the Highway Research Board of the National Academy of Sciences, the American Camping Association and the Public Works Advisory Board of Onondaga County.

Mr. Sears' wife, Ruth, died in 2005. He is survived by two sons, Bradford and Brian; a daughter, Patricia R. Bradley; six grandchildren and four great-grandchildren.

Memorial contributions may be made to the Bradford G. Sears Lecture, ESF College Foundation, 1 Forestry Drive, Syracuse, N.Y., 13210.



Gleaming wood furniture graces the dining room of the refurbished Huntington Lodge at the Adirondack Ecological Center.

Huntington Lodge Restoration Gets 'Perfect' Marks

"It's perfect!"

Joanne Murphy expressed the sentiments of the first guests to see the completed restoration of Huntington Lodge in October. The occasion was a dinner for the ESF Board of Trustees hosted by Joanne, her husband (and ESF President) Neil Murphy, and the AEC staff.

The goal of the project was to recapture the lodge's original Great Camp look. The knotty pine paneling, the spruce stair rails and the whole-log archways reflect the original vision of architect William West Durant. The result combines the ideas of AEC educator Paul Hai, the architectural design work of ESF architect Gary Peden and the craftsmanship of Joel Delia, Joseph Novak and Thomas Steven. Their work provides a rich setting for craftsman furniture created by L. & J.G. Stickley Inc. and obtained by the College through the generosity of the Audi family, owners of the Stickley company.

The entry of the 1911 lodge brings guests into a foyer that features a reconstructed, historic fireplace and a staircase reflective of vintage Durant

architecture. The foyer opens onto a formal dining room. New floor-to-ceiling windows draw in the late afternoon sunlight. A painting of Wolf Lake Cabin done by the late Justus Mueller, who taught at ESF during the 1930s and '40s, and restored by West Lake Conservators of Skaneateles, has been placed over the dining room fireplace.

The bedrooms have been reconfigured into suites with beds made up with Hudson's Bay blankets.

But, as always, the lodge's centerpiece is the first-floor Trophy Room. Multiple-pane windows restore the picture-window view of Arbutus Lake and its stunning sunsets. Archer Huntington's chair, an oversized easy chair, was reupholstered by Stickley. Rocking chairs, a leather sofa, and an oriental rug complete the look.

"Now that the work at Huntington Lodge is complete, we are turning our attention to restoring Arbutus Lodge and the landscaping to the same rustic elegance that existed a century ago," said Dr. William Porter, AEC director. "Our goal will be to have another honored guest say, 'It's perfect!'"

Hydrology Institute Honors Black

College of Environmental Science and Forestry (ESF) Professor Peter E. Black received the prestigious Ray K. Linsley Award for outstanding contributions in surface water hydrology during the annual water symposium of the American Institute of Hydrology last summer.

Black, Distinguished Teaching Professor of Water and Related

Land Resources, Emeritus, spoke during the symposium about the practice of hydrology and the future needs of the profession.

Black has taught and conducted research at ESF since 1965. He has taught courses and conducted environmental impact analyses across the United States and in China, Chile, Spain, Nepal and Australia, among other countries. ■



A young red-tailed hawk has been seen frequently on the ESF campus this fall. The hawk preys on squirrels, perches in trees — often in front of Marshall Hall or Bray Hall — and draws a crowd of onlookers who snap pictures with cameras and cell phones. There are other photos and a short video of the hawk on ESF's facebook page: www.facebook.com/sunyesf.

Awards and Honors

Barber, Marcia A., elected president-elect of the SUNY Human Resources Association, 2009

Breitmeyer, Bruce, elected chair of the New York State Chapter of the Society of American Foresters, 2009

Hawks, Richard S., elected to two-year term as vice president for education, American Society of Landscape Architects, 2009

Malmsheimer, Robert, named a Fellow in the Society of American Foresters, 2009

Smardon, Richard C., sworn in as chair of Great Lakes Basin Advisory Council, 2009

Stewart, Anna, Ecological Society of America Award for Outstanding Undergraduate Student Research in Ecology, 2009



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