A Torch Song
Jeffrey Rainforth '97
Brings Lady Liberty Into New Century
Page 14
Up on the Roof

This stunning bird of paradise bloomed in an ESF greenhouse in December, bringing a touch of the tropics to what is typically the cloudiest month in Syracuse. The flower’s scientific name is Strelitzia reginae, after Charlotte of Mecklenburg-Strelitz, who was queen of England and Ireland, and wife of King George III. The species is native to South Africa. At ESF, the plant spends the winter in a greenhouse atop Illick Hall but, in the summer, Greenhouse Manager Terry Ettinger moves it outside to the roof to drink up some Central New York sunshine. The College’s teaching and research greenhouse complex consists of nine gutter-connected glass greenhouses totaling nearly 7,000 square feet of growing space.

Photo by Wendy P. Osborne
FROM THE PRESIDENT’S OFFICE

David C. Amberg, Interim President

In the last eight years climate change has reduced the Mendenhall Glacier in Alaska by one-third of a mile. Photo taken by David C. Amberg on his trip to Alaska this past summer.

Dear ESF Family and Friends,

It has been a notable six months since the summer edition of ESF Magazine, and I continue to marvel at the achievements of our faculty and students, and the support they receive from our staff. These combined efforts are behind the rankings and recognitions for the College, including being noted for enrolling and graduating the highest percentage of women engineers in the country, having the ninth-highest four-year graduation rate in the United States, and being named for the fourth year in a row the second “Greenest College” in North America in recognition of our sustainability programs.

Our graduates are coveted by employers in the environmental sector as indicated by the 99 percent placement rate of our graduates from 2018, with 87 percent in jobs directly related to their fields of study. We have completed the ESF Discovery Challenge to identify cross-cutting initiatives that leverage our faculty’s strengths, address the pressing environmental concerns of our time, and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in New York and position the College to continue to lead as the premier environmental college in NewYork.

With the pace of climate change and environmental degradation accelerating at a frightening rate, there is no more important institution at this time than the College of Environmental Sciences and Forestry. This generation of students is intensely focused on tackling the breadth of challenges associated with climate change, and there is no better college than ESF to prepare them to do this. Know that we at ESF stand committed to continuing the development of the leaders and change agents required to address these environmental challenges and develop the research and technical innovation to discover solutions to these pressing issues.

Sincerely,

David C. Amberg, Interim President

we become a more resilient community in support of all members of the ESF family but in particular targeted diverse members of our community.

One aspect of resilience is eliminating food insecurity among our students. One in five college students in this country suffers at some point during their college careers from hunger and food insecurity. Last summer we lost Beth Ann Newkirk, an EFB student, in a house fire in the Westcott neighborhood. Beth had been using the Syracuse University food pantry because ESF did not have one of its own. Working with Beth’s family, the ESF College Foundation and Division of Student Affairs, we have established an ESF food pantry in Beth’s name. You can learn more about this new program and the issues it addresses within these pages.

This issue also includes stories about a new partnership between ESF’s Center for Native Peoples and the Environment headed by Dr. Robin Kimmel and the Sloan Foundation to fund several new Ph.D. stipends for indigenous scholars, and the work of alumna Jeffrey Bainforth in restoring and rehabilitating the Statue of Liberty and her environs.

ACROSS THE QUAD

ESF celebrates a new era of athletics, outstanding college rankings and the Discovery Challenge.

DEPARTMENT NEWS

ESF Research:
Fins and feathers abound as ESF scientists study the effects of hypoxia on fish, and the health of the Eastern mollard population.

ADVANCING ESF

Sloan fellows work to meld scientific knowledge with Traditional Ecological Knowledge.

ALUMNI ACCOLADES

Keep current with professional news and awards among ESF graduates.

IN THIS ISSUE

6
ESF STUDENTS
Helping humans or primates, young folks ‘20 and Abigail Glenn ’19 use their time at ESF to meet their goals.

24
ACROSS THE QUAD

ESF celebrates a new era of athletics, outstanding college rankings and the Discovery Challenge.

10
DEPARTMENT NEWS
Find out what’s new from a number of ESF’s academic departments.

26
GRADUATES OF DISTINCTION
The ESF Alumni Association honors outstanding alumna during December Commencement.

28
CLASS NOTES
Learn the latest news in the lives of your friends and classmates.

32
ALUMNI ACCOLADES
Keep current with professional news and awards among ESF graduates.

IN THE WEB

We invite you to check out the online ESF Magazine at www.magazine.esf.edu
Mass Timber Construction

“Mass timber construction is a system that we build. Our future cities will be built from timber,” said Dr. Paul Crovella ‘16, who helps lead this project. “This moves us from combusting and releasing carbon to build our buildings, to capturing and storing carbon in our buildings.”

This initiative aims to implement a system that removes barriers, lowers costs and reduces risk for mass timber construction. The project reaches beyond ESF to not only share results, but to implement the findings and educate designers about the vast potential of mass timber. The project will bring ESF forest properties to a starring role in transforming the built environment in New York. The project also includes a digital fabrication lab that would provide a hub of exploration for innovation in developing new cross-disciplinary applications in materials science, manufacturing, and design.

Crovella and colleague Dr. William Smith ‘76 said the project highlights the benefits of building with wood: its positive health effects include lower blood pressure, lower heart rate and lower nervous system stress levels; the resource is renewable and sustainable; wood construction is strong and durable; its insulating characteristics mean buildings made from wood require less energy to heat and cool.

Crovella has organized a Mass Timber Construction Symposium for April 2020 in Syracuse that will feature speakers from the United States, Canada and the United Kingdom. The event will be part of the annual New York State Green Building Conference.

Initiative in Environmental Data Science

In the last decade, intensive data collection and processing have become woven into ordinary parts of life. For example, travelers might think nothing of checking traffic congestion on a phone while, behind the scenes, millions of GPS receivers in cell phones are being tracked, processed and instantly fed to web maps. However, this same capacity to collect and process data has not been fully incorporated into the solution of environmental problems.

The research team working on this initiative envisions a sophisticated melding of data with environmental science. ESF’s new initiative in Environmental Data Science will be responsive to emergent data science themes pursued by the National Science Foundation and the National Institutes of Health. The center will foster synergies with the newly formed Center of Excellence in Healthy Water Solutions and coordinate new course offerings, seed grants, critical faculty support, campus computing, innovative faculty training and new partnerships with other academic institutions, government and industry. The initiative has already completed the first Environmental Data Science Bootcamp for graduate students at the ESF Adirondack Ecological Center and established a new environmental data science PhD D. P. D. fellowships.

“Our goal is to develop a new, specialized form of the broader field of data science and enact it here at ESF,” said Dr. Hyatt Green. “Environmental data needs special attention because it is our most helpful tool at mitigating and adapting to climate change; it now comes from a diversity of collation methods, including drones, satellites, imagery and hand-recorded measurements, as well as terabytes of microbial sequence data. It can be difficult for traditionally trained environmental scientists to bring all this data together and make sense of it. We will use this messy data to build a more reliable environmental science foundation already at ESF as a training ground to give students relevant skills needed to do most any job that requires the generation, manipulation and interpretation of data.”

Pathways to a Net-Zero Carbon Future: Landscape Design for Sustainable Energy and Climate Change Mitigation

To avoid catastrophic climate change, industrialized nations must make rapid and fundamental changes to their energy systems and land use practices in ways that eliminate greenhouse gas emissions, and offset the remainder through sequestration and storage. Renewable energy and land-based natural climatic solutions such as forest carbon sequestration are therefore examined to achieve the goal of a “net-zero carbon” future.

However, the pathways that lead toward this more sustainable future are largely uncharted, while the real-world landscapes that can accomplish these pathways—and other societal goals—to be achieved have not yet been conceived.

“While it is possible to prevent catastrophic climate change, and although much has already been done to prepare for a low-carbon enough action,” said Dr. Colin Beier, a leading team member.

“New York’s new climate bill can be a game-changer because it demands action. To achieve its ambitious goals, we will need to use real-world solutions for reducing emissions through clean energy and natural climate solutions. By bringing together ESF’s strengths in land stewardship, sustainable energy and landscape architecture, we are seeking practical ways to reimage and ultimately adapt our current landscapes to not only slow down but actually be resilient to near-term changes we are likely to experience.”

ESF Restoration Science Center

This initiative will lead a hands-on interdisciplinary restoration effort to regain ecological function of landscapes and ecosystems affected by overexploitation and endangered species, and rebuild our cultural relationships with the land using adaptive methodology and science. ESF researchers and scientists will work side-by-side with researchers and community leaders to test, develop and apply novel technologies to deliver ecosystem restoration, incorporating biocultural and food system restoration while deepening our understanding of knowledge and land stewardship practices.

“By launching a regional initiative to restore degraded estates and species from small wetlands and streams to whole forests, lakeshores and entire river basins, people interact with restoration and restored environments by building meaningful social relationships with the environment and the sustainable food the land provides,” said the team’s Dr. John Farrell.

“We want to bring research and teaching closer together in an applied setting,” Farrell said. “This will prepare future generations for dealing with the challenges of complex technology and science solutions while developing strong biocultural and sustainability foundations.”

Center for Environmental Medicine and Natural Health

With a significant portion of human disease influenced by environmental exposures, an interdisciplinary team working on these links has been established. With rapid translation of such findings into public health applications critical, the team works at ESF, SUNY Upstate Medical University and Syracuse University to help fill this gap by creating a formal structure for collaboration centered on the application of big data, artificial intelligence and information technology to pressing environmental health problems. SONH is the team’s new cross-disciplinary venture, said Dr. Collins. Led by Prof. John Farrell, this initiative is needed in the area of translational research as applied to environmental medicine. Experts at the three institutions work well together, setting up collaborations in environmental links to cancer and Parkinson’s disease; health disparities in morbidity and mortality; and diseases influenced by environmental vulnerability; and the relationships between environmental stressors and disease, and discrimination and cardiovascular disease risk.

ESF Excels in College Rankings

ESF topped a number of college rankings this past fall, proving the College is a leader in not only teaching sustainability and environmental science, but practicing it as well. ESF is once again ranked one of the top green colleges by The Princeton Review. The education service company features the college in “The Best 385 Colleges in America: 2020 Edition.”

ESF is ranked No. 2 in the Top Green Colleges. It is the only SUNY school in the Top 50 and one of only four colleges in New York state to make this year’s list.

The College is also featured in the listing of best Northeastern Colleges that were chosen for being “academically outstanding.” ESF is listed as a Red Value College based on a combination of institutional and student data, including academic accountability and career outcomes for graduates.

For the third year in a row, ESF is ranked among the nation’s top “Cool Schools” by Sierra magazine, the national magazine of the Sierra Club. Sierra puts the College at No. 3 among more than 280 schools surveyed.

ESF is the highest-ranked school in the nation’s top 34 colleges and universities in New York state.

ESF was recognized as a top performer in the 2019 Sustainable Campus Index, achieving high marks in curriculum, public engagement, purchasing and green products.

The Sustainable Campus Index, a publication from the Association for the Advancement of Sustainability in Higher Education (AASHE), recognizes top-performing sustainable colleges and universities, measuring overall sustainability performance across 33 areas as defined by the Sustainability Tracking, Assessment & Rating System (STARS). ESF is in a No. 5 ranking in green products, 15 in public engagement, 20 in purchasing, 20 in curriculum and 23 in green products.

ESF is tied with a number of other institutions for its No. 2 ranking in research which covers faculty and department sustainability research and initiatives and open-access research.

ESF achieved top performer status by earning a high score overall in the doctoral institution subcategory in STARS.

Specchio to Lead Office of Communications and Marketing

Stephanie Specchio joined the ESF leadership team as associate vice president for communications and marketing. Specchio assumed her new role as the College’s director of communications this past fall, proving the College is a leader in not only teaching sustainability and environmental science, but practicing it as well.

Specchio brings a breadth and depth of relevant experience to the College’s overall communications function, which covers faculty and department sustainability research and initiatives and open-access research.

Specchio holds a master’s degree in strategic communications and a bachelor’s in marketing from Syracuse University. Specchio held the position of director of communications at Cornell University School of Veterinary Medicine. She holds a Master of Science in integrated marketing communication from West Virginia University.

Specchio brings a wealth of depth and relevant experience to ESF’s unique marketing and communications needs. “I look forward to working with Stephanie and leveraging her leadership to move the College for increased national and international visibility of our research, academic programs, faculty, staff and students,” said Interim President David C. Amberg.
the final seed in the USCAA tournament. The team finished 5-1 in Clermont. The USCAA national tournament against University of Cincinnati Athletic Conference (HVIAC) champions for the third year in a row. The Mighty Oaks were Hudson Valley Intercollegiate Athletics Conference (USCAA). Tripp and junior Mark McClenahan were named USCAA First Team All-Americans. Freshman Simon Seidl was named USCAA Second Team All-American.

Mighty Oaks Fall Sports Roundup

Men’s and Women’s Cross-Country

The trim of 19 boys and 14 girls is in their third year. The Mighty Oaks are coached by knowledgeable and passionate coaches, all supported by the ESF administration and the ESF community.

Women’s Soccer

The women’s soccer team finished its season with a 13-3 overall record. The Mighty Oaks were Hudson Valley Intercollegiate Athletics Conference (LVIC) Champions. The team finished third overall in the USCAA National Championships.

Men’s Soccer

The men’s soccer team finished its season with a 4-1-4 record, just missing the bid for the final seed in the USCAA tournament. The team finished 5-1 in HVAC conference play.

Meet_belief

The team finished third overall in the USCAA National Championships. Several golfers finished in the top five during competitions throughout the season.

Timber Sports

The men’s and women’s teams won the annual home meet held in Rome in November. The women’s team won the Paul Smith’s College meet for the first time in 12 years.

Dr. Herrington Honored with Lifetime Achievement Award

Dr. Lee Herrington, SUNY Distinctive Teaching Professor Emeritus at ESF, received the Lifetime Achievement Award at the New York State Geographic Information Systems Association (NYSGIS) Annual Meeting in October 2019. Herrington was one of the founders of the New York State Geographic Information Systems Community. He has been involved in GIS education and research for more than 30 years and saw it develop from a small user group to a major professional development organization. Herrington has been a major contributor to the ESF GIS program and has been instrumental in developing course material and professional networks.

Food for Thought

New ESF food pantry helps keep students eating so they can keep learning

By Margaret McCormick

Tucked away in the basement of Bray Hall is a small room, accessible yet private, with metal shelves and plastic bins filled with non-perish able food items for students who are not getting enough nutritious food on a daily basis. Food insecurity among college students is a growing problem and, on the ESF campus, leaders are working to alleviate this stress for students struggling with it.

The food pantry, Beth’s Bounty, is named in memory of Beth Ann Newkirk, an ESF student who died as the result of a house fire on Buckingham Avenue in Syracuse in June 2019. Newkirk transferred to ESF in the fall of 2018 and was working toward a degree in environmental and forest biology. At the time of her death, Newkirk was a work-study collections intern at ESF’s Roosevelt Wildlife Preserve. In the months following her death, the College received a number of financial donations in her memory. In speaking with her family, ESF’s leadership learned that Newkirk struggled with food insecurity and many of her classmates had family members who could not afford to take food out of their budget to help the student.

As part of Governor Cuomo’s “No Student Hungry” initiative, the Food Pantry Task Force was launched to help address food insecurity on college campuses. In conjunction with the Food Pantry Task Force, the College created a food pantry in the past and said she worked several jobs in the summer and was able to set aside money for food this year. “This is a state school, not exactly for rich kids,” Rodriguez says. “I have seen students struggling with ramen noodles and pasta. You need more than that to pay attention and succeed.”

Student services is open to any student who is experiencing hunger and/or struggling to obtain food and eat regularly because of financial challenges. As the USCAA is filled with students from pasta, canned fruits, vegetables and legumes, soups, cereal, cooking oil, herbs and spices, and other non-perishable items from the Food Bank of Central New York. The pantry also offers some personal and household items, such as dish soap, laundry detergent, dog food, shampoo, medicine and hygiene products.

ESF students can visit the pantry once a week during drop-in hours (or by appointment) and request food from our list of items. We form each visit and bring their shopping bags. The pantry is open 7 a.m. to 6 p.m. Monday to Friday and staffed by members of the student organization Alpha Xi Sigma, who donate their time.

Crandall says Beth’s Bounty is in its for th year and is figuring things out as they go. She would like to see some significant changes happening in the future. Students are positive and feel that having a food pantry helps them to make ends meet. Students are satisfied with the pantry because it is open and accessible, and they don’t have to worry about running out of food. Students are also happy that they can use the pantry as much as they need and that they can bring friends with them.

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If you are interested in making a donation please visit www.esf.edu/foodpantry/ and consider making a donation to “Beth’s Bounty.”

You can also mail a check to:
ESF Development Office, 214 Bray Hall, 1 Forestry Drive, Syracuse, NY 13210

or send a contribution through ESF College Foundation, Inc. Re: Food Pantry

At top, Laura Cran dall is the director of student involvement and leadership, helped establish the ESF food pantry.
Environmental Science

The Division of Environmental Science oversees the B.S. program in environmental health, the B.S. program in environmental science and the graduate program in environmental science (GPPES). These interdepartmental programs continue to attract a wide array of students beyond the traditional department, providing opportunities for the next generation of environmental scientists and managers. Currently, there are 48 undergraduate and 129 graduate students in environmental health (EH) and environmental science. In addition, 40 of the 77 students enrolled in GPPES are pursuing their Ph.D.

To refine our undergraduate environmental science program to meet the needs and expectations of our graduates, we are excited to add a new required course, ENS223, Professional Development in Environmental Science. This course will be held during the spring semester and is designed to prepare students for careers in the environmental science field. In addition to preparing students for careers in the environmental science field, the course will also provide students with a platform to share their research and experiences with their peers and faculty members. The course will be taught by Dr. Jennifer Belant, the department's Interim Chair.

In the environmental science program, we have seen a growing interest in the field among our students. This interest has been driven by the relevance of environmental science in addressing contemporary challenges such as climate change, biodiversity loss, and environmental justice. To accommodate this growing interest, we have recently introduced a new course, ENS232, Professional Development in Environmental Science. This course will provide students with the skills and knowledge needed to succeed in the environmental science field.

Additionally, we have also expanded our graduate program in environmental science. We have recently added a new track in environmental health, bringing the total number of tracks to four. These tracks include environmental chemistry, environmental biology, environmental policy, and environmental geology. This expansion will allow students to specialize in areas that align with their career goals.

We continue to refine our undergraduate environmental science program to meet the needs and expectations of our graduates. We are excited to add a new required course, ENS223, Professional Development in Environmental Science. In addition to preparing students for careers in the environmental science field, the course will also provide students with a platform to share their research and experiences with their peers and faculty members. The course will be held during the spring semester and is designed to prepare students for careers in the environmental science field.
Scientists Link Decline of Baltic Cod to Hypoxia — and Climate Change

By Claire B. Dunn

ESF RESEARCH

If you want to know how climate change and hypoxia — the related loss of oxygen in the world’s seas — affect fish species such as the economically important Baltic cod, all you have to do is ask the fish.

Those cod, at least, will tell you that hypoxia is making them smaller, scrawnier and less valuable.

“The cod themselves are telling us through their ‘internal logbooks’ that they’re affected by hypoxia, which we now know is driven by climate change and by nutrient loading,” said Dr. Karin Limburg, a fisheries ecologist in the Department of Environmental and Forest Biology. “Our recent findings suggest fish are in worse condition because of hypoxia.”

Limburg is the joint author of a paper that appeared in December in the journal Biology Letters, published by the Royal Society, that adds new depth and perspective to scientists’ ability to decode the history of a fish’s life by analyzing the chemical content of otoliths, or earstones, that form part of a fish’s hearing system. Made of calcium carbonate, otoliths grow as the fish grows, forming rings each year that can be read much the same way as a tree’s rings.

Limburg was a contributor to the International Union for the Conservation of Nature’s recently released global ocean deoxygenation report. That report lays out the clear connection of hypoxia to the warming climate. As for the cod otoliths, Limburg puts it this way: “It’s another tool that helps tell the story. It provides a clear link between hypoxia and the declining condition of Baltic Sea cod that we’ve been seeing for more than 20 years.”

The new study details research done by Limburg and her co-author, Michele Casini of the Department of Aquatic Resources at the Swedish University of Agricultural Sciences. They report that the presence of certain trace elements in otoliths points to hypoxia as the reason for the declining condition of Baltic cod, at least for the last 20 years.

Long-term monitoring shows that the frequency of slender cod with little economic value has been steadily increasing since the 1990s, and the fish’s overall body condition — which takes length and weight into consideration — has decreased by around 30 percent. From the early 1990s to 2018, the average weight of a 45-cm-long cod (about 18 inches) has dropped from 500 grams (11 ounces) to 600 grams (21 ounces).

The amount of the element magnesium in otoliths is seen as an indicator of the fishes’ overall condition. The higher the magnesium level, the better the fish had fared in life. But Limburg recently discovered that another mineral, with a similar-sounding name, manganese, explains why the cod were increasingly in poor condition.

In well-oxygenated ocean water, she said, manganese exists as a solid, taking the form of small particles. But when oxygen is depleted, manganese dissolves and can be absorbed by the fishes’ bodies. The otoliths, analyzed through X-ray fluorescence and mass spectrometry analysis, pick up the manganese and tell the story of the fish’s travels through hypoxic waters.

Limburg said the research indicates hypoxia has been a factor since 2000. “This suggests that in earlier years, the poor condition of Baltic cod was caused by other factors, such as over-fishing or fishing,” she said.

“Manganese reflects the fish’s condition. Basically, it tells us if the fish was ‘feeling’ good or bad,” she said. “The manganese tells us why it was feeling bad — that it had spent too much time in deoxygenated waters.”

Claire B. Dunn is a freelance science writer in the Syracuse area.

50% Decline in Mallard Population Sparks Research and Funding Efforts

By Claire B. Dunn

The U.S. population of eastern mallards — dabbling ducks with distinctive green heads — has plunged inexplicably by 50 percent in the last 20 years, prompting ESF to launch research into the birds’ productivity, changes in their habitat and their genetic diversity.

Long-term data collected along the Atlantic Flyway indicates the birds’ numbers are falling dramatically, but scientists cannot explain why.

“We don’t know the mechanism for the decline,” said Dr. Michael Schummer, a faculty member in the Department of Environmental and Forest Biology.

Schummer and several partners have responded to the changes in the population with a research effort called Rescue the Eastern Mallard. He said the challenge highlights an urgent need for humans to address biodiversity loss and devise ways to accommodate wildlife in developed areas.

“We have to get this one right,” he said. “Eastern mallards are one of the most monitored populations on the planet. We band thousands of them and recover lots of them every year. We fly planes over to count them, we get on the ground and count them. We have all these data, but we don’t know why they are in decline.

“If we don’t figure this one out, we’re in trouble,” he said.

“We have imperilled species in faraway places that are much more isolated. Here, we have an opportunity to answer some important questions about what happens when even common species start to decline. We are working in one of the most populated places on Earth, so we have access to lots of birds and data. If we can’t find a way to keep animals with us in this urban environment, where is it going to happen?”

A crowding effort at the end of 2019 has so far raised some $30,000 that is being added to funds received previously for the project. Schummer credits Delta Waterfowl with leading the support. The Schummer Lab for Waterfowl and Wetlands Conservation is also partnering with Ducks Unlimited and the Long Island Wildfowl Heritage Group.

The scientists will use innovative techniques to analyze elements locked in mallard feathers to understand where eastern mallards are hatched. High-resolution satellite imagery will help researchers understand how changing landscapes influence the number of mallard ducklings produced. And new genetic technologies and techniques will be used to determine the genetic diversity of mallards regionally.

Schummer said preliminary analyses are already providing novel insight: the majority of Eastern mallards are produced in Canada, even though most of the breeding population is in the United States.

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Claire B. Dunn is a freelance science writer in the Syracuse area.

If you’d like to learn more about the Rescue the Eastern Mallard project, including how you can help support the lab, visit the Schummer Lab at https://schummerlab.woodylab.com/donate.html or contact Dr. Schummer at mishumm@esf.edu.
The Statue of Liberty is an American icon, symbolizing hope and freedom to millions who come to America and those who have been here for generations. ESF alumnus Jeffrey Rainforth ’97 (CM) is playing a major role in its preservation and that of the surrounding environment, and it’s not something he takes lightly.

“There’s no other feeling like it as you’re coming in on the ferry in the morning and the fog’s coming across the Hudson and there’s the statue in the background,” said Rainforth, whose company recently completed construction of the new Statue of Liberty Museum on Liberty Island.

There were times when he and his crew were on the island in New York Harbor until 2 or 3 a.m. as the work dictated. “It was just us and the statue,” he said. “You would stand there and look up at it and you can’t believe you’re there by yourself in the middle of the Hudson River looking up at the statue. It’s pretty special.”

Rainforth is president of the Phelps Construction Group based in Boonton, New Jersey, and project executive on the company’s Liberty and Ellis islands projects. He has been instrumental in ensuring that not only will the Statue of Liberty be here for future generations, but that the surrounding grounds and museums provide visitors with an immersive experience.

Rainforth and his partner Douglas Phelps formed Phelps Construction in 2007 after working together for another construction company. At that company they worked on the restoration of the Statue of Liberty following the events of 9/11 as officials realized the statue was a potential target for terrorist attacks.

“At that point the only way up was a spiral staircase and the only way down was a spiral staircase,” said Rainforth. “There was no emergency evacuation; there was only one way in or out, so they figured that was not a good situation.” Life safety upgrades included adding a sprinkler system throughout the statue and egress stairs. Stairs that went to the statue’s crown were removed and blast-resistant glass was installed, preventing visitors from climbing into the statue’s crown.

“You could stand at the last pedestal level and look up into the statue and hear a story through a new AV system,” Rainforth said. “But about three years later some politicians didn’t like the idea that they took away the ability of people to go into the crown and they ended up putting in elevators to take you up to the crown. But the number of people who can visit the crown is now limited to approximately 400 per day.”
The use of native plantings was just a part of the use of best practices for sustainability.

Phelps Construction is no stranger to work on Liberty and Ellis islands, which together make up the Statue of Liberty National Monument. The company completed work on the Peopling of America Center on Ellis Island in 2015. That project involved a large museum renovation and creation of new museum space in the existing historic buildings. The new museum areas tell the story of immigration to the United States in the post-Ellis Island era. Ellis Island was then renamed The National Museum of Immigration.

“We went right from the Peopling of America project to planning for the Statue of Liberty Museum in 2012,” Rainforth said. It took about a year and half of planning and working with architects to develop the designs and proper budgets before the groundbreaking in late 2016.

The work on Liberty and Ellis islands is funded through the nonprofit Statue of Liberty Ellis Island Foundation (SOLEIF). The money is privately raised and, through a partnership between the SOLEIF and the National Park Service, is donated to the park service to be used on various projects.

The Statue of Liberty Museum was one such project. The 26-month project resulted in construction of a 26,000-square-foot building that provides the estimated 4.3 million annual visitors the opportunity to learn about the Statue of Liberty’s history, influence and legacy through three gallery spaces and artifacts, including the statue’s original torch.

During that time, the company also built a new secure screening facility to replace the not-so-temporary facility that was installed in a tent during the 2003 restoration of the statue.

“At that point (in 2003) there was limited security,” Rainforth said. “The events of ‘9/11 changed the manner in which people could access the statue. The tent housed modern airport-type security systems.”

With work being done on the Statue of Liberty Museum it was decided to replace the tent with a permanent structure.

“We built another environmentally sensitive structure called the Secured Screening Facility that was a mass timber structure with a green roof alongside the Statue of Liberty to house the screening equipment. This building was designed and built in 10 months so as not to impact the opening of the new museum.”

After transferring to ESF from SUNY Delhi, where he earned an associate’s degree in carpentry, Rainforth gained an interest in green technologies. “When I started in the industry in 1995, it was something that was just taking off,” he said.

After transferring to ESF from SUNY Delhi, where he earned an associate’s degree in carpentry, Rainforth gained an interest in green technologies at ESF. “When I was at ESF green technologies were just starting. There wasn’t a course designed for it, but I know since then it’s really the basis of some of the programs there.”

Rainforth credits Ken Tiok 78, then an instructor in the construction management program, with inspiring him on his career path. “He was an industry professional and professor who would spend extra hours with us and help guide us in the right direction down our career paths. He was always very helpful going the extra mile and helping us with the real-life experience that he had coming from the industry. While he taught the lessons from our textbooks, he also taught us the lessons he learned being in industry himself. These are the lessons that taught me the most.”

Phelps Construction Group’s work on nearby Ellis Island, which served as an immigration station for more than 12 million immigrants until it closed in 1954, continues today. The project involves historic restoration of an outdoor recreation structure on the island’s south side. “This is the part of the island that isn’t really been restored at all,” said Rainforth.

Rainforth credits his time at ESF for giving him an introduction to green technologies. “When I started in the industry in 1995, it was something that was just taking off,” he said.

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Phelps Construction Group continues work on other projects but maintains ties to some special islands in New York Harbor.

“We’re always on Liberty and Ellis Island doing something,” Rainforth said.

Karen B. Moore is editor of ESF Magazine.
Alumni Honored as ‘Trailblazer’ Promotes Benefits of Urban Forestry

By Judy Gelman Myers

For his exceptional contributions to urban forestry, ESF graduate David Moore ’66 FRM has received the New York State Urban Forestry Council’s Trailblazer Award. The foundation is the largest nonprofit membership organization dedicated to planting trees, and every year it honors six individuals and organizations for their work in tree conservation. The Trailblazer Award recognizes professionals or organizations for their work in tree conservation.

“The Trailblazer Award recognizes professionals or organizations for their work in tree conservation. The system for tree selection, and now in Oakland, California, where he’s a senior tree supervisor. Write Judy Gelman Myers recently spoke with David Moore about how he navigates some of the challenges he faces as he transforms concrete deserts into tree-lined oases. Bridging that gap is very meaningful, and it’s where I find myself on a daily basis.”

ESF: How did you study at ESF prepare you for your job?

DM: Environmental studies was a requirement major at ESF. I was immersed in a fascinating world of science, and I learned that you can’t do that type of work without stakeholders, and an approval process through a chain of command. Policies are constrained by availability of resources, time, other laws, and social pressures. Some of the policies under my purview are tree protection, prioritizing tree species, and the natural urban forest and its canopy so when old trees reach the end of their lifespan, the city can determine what replacement trees are placed. In a common goal across different cities is environmental equity/ environmental justice; in the context of urban forestry, you want to disperse trees in areas that need them the most — areas that are prone to pollution or to crime, or are closest to the highway, or have the most amount of concrete.

ESF: How much does budget enter into the picture when you set policy?

DM: Unfortunately, the concept of trees being an investment with measurable environmental benefits is still relatively new. Most people see trees as luxury — something to be planted and cared for when times are good. When times are bad, they don’t rank as high as other city services.

I feel strongly that urban trees should be viewed as a component of city infrastructure, like roads, bridges, or schools — features that provide a service that can be measured in dollars. If you’re going to build a bridge, you have to show exactly how many cars are going to use it, how much it will cost, and what the net benefit is. When we’re planting trees, we’re really planting air filters, building coolers and stormwater absorbers. We need to change the paradigm to see them as infrastructure rather than decoration on the streets.

ESF: You worked in New York for 10 years before moving to Oakland. How does urban forestry differ in these two cities?

DM: In New York City, the pace and the expectation is high. Due to a legacy of research-based public policy and an appreciation for trees as green infrastructure, municipal investment in urban trees is also high. Oakland is much smaller city. It has 420,000 or so residents instead of eight and a half million, like New York. It’s challenging with other issues. My department in Oakland was downsized in 2008 or 2009 due to budget cuts. More than half of the staff were let go and never restored, which means that service levels have been severely affected. So instead of being the least restressed, fastest-paced, high-volume operation that I used to my biggest challenge now is being understaffed and under-resourced.

ESF: How do you navigate the intersection between environmental and public policy?

DM: Tree science is based on predictable laws of the universe. I can always count on the tree growing toward the sun. Working for city government is filled with unexpected situations. Understanding how government operates, what it’s capable of doing and what its limitations are helps me act strategically. I’m trying to do something as big as planning an urban forest.

I think bureaucracy gets a bad rap in general. It’s easy to say our government doesn’t know what it’s doing, but there’s more to it than that. That’s the very reason I wanted to work for local government. I wanted to step up to the plate and do something I can’t see rather than just complaining about how other people ought to do a better job. I have a huge appreciation for anything actually accomplished in society, the consensus that needs to be made, the high road that needs to be taken, in the face of certain people never being happy or satisfied.

To give an example of what I’m saying, the government is a monopoly service provider. If someone is not happy with my service, they can’t go elsewhere. A government agency provides what it can, serving the most people with the limited resources available. That’s where you get into the art of government — how can we equitably serve the people despite the inevitable constraints?

For anyone out there who’s considering a life in government, I’d say find a mentor, someone who’s been there, and learn from them. It’s so beneficial to have a career in government, where they’re in the driver’s seat and can facilitate a world in a way you’re skilled and passionate about. Even the most challenging days working for time, where people are sweating, and seeing the tangible impacts of your hard work, it’s so fulfilling in and of itself.

Judy Gelman Myers is a freelance science writer based in New York City.
“It’s hard to be healing and feel like a whole person when you’re hungry or you’re not getting adequate nutrition,” said Jessi Lyons ’09 (MLA), farm coordinator of the Brady Farm in Syracuse.

The farm is a program of the Brady Faith Center, an urban mission on Syracuse’s south- west side. Located between Onondaga Creek and one of its tributaries, the 5.8-acre farm started in 2016 as an urban farm woven into the fabric of the community to provide sustainable nutritious foods, employment and education that nourishes the body, mind and spirit of community residents, according to the Brady Faith Center website.

“It’s over three miles to the nearest grocery store in this neighborhood,” Lyons said. “So food access is important.” But also important are affordability and quality. “We have about eight corner stores in a quarter mile of our farm. You can get plenty of junk food and, unfortunately, that’s what a lot of folks are doing for just convenience meals — they’re relying on corner store-type foods. So far as I tell my Faith Center is concerned, food access is part of spiritual and physical health.”

Lyons has been a key player in food accessibility in Syracuse since 2008 when she came to ESF for her master’s degree in landscape architecture. Her capstone focused on community gardens. After earning her degree, she worked for Cornell Cooperative Extension in Onondaga County as a natural resources program coordinator and continued to be involved in food accessibility and urban agriculture issues. She was instrumental in starting several programs to help urban gardeners, including Southwest Community Learning Farm and Syracuse Grows, a nonprofit network that provides advocacy and support for existing community gardens and urban farms.

She consulted on the Brady Farm project when it was in the planning stages. “There was interest in creating a larger urban farm and I was giving advice and consultation early on,” she said. Once they secured the land, administrators at the Brady Faith Center offered her the job of farm coordinator.

Lyons noted some people expect the farm to be a picturesque landscape with weed-free, neat rows. But the facility doesn’t always meet people’s expectations of what a farm looks like. “I tell people, ‘No judgment. We’ve been here four years, we’ve been organic and we didn’t know what we were doing.’ It’s hard sometimes.

“The reality is organic farming as a nonprofit is expensive and hard. We can’t afford labor and there are going to be weeds because you can only do so much,” she said.

The farm staff has an ESF influence. In addition to Lyons, it includes Farm Manager Alice Gallagher ’12 (ES) and dedicated volunteer Thomas Mackey, a graduate student in environmental interpretation. The staff uses numerous sustainable practices including cover crops, minimal tillage and natural pest management.

“Some people complain that we have a lot of weeds, but what might look like a weed is actually a cover crop that’s there intentionally because it’s a pollination period for a certain insect that is beneficial or helps with pest management,” Lyons said. “I use our newsletter as a platform for education.

For example, Lyons wants people to know that the farm balances its pest management to promote lady bugs because they, in turn, help control aphids that can damage plants. “If we take care of our ladybugs, they will take care of our aphids,” she said.

Food raised at the farm is sold at a variety of outlets including an on-site farm stand and a booth at the Regional Market on Saturdays. The farm also offers summer and winter Community Supported Agriculture (CSA) boxes.

“When 20 percent of our produce gets donated,” said Lyons. “It might be to a neighbor or other community pantries or organizations. Some people get directed donation boxes through our CSA program.

Part of the farm’s mission is being sensitive to people’s food dollars. The weekly CSA newsletter includes information about what’s in the latest box and how to prepare it. The newsletter also provides tips on growing produce in Central New York and educates its audience about the challenges of farming. “It’s helping people understand some of the underlying principles of organic farming that might not be obvious,” Lyons said.

Part of food access for us is growing things that people want to eat. One of my standard lines is we don’t grow kohlrabi because nobody knows what to do with kohlrabi. I might love it and it might be an amazing vegetable but if people don’t know how to eat it, it’s a waste of their money,” she said.

The farm is also focused on workforce development. “We employ people who don’t necessarily have the best skills and education. Or they might also have other life limitations that involve substance abuse or mental health or just the difficulties of living in poverty,” Lyons said. “There are a lot of untapped resources in our community — a lot of great people who aren’t put into leadership positions because life is complicated, so we want to give those folks opportunities.”

Lyons maintains a strong connection with ESF. This past fall, students helped with seasonal chores during the October Saturday of Service, pulling up old eggplants and tomato plants. Students have done capstones on sustainable agriculture, and Dr. Timothy Yokl ’02 of the Department of Sustainable Resources Management has a research plot on the farm studying the use of shrub willow for mulch and how different mulch applications can improve compacted soil.

Tucked in a back corner of the farm is a nature classroom situated on a migratory pathway. “This little wooly spot is like a bird haven,” Lyons said. When Dr. Stewart Diemont of ESF’s Department of Environmental and Forest Biology visited, Lyons told him about the bald eagles they often see at the farm. As on fox, an eagle flew overhead. “We’ve got all this foraging habitat, and there’s shelter, woods and water,” she said. “It’s a really sweet little migratory path. This is an opportunity we want to grow. This is where I want ESF students to go make something happen,” said Lyons.

Karen B. Moore is editor of ESF Magazine.
Mariah Gladstone grew up near Glacier National Park in Montana’s Rocky Mountains. After earning a bachelor’s degree in environmental engineering from Columbia University, she returned home, near her father’s community, the Blackfeet Nation. Inspired by family roots — her mother is Cherokee from Oklahoma — she created Indigikitchen, an online cookbook that emphasizes cooking with native foods.

Native people have been subject to very intentional colonization of our diets. The past 200 years has brought rapid forced dietary shifts that have led to disease and destruction of our communities, the Blackfeet Nation. Inspired by family roots — her mother is Cherokee from Oklahoma — she created Indigikitchen, an online cookbook that emphasizes cooking with native foods.

Gladstone is one of four ESF master’s students who received SIGP funding this fall. Also supported through the Sloan partnership is Susannah Howard of the Citizen Potawatomi Nation, who earned a master’s degree in environmental geosciences and certificate in Native American and Indigenous studies from Smith College. The third student is Dinesh Judd, of the Navajo Nation and graduate of Northwest Indian College, who is in the graduate program in environmental science, studying rare plants on the Navajo Nation. Bidadanin Reinhart, who is in the graduate program in environmental science, studying rare plants on the Navajo Nation. Bidadanin Reinhart, who is in the graduate program in environmental science, studying rare plants on the Navajo Nation. Bidadanin Reinhart, who is in the graduate program in environmental science, studying rare plants on the Navajo Nation.

Collaborating with Sloan’s other university partners also multiplies opportunities for learning: “We get their insight and can share in their best practices,” she said. “It helps ESF learner and they get to learn from us.” Kimmerer counts herself among the beneficiaries. “It is a source of colleagues for me,” she said. “I appreciate the collaboration.”

One of the hallmarks of indigenous thinking is not chaotic and integrated,” Kimmerer said. “It doesn’t compartmentalize science from policy. Those things are intertwined one with another in a cultural context.”

Educated indigenous scientists could, for example, play important roles in the honoring of treaty rights, and guiding land use and conservation. “We have the opportunity to help educate a whole new generation of indigenous land managers,” Kimmerer said. “They will come to a new wave of self-determination in indigenous environmental decision making.”

Howard is studying how climate change affects culturally important plants of the Potawatomi Nation. She gave up in kindergarten and first visited Oklahoma for a six-week Potawatomi language immersion program. “It was a crash course in the culture and business and how we exist as a nation and build relationships so you can give back,” she said.

“My community has already experienced climate change in a rapid way, having been moved in the 1850s from the Great Lakes to Kansas by Federal Indian Removal policy.” — Susannah Howard

In the coming months, ESF will ask members of the College community to review the federal regulatory approval process for the introduction of genetically engineered, blight-tolerant American chestnut trees that were developed at ESF. Powell said he expects the petition to be accepted for full review this winter. The request must be approved by the U.S. Forest and Food Administration, Environmental Protection Agency and U.S. Department of Agriculture. Because the chestnut’s range extends into part of southern Canada, approval will also be sought from the Canadian Food Inspection Agency.

Although genetic engineering has been approved in use for agricultural crops, this is the first time scientists have sought approval to use the technique to restore a native tree species. The ESF scientists identified a single gene from wheat to the tree’s genome; the additional gene allows the tree to detoxify the toxic acid produced by the invasive fungi. For the last several years, the chestnut project at ESF has been supported primarily by philanthropic funds. Claire R. Dunn is a freelance science writer in the Syracuse area.

ESF has received its largest-ever charitable gift, $3.2 million, to support one of the College’s most impactful research projects: the restoration of the American chestnut tree. The gift from the Templeton World Charity Foundation, Inc., will support a full three years of research and restoration work. “This is truly a transformational gift,” said Dan Piwinski ’80, senior director of major gifts in the ESF Office of Development. “It means that at this critical stage, with the project undergoing federal review, the researchers know they have the support they need to continue work with a full staff.”

Dr. William Powell, who heads the ESF American Chestnut Research and Restoration Project, said, “The Templeton support will allow us to ‘kick-start’ the restoration of the magnificent American chestnut trees and help improve the health of the forest from which they were lost.”

The Templeton World Charity funds scientific breakthroughs and development of practical tools relating to the search for meaning, purpose and truth. The charity describes itself as serving as “a global philanthropic catalyst for discoveries relating to Big Questions of life and the universe, in areas of science, theology, philosophy, and human society.”

The gift will support numerous aspects of the project, including completion of regulatory review; establishment of production orchards for public distribution of the blight-tolerant trees; production of transgenic trees on federal and small-scale forest sites; establishment of small educational plantings at online college campuses; development of historical sites and other public venues; the planting of a demonstration research forest focused on public education and outreach; development of ecosystem and agicultural restoration protocols; and, finally, the start of distribution to the public.

Dr. William Powell stands among American chestnut plants in an ESF greenhouse.
Senior Truong Ho Receives Statewide EOP Award

by Karen B. Moore

Soon after Truong Ho and his family arrived in the United States from Vietnam in 2015, his mother became ill and needed to go to a hospital. That experience made an impression on Ho and furthered his desire to pursue a medical career. “My family and myself couldn’t speak English that well, so we had a really hard time in hospitals,” he said. “They (the hospital) could provide my family with a translator, but it’s not convenient to talk with a doctor (through a translator),” he said. Cultural differences added to the difficulty, he said. “It’s different from Asian to Americans,” he explained. “We’re not open to talking about (per- sonal) stuff. It wasn’t easy for her to talk about it and I understand that. So, I want to be a doctor and understand other types of people and connect them to healthcare.”

Ho and his parents moved to the United States for his education. “They knew I would study better in a bigger country, especially America,” he said.

Despite a significant language barrier, he hasn’t wavered from his goal of becoming a doctor. He was admitted to ESF as an Educational Opportunity Program (EOP) student in the fall of 2017 and will graduate in May 2020, completing his biology coursework with a minor in mathematics in three years. He is an active member of the ESF community, both in and out of the classroom. He has consistently been an EOP success story and excels in his coursework.

The Career Fellowships are intended to promote the career and professional development of ESF students. The program has supported nearly 100 students over the last seven years. The program recently was buoyed by a $250,000 gift from alumna Jesse Fink and Betty Mitchell-Fink — the second such gift from the Finks since the program’s inception.

In Glenn’s case, it provided the financial security to gain experience in her chosen field. I funded the trip by myself and the fellowship enabled me to work there without worrying about money. Without the fellowship, I wouldn’t have felt a lot of financial stress during the trip.

“The experience solidified my desire to work with primates and set the foundation for my future in primate rehabilitation,” she said.

Glenn graduated in December and is applying for a position at the Pacific Primate Sanctuary on Maui. Karen B. Moore is editor of ESF Magazine.
The ESF Alumni Association honored this year’s Graduate of Distinction award recipients during Commencement Dec. 6, 2019. These awards are presented each year to recognize the outstanding achievements of our distinguishing alumni, and share these accomplishments with our newest graduates.

2020 Graduates of Distinction: Call for Nominations

We are currently seeking nominations for the 2020 awards in all three categories. Lifetime Achievement is reserved for alumni who have ended or will soon end their active careers, Notable Achievement is for alumni who are in the early stages of their careers and, Incipiens Querua is geared toward our alumni who have recently graduated and are demonstrating their commitment to ESF’s environmental stewardship through their professional and/or volunteer work experience. Please keep in mind these awards are presented to those whose accomplishments might be considered “pioneering,” whose work has positively affected society, or who offer inspiration to students and fellow alumni.

Nominations may be received from alumni or anyone who would like to nominate an alumnus to receive one of these awards. Please visit www.esf.edu/alumni/distinction.htm to complete an online nomination form or email alumni@esf.edu to request a nomination packet. Self-nominations are welcome. The nomination deadline is June 30, 2020.

John Anlian ’73 Notable Achievement

John Anlian ’73 is an outstanding example of how commitment to the environment and a passion for public service can change the world. After graduating from ESF with a degree in forest biology, Anlian continued his education at New York Law School in New York City and earned his juris doctor degree, and began practicing law in New Jersey. While developing a successful career as a respected attorney, he did not forget his roots. Anlian’s desire to improve the environment and, in turn, the lives of those he served, led him on an extraordinary journey spanning almost 40 years of public service that includes serving as an elected official for his hometown of Ridgefield Park, New Jersey, since 1980.

Running as an independent candidate on a platform of providing responsive government, Anlian was elected to the board of commissioners in 1980. Now serving his 24th four-year term, he continues to promote local government that is responsive to the will and needs of the people. This has included, among other things, establishing a nature preserve in his community, creating an Environmental Commission and Green Team that promotes green sustainability, furthering the goals of the village’s Shade Tree Commission and keeping the environment and conservation as important factors in municipal decision-making.

Among Anlian’s achievements are the advancement of the issues of conservation, recycling, land preservation, urban forestry, parks and green sustainability, and his leadership and support for a major expansion of Overpeck County Park in Bergen County, New Jersey.

Over the years, Anlian has combined his love for the environment with his legal expertise by volunteering his time and knowledge to teach members of the N.J. Shade Tree Federation and several New Jersey communities about the legal concerns with shade tree commissions and community forestry. He was instrumental in providing counsel and advice in the adoption of the New Jersey Community Forestry Assistance Act, and he continues to provide guidance on other proposed legislation in New Jersey affecting trees and community forestry.

Throughout his tenure, Anlian has never forgotten the principles that he learned at ESF and upon which he started his career in public service. He is a life-long active environmental activist and has been active in scouting. An Eagle Scout himself, he has served as an institutional representative for a local Boy Scout troop for many years. He continues to help keep environmental and conservation concerns at the forefront of municipal governmental decisions in Ridgefield Park.

For his outstanding contributions in society, the College of Environmental Science and Forestry Alumni Association is proud to recognize John Anlian as the Graduate of Distinction — Notable Achievement award recipient.

Nikita Lopoukhine ’68 Lifetime Achievement

After earning his degree in forest botany from the College, Nikita Lopoukhine ’68 began his career working with forestry Canada in Ottawa. During his tenure there, he earned his master’s degree from the University of Saskatchewan under the tutelage of the renowned Canadian biogeochemist and eco-philosopher, Dr. Sir Robert Macfadyen.

Lopoukhine’s career path continued with the Lands Directorate for Environment Canada in Halifax, Nova Scotia, where he led the development and application of a Coastal Classification System for the Atlantic Provinces of Canada. As a result of a working group under the Canadian Committee on Ecological Classification, he was instrumental in the evolution of the techniques and concepts of ecological land classification.

In 1981, Lopoukhine brought his talents and vision to Parks Canada, where he worked as a World Bank adviser, served as national science advisor, chaired the Society for Ecological Restoration Board, served as executive director of the Ecological Integrity Branch and finally, served as director general, National Parks Directorate.

Throughout his years with Parks Canada, Lopoukhine’s accomplishments include the application of controlled fire in maintaining park ecosystems, the launching of a leading-edge ecological integrity monitoring program, and the introduction and implementation of the Species at Risk Act. He also oversaw the implementation of emerging scientific methods in addressing contemporary issues such as the Convention on Biological Diversity.

In 2004, Lopoukhine was elected chair of the World Commission on Protected Areas for the International Union for the Conservation of Nature, where he served for the next eight years. In this volunteer role, he worked to strengthen the recognition of the fundamental role of protected areas in conserving nature and reducing the definition of a “protected area” into the standard currently used around the world. Through presentations and guest speaking engagements across the globe, Lopoukhine continues to promote the importance of ecological restoration, biodiversity and conservation. He has spent a lifetime protecting the special places of our planet and communicating to people the experience, embrace and love nature for them.

For his outstanding contributions to the field of environmental and forest biology, the College of Environmental Science and Forestry Alumni Association is proud to recognize Nikita Lopoukhine as the 2019 Graduate of Distinction — Lifetime Achievement award recipient.

Roseana Burick ’06 Incipient Querua

Since graduating from ESF, Roseana Burick ’06 has made her mark in environmental sciences working with the U.S. Army Corps of Engineers. She has dedicated her career to overseeing public recreation and environmental stewardship, planning, interpretation, outreach services and budgeting for federal projects. Burick has been recognized for the numerous occasions she coordinated for the Department of the Army for her tremendous work on national projects and outstanding community outreach.

Burick’s degree in water sciences/environmental policy and law prepared her extraordinarily well for her career with the U.S. Army Corps of Engineers. She has served as a park ranger for a lake in Virginia and North Carolina, a natural resources technical specialist for the St. Louis District, a lock and dam program manager for the Mississippi River, chief of natural resources technical specialists for the Ridgefield National Wildlife Refuge, and most recently she accepted a program manager position at the U.S. Army Corps of Engineers headquarters office, where she works on policy and budget for the Northwestern and Pacific Ocean divisions. In her professional roles, she has been responsible for the critical technical guidance and recommendations concerning solutions to a variety of natural resources, park management, flood control, operational and budget development issues.

Burick worked to develop and apply standardized operating procedures to support the implementation of day-use and camping fees, special recreation-use permit fees and the addition of the U.S. Army Corps of Engineers into the America the Beautiful Pass Program.

Whether it’s partnering with local libraries for their summer reading programs or teaching the next generation of park rangers about interpretation and outreach, Burick has played an integral role in the development of national community outreach careers. She was instrumental in implementing the national Every Kid Outdoors initiative in conjunction with other federal agencies. This program provides free access to national parks across the country for every fourth-grader and their family. Burick served as the lead representative of Engineers key point of contact on the project. Her involvement included leading training field assistants, assisting with grants, coordinating corollary events and attending a White House reception.

For her outstanding contributions in the field of natural resources management, the College of Environmental Science and Forestry Alumni Association is proud to recognize Roseana Burick as the Graduate of Distinction — Incipient Querua.
1943
George Prokupek (PSE) writes, “This past June, my wife and I celebrated our 72nd wedding anniversary. In August, I celebrated my 97th birthday. Wishing all ESF alumni a happy and healthy 2020.”

1948
Art Nishlak (PSE) writes, “I celebrated my 91st birthday June 19, 2020, and my 62nd anniversary Nov. 10, 2019, with two of our children, Nancy, and Judy and her husband, John. I have been considering our age. Both us walkers and having lived in an assisted living facility in Woodbridge, Connecticut, just outside New York City. Hope all who see this are still enjoying life.”

1950
Willard Fitchel (WPE) writes, “Still enjoying fishing and golf with my children and grandchildren. It’s ESF in my thoughts.”

1952
Jaye Hutchison (FOR) writes, “Daily woodsy walks keep me at least partial and painting if not healthy, as approach 90. I’m happy and life continues with my wonderful wife.”

1959
Ernest Paskey (WPE) writes, “Living midyear throughout the Gulf of Mexico and Atlantic Ocean in a subtropical forest, it’s very nice!”

1965
Robert Edmonds (FRM) writes, “You have chosen well if you went to ESF. After well over 50 years in natural resources, I realize I could not have selected a better path in life. In fact, I have retired, ‘unretired’ and still maintain a couple of related businesses because I just can’t shake the desire to stay in forestry. Like many of my colleagues, the natural resources industry has captured me mind, body and spirit. One reason is that I live back East, I welcome the possibility of participating in our local rail-to-trail organization.”

1968
David Tessier (LA) writes, “I took a wonderful and relaxing 10-day cruise to the Panama Canal with stops in Aruba; Curacao; Colon; Panama; and Puerto Limon, Costa Rica. The word I use describing the canal was impressive. Everyday is a Saturday.”

2017
Bruce Dayton (WPE), “I can hardly believe that I have been 67 years since graduation and that I have been living and retired on a golf course in Palm City, Florida, for 30 years. I spent my whole working life in the pulp and paper industry and have lived and worked in six states, some twice, plus four years in Canada and seven years in Brazil. First off with National Gypsum Company in various engineering, manufacturing and management positions. Then with Beloit Corporation, Beloit, Wisconsin, a leading manufacturer of papermaking machinery in sales and sales management positions. Then four years as VP of sales Beloit Corporation, and lastly, seven years as president of Beloit Brazil, Campinas, where we sold, engineered and manufactured machinery for all of South, Central and North America. It has been a great ride both professionally and personally. I finally settled into ESF in a few days a month, hockey and lacrosse games with my great grandchildren and Connie and cele- brated my 58 years in marriage in July!”

2019
Robert Kinstrey (FRM) writes, “Daily woodsy walks keep me at least partial and painting if not healthy, as approach 90. I’m happy and life continues with my wonderful wife.”

When it comes to serving the planet, some have been working on it for decades, and Dean Ottaway ’47, Robert Eastmont ’40, John Slater ’52, Robert Upper ’51, William Vernam ’51, and William Belden ’66 are no exception. Learn more about these alumni and how they are contributing to a sustainable future through their environmental work.

Dean Ottaway ’47
Dean Ottaway ’47 has dedicated his life to environmental education and conservation. He is the founder of the Boardman Nature Preserve in Florence, Massachusetts, and has been involved with our local rail-to-trail organization.

Robert Eastmont ’40
Robert Eastmont ’40 has a long history of environmental work, including serving as a volunteer naturalist at Mote Marine Laboratory and elsewhere on the East Coast. He retired from SUNY Oneonta in 2000 and has since served as a volunteer naturalist at Mote Marine Laboratory and elsewhere on the East Coast. He retired from SUNY Oneonta in 2000 and has since served as a volunteer naturalist at Mote Marine Laboratory.

Jock Robie (WPE) is busy with his vermiculture project and, individually, the natural resources profession has captured me mind, body and spirit. One reason is that I live back East, I welcome the possibility of participating in our local rail-to-trail organization.”

In memory of the following, their friends, and families: M. April Ellis ’94*, William Belden ’66*, William Venem ’51*, Bruce Washburn ’59*, Robert Upper ’51*, James Gram ’50*, Bruce Dayton ’WPE*.

To send us an obituary — Email: alumni@esf.edu

Memoirs, obituary information, the nearly half-century since graduation, and continued through the U.S. Forest Service in 1971.

Drinking Water Administrators in 2019. The first class reunion in the nearly half-century since graduation, and continued through the U.S. Forest Service in 1971.

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Pam (CHE) writes, “While (FRM) writes, “How little did we (ES) has left the world of (FRM) writes, “I retired in 2017, retirement celebration.”

1975
A. Christopher Sandstrom (FRM) writes, “2019 marked my 50th year of caring for trees as Cayuga Tree Service, Inc. The company was founded in 1969 by Arthur C. Sandstrom (FRM), (FRM). After working for the family business for 28 years, I joined full time, purchasing the business in 1988. We have had the opportunity to work on many properties throughout Central New York, focusing on estates around Skaneateles Lake. I still enjoy what we do, so no plans to stop just yet. I am past president of the ESF Alumni Association and currently serve on the board. I have also been involved with the Central New York Land Trust for 30 years, currently serving as vice chair. I can be reached at cayugatree@msn.com if any classmate would like to reach out.”

1976
George Steele (FRB) writes, “I continue to do environmental education work and attended the New York Forest Owners Association conference last year. That was my 44th year on managing your wood lot for wildlife. I will also be attending the North American Forestry Association for Environmental Education and New York State Outdoor Education Association conferences where I will be on the lookout for ESF alumni.”

1977
Scott Soreff (FRM) writes, “I’m glad to report that my ESF roommate Mike Anderson (FRB) and our families continue to hang out at his home in Newark, Ohio.”

1978
Laurel E. (Stitch) Flynn (CHE) writes, “While I’m missing doing mass spectrometry, I don’t miss working in management. I have now officially retired, finishing out my career in chemicals as director of a small lab in uptown New York. To change it up and start off on my next adventure, my husband and I have relocated to sunny Casa Grande, Arizona. Division 11 rodeo is now a convenient destination rather than something that piles up outside the house. We are looking forward to reviving all the places we have already been in the great Southwest and seeing so many more. We have quite the bucket list.”

1979
Betsy (Flecker) Bible (LA) writes, “Spent a week with Jayme Henderson (79, EF) in Cape Cod, Massachusetts, catching up and enjoying the sun.”

1980
Tom Malecke (PSE) writes, “I enjoyed a 33-year career with Appleton Papers until my recent retirement, like so many other paper mills around the country in recent years, their paper and recycled pulp mill in Ohio closed in 2012. Fortunately, I was able to transfer my paper science and paper industry chemical engineering experience to my new career at retirement with DuPont in Dayton, Ohio.”

Christopher Williams (FRM) writes, “I retired in July after serving 36 years at the Massachusetts Department of Conservation & Recreation, finishing up as chief park ranger. Now I’m enjoying family time, volunteering with the Brewater Conserva- tion Trust and getting out in the great outdoors.”

1981
Irene Marie Olson (EST) writes, “I am still working as an RN, but now we live in our little dream house on a lake in Northern Wisconsin. It is so wonderful — we are close to ski and mount- ain bike trails. I love living in the woods. I’ve had to brush up on those ‘quiz trees’ and the bird calls we learned off that LP phonograph record at summer camp! Susan (Kong) Trigg (FRM) – wish we lived a little closer to each other!”

Joy Sholes (LA) writes, “After 21 years at Walt Disney Imagineering, I’ve retired to Palm Springs, California, I became a Master Gardner and travel four months of the year.”

1982
Susan (Suhli) Browne (ES) writes, “We send an Alaskan hello to fellow ESF graduates. Retirement in Alaska is satisfying, living in the shadow of Denali National Park. Come visit. Summer is the best. Environmental science thrives here.”

Ward (Blast) Hello Class of ’83 and congrats to those of you who stayed in the environmental business. After receiving my M.B.A., I have been in the banking business in downtown New York for 35 years. I am currently an SVP and chief compliance officer for a bank in New York City. Even though I am a world away from the ‘East Coast,’ the Alumni Magazine is still a great ESF resource with teaching me how to write a good research paper. Those skills translated well into regulatory compliance and memos and reports. Janene and I are starting to think of retirement down the road. We have done more travel and have fun with my rock band The Gypsy Felons. Peace.”

1983
David Jacobs (LA) writes, “I have a new second home in Taishkent, Uzbekistan, Peckham, Vermont, and Skaneateles Lake, but my wife teaches in Taishkent so life is back and forth.”

Robin (Vicka) Huns (FRM) writes, “Last year we moved to a new house, I retired and we wel- comed our second grandson into the world.”

1984
Jeffrey R. Auer (EST) writes, “Forestry Day is to be held in West Springfield, Massachusetts, April 26, 2021. This day is to celebrate the Town Forest with the MADCR and the Tricity Carbon Sequestration Project.”

1985
After over 30 years working as a planner, Tracey Corbitt (LA) is retiring and moving to the Adirondacks.

Holly Kaufman (ES) has left the world of private engineering firms and is currently an environmental scientist for the Utah National Guard. She is still conducting soil and water ground- water remediation, and generally playing in the mud, and is loving life in the Wasatch Mountains.

1991
Virginia Rettig (EFB) writes, “I have been refuge manager at Edwin B. Forsythe National Wildlife Refuge for nine years and counting.”

David Suarez (LA) writes, “Ellen and I moved to Greenville, South Carolina, at the end of 2018. After 27 years of operating Global Landscapes Inc. in Syracuse, we closed down and moved closer to Mom and family. I now work for the City of Greenville Parks and Recreation Maintenance Department at the Greenville Zoo. Greenville is a great small city!”

1992
Andrea Owens (FRM) writes, “Rob and I have been married for 17 years. We both enjoy teach- ing and camping with our two kids and dog, Bella, in the summer and skiing in the winter. Love to meet up with others — let us know!”

1995
Avery Y. Kamila (ES) reports that her work with the Portland Public Schools in Portland, Maine, resulted in the state’s largest school dis- trict serving daily vegan hot lunch, which started in September.

2005
Nicole Williams (FRM) writes, “I am now in Port- land, Oregon, working for Ocean Outcomes, a fish- eries and ocean conservation organization. I am still playing roller derby under the name Bonnie Thunder with the Portland Roller Derby. That is how I won my sixth world championship last year. If you’re in the area, let’s link up!”

2011
Last summer, Kathryn Ellers (EFB) studied emerging models in conservation and educa- tion as well as spiritual connections to nature in Thailand. Kathryn, a conservation biologist at Adelante Consulting, Inc., lives in Santa Fe, New Mexico, where she is a graduate student in the University of Global Field Program.”

Share Your News
These Class Notes were received by the Alumni Office before December 19, 2019. The next issue of the ESF Magazine will have a submission deadline of May 11, 2020. How to share your news with us
Online: www.esf.edu/forms/alumni/classnote.asp
Email: alumni@esf.edu
Mail: ESF Alumni Office, 219 Bray Hall, 1 Forestry Drive, Syracuse, NY 13210
Notes should be limited to 100 words and either typed or print legibly.
Photos should be high-resolution or 1 to 2 MB (megabytes) in size or right from the camera or phone. Please label the photos with your name.
You may also mail your photos to the address above. We will return them to you.
**1996**

Greg Bubnaiik (FS) has been promoted to a division director position within the Naval Surface Warfare Center Indian Head, Picatinny Arsenal Detachment. Greg is responsible for the enterprise and organization that maintains one of the most feared U.S. Navy weapon systems, the Close-In Weapon System.

**2007**

Julia Braumueller (ES) has been promoted to senior project manager at the DNV GL, New York. Prior to joining the firm, he worked for CLA Consultants Inc. in San Antonio, Texas, where his work included graph and technical drawings from the planning stages through completion. Daniel’s work was recognized as an intern at the New York State Park system's historic preservation and management program.

**2012**

Matthew Taylor (NRM) was the recipient of the Outstanding Young Professional (OYP) Award from the American Phytopathological Society (APS) for his work as a forest health surveyor, trainer and program manager in four Forest Service regions and five states. Greg was instrumental in expanding GZA's natural resource, renewable energy and transmission line distancing services while also leading GZA's company wide solar working group.

**2016**

Daniel O'Neill (LL) was recognized for his prominence of local landmark preservation. Roy Green (FRM) was the recipient of the New York City Recreation and Park Society’s (NCRPS) History Award from the USDA Forest Service for his work in helping to manage the 35 years of significant lake-related contributions to the Birth of Wildlife Photography.

**2019**

Amanda Tomasello (ES) joined Beardsley Architects + Engineers where she will work on projects for governmental, municipal and state offices as a civil engineer intern.

**1993**

James MacCormac (ES), a professor at Northern Michigan University, has written a PhD from Dr. Robert Westfall in 1979, he held a post-doctorate position with Dr. Melissa Aubuson at the University of California, Berkeley. I then worked at the following organizations: Plant Genetics Inc., Calgene Inc., Iowa State University, Seminis Vegetable Seeds Inc., Monsanto Inc. and finally Arcadia Biosciences.

**1983**

David O’Connor (FS) retired from the Nas- sau County Police Department where he attained the rank of lieutenant and served for 33 years. He was the team captain of the Great River Volunteer Fire Department.

**1960**

William Ciesla (FRM) was the recipient of the 2018 Forest Health Protection Aviation Safety Award from the USDA Forest Service for his work in flying the personnel of the Adirondack Fire Management Team (AFMT). He has been a top performer in the Adirondack region, having been instrumental in expanding GZA’s natural resource, renewable energy and transmission line distancing services while also leading GZA’s company wide solar working group.

**1985**

Michael Hays (FSW) was appointed president and CEO of Sappi North America. Mike joined Sappi in 1994 as its managing director of Sappi Mill before being promoted to vice president of manufacturing in October 2013, giving him responsibility for the Somerset, Westbrook and Croquet Mills, the company’s sheeting facility, safety, research and development, and customer care. Prior to joining Sappi, he had extensive experience in the industry and held numerous leadership roles with St. Regis, Champion International, International Paper and Weyerhaeuser.

**1987**

The New York State Federation of Lake Associations (NYSFOLA) has been named a Fellow of the American Phytopathological Society in recognition of its distinguished contributions to plant pathology. A key figure in the Department of Forest and Wildlife Ecology at the University of Wisconsin-Madison, he studies diseases of trees, and has taught as a grad student in forest entomology.

**1997**

Jeremy Taylor (FS) was promoted to senior engineering researcher at the New York State Department of Environmental Conservation (DEC) in Albany. Jeremy joined the DEC in 2014 as a professional educator and the editor of “Conservationist for Kids” (“CFK”). In his new role, in addition to continuing as editor of CFK, he will take on new responsibilities with “Conservationist magazine,” as well as managing the social media program for both Conservationist magazine and CFK.

**1999**

Andrew Ferguson (FRM) has been promoted to vice president of western residential/commercial (RC) operations at the Davey Tree Expert Company. In his new role, Andrew will assume oversight of Davey’s Western Regional Manager and the company will continue to manage the South-Central/R/C Operating Group started in Davey in 1998 as a plant health care (PHC) technician in the Denver territory. In 2001, he was promoted to PHC coordinator and in 2006, he was promoted to the District of the West Denver R/C office in 2006. In 2011, he was promoted to group manager of the South-Central/R/C Operating Group. Andrew graduated in 2004 from the Davey Institute of Tree Sciences, which is Davey’s flagship training program in biological sciences, safety, tree and plant care, and management techniques. He is an International Society of Arboriculture Certified Arborist.

**2004**

Karen Stainbrook (FSW) was promoted to the position of chief of the Lake Monitoring and Assessment Section in the Bureau of Water Assessment and Monitoring at the New York State Department of Environmental Conservation. Karen is a research scientist with over 20 years of experience in the field of water and watershed programs.

**2005**

David Moore (FSW) was the recipient of the 2019 TrailBlazer Award from the Arbor Day Foundation, which recognizes outstanding achievement in arboriculture and/or urban forestry by professionals under 35. After working for 10 years in New York City for the Rockefeller Foundation Project and then for NYC Parks, David is now the senior arborist for Oakland, California, in the Public Works Department. Within his first year there, David secured a million-dollar grant for a citywide tree inventory and developed a 50-year urban forestry master plan for Oakland. For more about David’s work, see the Q&A on page 19.

**2006**

Hark Bailey (EES) joined the Chemical and Engineering Network. He graduated in 2004 from the University of California, Berkeley, with a degree in environmental science and policy.

**2013**

Graham Hoburg (CHE) received his Ph.D. in chemistry from the University of Toronto in Ontario, Canada, June 18, 2013.

**2019**

Alexandra Henderson (FRM) joined B9Creations Graft + Engineers where she will work on projects for governmental, municipal and state offices as a junior landscape architect.

**1979**

M. Keith Redenbaugh (FFW) writes, “I retired as director of regulatory affairs from Arcadia Biosciences Inc. in Davis, California, in 2018. After completing my PhD from ESF under Dr. Robert Westfall in 1979, I held a post-doctorate position with Dr. Melissa Aubuson at the University of California, Berkeley. I then worked at the following organizations: Plant Genetics Inc., Calgene Inc., Iowa State University, Seminis Vegetable Seeds Inc., Monsanto Inc. and finally Arcadia Biosciences.”

**1984**

Fred Robinson (FFW) was born in Syracuse this fall. He is the first of eight former players who were inducted into the inaugural Hall of Fame class of the SU men’s hockey team. Fred played then on the team while he was a graduate student in forest ecology.

**1971**

Glen Stanusa (EES) has been named a Fellow of the American Phytopathological Society in recognition of his distinguished contributions to plant pathology.
June 5, 2020
Metro New York Alumni Gathering
Tour of Storm King Art Center
Dinner at the Historic Thayer Hotel

Join us in June in the Hudson Valley region of New York for an unfor-
tgettable day of outdoor learning. This year we will be treated to an
in-depth tour of Storm King Art Center, an open-air museum which is
home to one of the largest collections of outdoor sculpture in the coun-
try. Our tour will focus primarily on Storm King’s ecological projects,
including their work to conserve the Center’s unique natural setting as
well as their revitalization project (which, involved ESF alumnus
Gary Hilderbrand ’79 and his firm, Reed Hilderbrand). We’ll finish up
the day with cocktails, hors d’oeuvres and dinner at the scenic Thayer
Hotel at West Point (where we’ll hear all about every thing that
is going on in Syracuse via a College update). Registration materials will be
available in April.

Registration information for both events will be available at www.esf.edu/calendar/alumni.asp
When Ysabella “Bella” Luikart was looking at colleges, she searched for schools that placed women in STEM-related positions and found ESF. As an environmental chemistry major, she is conducting research involving pollutants in Jamesville Reservoir with Dr. Mark Teece.

Why ESF?

ESF first came onto my radar because I was looking at schools that successfully placed women in STEM fields, and ESF was at the top of the list. The first time I stepped on campus I was pretty sure I was going to go to school here. I loved the general feeling and atmosphere on campus. I knew I wanted to major in chemistry and a huge draw for me was that undergrads are able to be involved in research as early as they want. I know my ESF education is going to prepare me for anywhere I choose to go. I’m interested in aquatic chemistry research, but I’m open to anything. Eventually I want to be a teacher, but that might not be for quite some time.

What impact did your National Scholarship have on your education?

Thanks to the National Scholarship, I can take advantage of the research opportunities at ESF. To go here without too much financial strain is great. Right now, I don’t have many loans which is awesome. If I didn’t have the scholarship — it’s a big chunk of my tuition — I probably would’ve gone to UMass, in my home state, rather than coming here, so I’m grateful for that.

Why is giving back important to you?

I know the difference scholarships have made to my academic career, and I’m proud to be a caller for the ESF Annual Fund, reaching out to ESF alumni, friends and families asking for their financial support for my fellow ESF students. I know how important the National Scholarship is to me and I want to ensure other ESF students have access to the same opportunities that I have.

Meet other scholars like Ysabella and learn how you can make a world of difference for many at www.esf.edu/scholars.