WHO WE ARE:

YALE SCHOOL OF THE ENVIRONMENT

With a new name, our School honors the past and looks to the future.
DEAR MEMBERS OF THE F&ES COMMUNITY,

As most of you know by now, the Yale School of Forestry & Environmental Studies will change its name to the Yale School of the Environment effective July 1.

At the same time, we will also establish The Forest School at the Yale School of the Environment in recognition of our founding mission and the continued importance of forestry.

This is a historic moment for our School and, I believe, a vitally important one.

I feel strongly that our new name reflects who we are as a community and the far-reaching impact we have across many disciplines and sectors. Our faculty, students, and alumni are working on a wide scope of urgent and important issues — including climate change, clean energy policy, ecosystem science and biogeochemistry, hydrology, urban science, green chemistry, and environmental justice, among many others.

Yet, there has often been a disconnect between the School’s name and its impact. We frequently hear from alumni who report the difficulty of explaining to a potential employer why it is that someone interested in, say, energy policy attended a “forestry” school. Our career services director has reported disinterest among some employers at career fairs. Even our own faculty have avoided using the School’s name on their publications because it seems outdated or irrelevant to their work.

As the Yale School of the Environment, we will be accurately communicating the breadth and depth of our scholarship, research, impact, and mission.

At the same time, it was extremely important to me that we reaffirm our commitment to forest science and global ecosystem management. Forestry remains an anchor for how we study and teach practical resources management and ecosystem and land conservation. As Professor Mark Ashton, who will serve as the first Senior Associate Dean of Forests, writes in this issue of Canopy (page 6), our forestry program is strong now and will only get stronger.

I recognize and appreciate that the history and culture of this School is incredibly important to so many of you, as it is to me. The decision to change our School’s name was not made lightly, but rather was the result of our long, deliberative, inclusive and inspiring Strategic Planning process, in which we articulated our diverse strengths and aspirations. We collected feedback from an external review committee and our Alumni Association Board, and, in November, the School’s Board of Permanent Officers (tenured faculty) voted to approve the name.

The response, I am pleased to say, has been overwhelmingly positive and I am grateful for the many thoughtful and heartfelt messages that I have received from so many of you since this news was first announced.

Since its founding, this School has demonstrated the willingness and strength to adapt to the evolving challenges facing our world. And I think there has been no more compelling example of this than how our community has responded during the COVID-19 crisis, some of which you will read about in this issue (pg. 40). There is so much I could say about how proud I am of our interconnectedness and of our collective response to this crisis — from our students and 2020 graduates who showed so much creativity, resilience, and concern for their classmates and their community in the face of great uncertainty; to our faculty and staff who moved virtual mountains to continue providing an F&ES education to our students and supported them in whatever ways they could; to our alumni who offered advice to our graduates on pursuing their goals and entering the professional world in challenging times.

I will just say that I have never felt more confident about how well poised we are to fulfill our mission of providing knowledge and leadership for a sustainable future. The work that we do here is vital to meeting the many global environmental challenges we are currently facing and will face in the future. And, working together with all of you, I’m excited to continue this incredibly important work with a name that recognizes the full scope of what we do while maintaining the connection to our roots as a school of forestry.

Thank you for all that you do,
Karen Seto (left), a professor of geography and urbanization science at F&ES, and Meredith Reba (right), a research associate in Seto’s lab, meet with community members during a visit to Nepal this winter. Read about their work on page 24.

Every time you get a new email address, relocate, or change positions, please send us an update at alumni.fes@yale.edu. If you keep us updated, we’ll keep you updated!
Before joining F&ES, Emma Johnson ’20 M.E.M. spent a year in Bhutan, where she helped coordinate The School for Field Studies study abroad program and studied youth perceptions of climate change and the environment. Last summer, she returned to report this article with support from the Pulitzer Center on Crisis Reporting, where she was a reporting fellow, returning to report this article with support from the Pulitzer Center on Crisis Reporting, where she was a reporting fellow.

The sudden floods on the Punatsangchhu were likely driven by the kind of extreme monsoon events that are becoming more common as a result of climate change.

As the climate warms, Bhutan may have more seasons of extremes: summers of flooding, intense monsoons, and glacier dam bursts followed by winters of drought. Because Bhutan is heavily dependent on rivers and the electricity they generate through hydropower — for its own development and to generate revenue from electricity-hungry India — shifts in climate will have implications for the country’s international relations.

Many Bhutanese are grappling with how to grow their country in the face of these changes.

**PERILS OF GEOGRAPHY**

Imagine a fist full of pebbles, then imagine crushing it into a ball. This is Bhutan’s geography. Steep valleys descend into deep river gorges and climb back up. Defining the valleys are the rivers. Originating amid the peaks of Tibet or Bhutan, rivers unwind down to Bhutan’s central temperate belt before cascading through the tropical south and into India. The rivers look different between winter and summer. Winter means drought, when rains rarely fall and the water in the north is locked in ice. The rivers flow at a fraction of their full volume. In summer, the Himalayan glaciers — the Third Pole — are melting faster every year, pouring water into Bhutan’s rivers. Add to this the erratic monsoon rains, which instead of bringing steady rain over a few months, as it once did, now dumps water in intense, irregular bursts. The result? Raging rivers ready to sweep away anything in their path.

“More and more people are thinking that winter will be drier, summer will be wetter with more floods and irregular rains, so we need to control the water that is coming down,” says Chhewang Rinzin, managing director of the Druk Green Power Corporation, Bhutan’s primary hydropower company.

Hydropower dams typically found in Bhutan are not like the large structures that span rivers in many parts of the world. These are run-of-the-river schemes, which means that water mostly flows through them rather than being stored behind them.

These dams may make Bhutan’s economy more vulnerable to climate change. Since the dams don’t actually store water, the energy production changes with the season: in the winter, when the river is low, the plants can only produce a fraction of their full capacity. But in the summer, with melting glacial flow, the monsoons, most of the water must run through or past the dam without generating electricity because the plants can’t accommodate such extreme flows. Summers also bring more flash floods, which means more debris cascading downstream, blocking and damaging the dam.

“What is going to happen when the glacier melts, when the snow melts, when the monsoons are not the monsoons that we are used to?” Rinzin asks. “Can the hydropower stations for which we have invested so much money be sustained?”

**CHALLENGES BEYOND SOLUTIONS**

There’s no straightforward climate mitigation answer in Bhutan. From the outset, “it is unsustainable because the microclimate conditions are very different than the regional climate conditions,” explains Ott Karol, dean and professor at the College of Natural Resources in Punakha. This also presents a challenge for modeling future climate changes. The country had no accurate weather stations until 1995, so any climate predictions use global models, which lack the resolution to take Bhutan’s extreme geographical variations into account.

And even if there were clear solutions, that wouldn’t be enough. “The biggest challenge is the implementation … there are no resources,” says Trinun Wangmo, the chief climate officer at the National Environment Commission.

Struggling with a lack of capacity and knowledge is especially difficult when Bhutan is not responsible for climate change in the first place. As a carbon-negative country, Bhutan has actually earned tree cover to compensate for its own emissions. By contrast, Bhutan’s neighbors, China and India, rank first and third, respectively, in terms of national greenhouse gas emissions. “We have done nothing,” Wangmo remarks, “but carbon has no borders.”

**A STABLE ECONOMY IN AN UNCERTAIN FUTURE**

“We are a hydropower-rich country,” states Mewang Gyelshen, director of the Department of Renewable Energy. In 2018, hydropower generation made up 13 percent of Bhutan’s GDP. That is only expected to grow as more plants are built.

“The whole economy is dependent on hydropower,” adds Wangmo. “And climate change will definitely impact hydropower. That is why it is our biggest worry.”

Gyelshen and his team have assessed sites for solar and wind projects in hopes of diversifying the economy, but with hydropower electricity being as cheap as it is, “we see these projects being more of a Plan B,” he says.

The logical next question then is diversifying to what. Perhaps more tourism, other industries, cryptocurrencies. But, Rinzin reminds bluntly, “we should not forget that any diversification work that you do will need electricity. And the only source we have today is hydropower.”

And so Bhutan continues to make huge investments in hydropower. Sitting in her small office in Thimphu, the country’s growing capital, Wangmo worries aloud. “If in 30 years this water dries up, what do we do?”

This is an adaptation of an article published on the site Mongabay. The full article is also at environment.yale.edu.
How The Forest School builds upon Yale’s traditional strength — and creates exciting new opportunities.

The F&ES forestry program takes students across the world for field studies, including Olympic National Park in Washington.
Stand dynamics. Second-growth forests. Silviculture. Watershed hydrology. Ecosystem ecology. Community forestry. Forest finance. Forest policy and governance. What would sound foreign to most makes perfect sense to anyone who has come to study at our school. These subjects — and many of the more important advances in forestry and land conservation — have roots here. As a graduate myself and a faculty member for several decades, I presume I’m not the only one who takes great pride in this fact. Since our school’s establishment, forestry has provided us with our foundation. It’s one of the most mature forms of environmental management and surely one of the oldest. It has structure in its skills and its professional recognition. Today forestry and understanding the human and biophysical attributes of a forest ecosystem still work as a strong anchor to the history of our School and provide students in all areas of study with that critical structure in their academic experience.

A new name will not change this — our forestry program is strong today and will only get stronger.

The creation of The Forest School within the Yale School of the Environment will ultimately solidify the long-term sustainability of the forestry program at Yale in several ways:

It will secure 12 endowed teaching positions, creating a core group of faculty members who represent the different disciplines of forestry and the natural and social sciences.

Creating a forestry school within a larger entity also neatly organizes our outstanding forest-related centers and programs under one banner. The pressing issues taught and researched by groups like the Urban Resources Initiative, The Forests Dialogue, the Environmental Leadership & Training Initiative, The Yale Forests, and the Tropical Resources Institute are vital to the future of forestry. Bringing them closer together encourages and facilitates the type of synergistic relationships that benefit our students, faculty, and program staff.

The master’s programs for forestry and forest science will receive substantial endowed support to facilitate teaching and research among faculty and students, which includes workshops, apprenticeships, and fieldwork conducted across the world. Combining these unique opportunities with our position as a forestry school will allow us to more directly target potential forestry students in areas we haven’t been of reach, particularly in rural regions. We can engage them digitally through webinars and a robust communications plan, partner with more rural universities, and network with our forestry alumni working in academia and the profession to identify promising undergraduate students across the world.

But perhaps the most exciting potential for The Forest School will be what I like to call hybrid vigor. One of our biggest strengths, from the beginning, has been that humanities and social sciences are put on equal footing with physical and biological sciences. It allows us to bring in students from a diversity of backgrounds who are prepared to apply systems thinking and problem-solving to the technical aspects of forestry. Our position within a larger entity will expand their knowledge beyond forestry in areas like urban development, climate adaptation and mitigation, industrial and business synergies in resource use, and environmental justice.

The Forest School will create a critical stream of fresh ideas and perspectives about how we can sustain forests and their value to society well into the future, bringing a new dimension of hybrid vigor to the field of forestry.

The Yale School Forests provide a perfect setting for hands-on forestry experience, with experienced faculty members like Marlyse Duguid ’10 M.F., ’16 Ph.D., the School’s first Siccama Lecturer in Environmental Field Studies.
Podcast Digs into Big Ideas

In the fall, F&ES published a book featuring 40 different pathways toward a sustainable future; in a new podcast, leading thinkers from the School and beyond dig deeper into those ideas. In each episode of the Yale Environmental Dialogue podcast, authors from the book “A Better Planet: 40 Big Ideas for a Sustainable Future” share their thoughts and then lead a discussion with colleagues and other experts about how their insights and innovations might achieve meaningful change.

Global Changemakers

Nearly 40 F&ES students traveled to Madrid, Spain, in December to take part in COP25, the annual “conference of the parties” hosted by the United Nations Framework Convention on Climate Change. Participants worked for nongovernmental organizations or served as delegates for countries like Mexico, Rwanda, Turkey, Morocco, Tonga, and Peru.

Faculty Provide Expertise to Congressional Committees

Two F&ES faculty members traveled to Washington, DC, to testify before congressional committees related to climate change. Daniel Esty, Hillhouse Professor of Environmental Law and Policy at F&ES and Yale Law School, spoke before the House Subcommittee on Environment and Climate Change of the Committee on Energy and Commerce in December. He urged the committee to create a multi-dimensional framework that includes public health, ecosystem science, and emerging technology in response to the climate crisis.

Thomas Easley, assistant dean of community and inclusion, discusses strategies to engage more people in environmental conversations for an episode of the Yale Environmental Dialogue podcast.

Justin Farrell, an associate professor of sociology, testified before the Senate Special Committee on the Climate Crisis in October about the “well-coordinated and well-funded” movement intended to deceive the American people about the reality of climate change. He called for “better data, more transparency, and access to information” to combat the misinformation campaign.

Additionally, Julie Zimmerman, professor of green engineering and senior associate dean of academic affairs, testified before the House Committee on Science, Space, & Technology last summer about innovations in sustainable chemistry.

Environmental Justice Conference Welcomes Emerging Scholars

As part of the Environmental Justice and Health Initiative at F&ES, the School hosted the inaugural Global Environmental Justice Conference, a day-long event that brought emerging scholars from across the world and from across disciplines to discuss how scholarship, social justice, and environmental management can be effectively integrated.

The conference was held in honor of Natasha Chichilnisky-Heal, a Ph.D. candidate at Yale University who died in 2014. Her doctoral research focused on environmental justice issues related to natural resource extraction in the developing world. Natasha’s mother, Graciela Chichilnisky, established a fund that supported the conference and will fund future environmental justice conferences at F&ES.

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Daniel Esty, Hillhouse Professor of Environmental Law and Policy
Renowned Scholar Taylor Earns Wilbur Cross Medal

Dorceta Taylor ’85 M.F.S., ’91 Ph.D., one of the nation’s leading environmental justice scholars and activists, has been named a recipient of the 2020 Wilbur Lucius Cross Medal, the highest honor Yale Graduate School bestows on its alumni.

Currently a professor and the director of diversity, equity, and inclusion at the University of Michigan’s School for Environment and Sustainability, Taylor has written several books and has piloted watershed studies on diversity in the environmental movement, including a 2014 study on the state of diversity in nearly 200 U.S. environmental organizations.

Taylor is only the third F&ES graduate to win the award, joining John Aber ’73 M.F.S., ’76 Ph.D. and Eleanor Sterling ’83 B.A., ’93 Ph.D.

F&ES Alum Takes Helm as New Haven Mayor

Justin Elicker ’10 M.E.M./M.B.A., who first moved to New Haven in 2007 as a joint-degree student at F&ES and the Yale School of Management, was sworn in as the city’s 51st mayor on January 2, 2020. Elicker, who had previously served as director of the New Haven Land Trust, has pledged to increase government transparency, fight for more public school funding, and address the challenges of environmental injustice in the city.

He also wants to work closely with Yale to continue strengthening its long-standing relationship with the city.

Marjorie Shansky, an F&ES lecturer, taught Elicker in her course “Land Use Law and Environmental Planning.” One of the key takeaways of that course, she says, is the immense authority cities and towns have to forge a sustainable future by committing to renewable energy sources, creating access to affordable and diverse housing, and protecting water quality.

“These are all issues that are important to Justin,” she said. “It makes you feel hopeful for the future.”

Mapping New Haven’s Street Trees

There are nearly 30,000 street trees in New Haven. We know this thanks to the Urban Resources Initiative (URI), part of the Hixon Center for Urban Ecology at F&ES, which curates a meticulous inventory of the city’s trees. Recently, Sabrina Szeto ’16 M.F., a geospatial consultant and former geospatial analyst with the Ucross High Plains Stewardship Initiative at F&ES, helped build a comprehensive and interactive map of New Haven’s street trees.

Users can search by address to find the size, genus, and species of the trees in their yard or in their local park.

Find the map at uri.yale.edu/maps/street-tree-inventory-map.

Earth Day at 50

This year marked the 50th anniversary of the first Earth Day, bringing the F&ES community together — virtually — to celebrate the landmark environmental event.

The day kicked off with an interview of former Secretary of State John Kerry by Dean Indy Burke. Kerry recalled helping organize events in Boston on the first Earth Day, discussed the progress that has been made since then, and plugged the launch of World War Zero — his latest effort in climate action.

More than 500 visitors then participated in an online event hosted by the Yale Environmental Dialogue, which featured insights from F&ES faculty Paul Anastas and Michelle Bell; Thomas Easley, assistant dean of community and inclusion; and renowned environmental scholar Thomas Lovejoy. The conversation, moderated by F&ES faculty member Daniel Esty, focused on past successes in the environmental movement and what steps are required to shift society onto a more sustainable trajectory.

In the days leading up to Earth Day, F&ES students shared their thoughts on Earth Day and the future of the environmental movement on social media, through powerful essays, visual art, poetry, and song.
Taking the Next Step:
Peter Pinchot ’88 M.E.S. Reflects on the Name Change

BY KEVIN DENNEHY

When it was announced that the Yale School of Forestry & Environmental Studies would change its name to the Yale School of the Environment effective July 1, the news elicited thoughtful reflection from generations of former students. The more than 5,100 living alumni share a deep connection with the School — due in no small part to its historic link to the international forestry sector and the modern environmental movement itself.

For one alumnus, that history has a distinctly personal dimension. Peter Pinchot ’88 M.E.S. is the grandson of Gifford Pinchot, co-founder of the school and first chief of the U.S. Forest Service. Peter spoke with Canopy this spring to discuss the history of the school, how it has adapted to changing environmental challenges globally, and why he believes it was time to change its name.

What did you think when you heard about the name change?
I think the change is highly appropriate. We took a step toward this change in 1972 following the first Earth Day and during the emergence of the modern environmental movement. At that time, the School changed its name to the Yale School of Forestry & Environmental Studies to better reflect the many things we do. So it’s not a great surprise that we now take this next step, which recognizes that forests are just one of the biomes that we’re managing globally.

Your great-grandparents and grandfather established the Yale Forest School in 1900. What was their original intent?
Well, my great-grandfather, James Pinchot, was responding to the environmental crisis facing our country at the time: deforestation. Before that our family was in the business of deforestation, to put it mildly. But he recognized that the destruction of the nation’s forests was bringing ecological destruction and dire economic consequences — and that something had to be done. There was a huge land grab going on and really there was no professional forestry happening in America.

Which is where this new School came in...
Well, they didn’t have qualified people to hire into the Forest Service. So, really, a big part of the original intent was human resources!

While the School’s original focus was on forestry, in the bigger picture those early leaders were also developing these principles of responsible long-term management — what we’d call sustainability today.

Exactly. This is when my grandfather and President Theodore Roosevelt came up with what we now consider to be the three parts of sustainability: that resources had to be developed for the benefit of the present generation; that they had to be preserved for future generations; and that the benefits should be distributed to all people, not just the rich and the powerful.

The issue then was the liquidation of forests. Today the issues also include climate change, water, energy, biodiversity, poverty and environmental justice, and many more. Forests and forestry are, of course, very relevant to almost all these things. And while forestry is no longer the sole focus, I think it was important for the School’s current leadership to highlight its importance by simultaneously creating The Forest School. But in my opinion, changing the name to the Yale School of the Environment is 100 percent appropriate. This is what the field has evolved into.

Lisa Comita (in pink), associate professor of tropical forest ecology at F&ES, uses the dense jungles of Panama to blend traditional teaching of forestry with ecology, biodiversity, and climate change.
Energy Choices Are Contagious – but Why?

A growing body of research has shown that peer behavior has a significant influence on an individual’s energy-related decisions, whether it’s choosing to install solar panels or to buy a hybrid vehicle. But why exactly that occurs is less clear.

In a recent paper, a team of scholars led by Kenneth Gillingham, associate professor of environmental and energy economics at F&ES, examined the latest findings on social influence. They then describe pathways by which that information might be used to promote sustainable energy choices.

The authors suggest that future research should focus on identifying when during the decision-making process social influence is most impactful. They also call for more research into the role of peer effects across disciplines – including economics, marketing, sociology, and psychology.

Scholars have documented the effects of peer influence on energy choices. But those findings have rarely been integrated. “We wanted to bridge those fields of literature so that we could better understand how peer effects and contagion work, why they work, and why they’re so powerful,” Gillingham said.

Climate Change and the American Diet

Shifting the American diet away from livestock production and toward more plant-based foods could significantly reduce greenhouse gas emissions. The majority of Americans, however, say they are unaware of this connection between food and the environment, according to a recent study by the Yale Program on Climate Change Communication (YPCCC).

In a report, “Climate Change and the American Diet,” researchers found that while more than half of Americans believe the production of beef, pork, dairy, and/or poultry contributes at least a little to global warming, only about 27 percent know that beef production contributes “a lot.” The findings were based on a survey of 1,043 American adults.

While a majority do not consider themselves to be vegetarians or vegans, most said they would be willing to eat more plant-based foods, and more than half said they would cut back on red meat. “Many American consumers are interested in eating a healthier and climate-friendly diet,” said Anthony Leiserowitz, a senior research scientist at F&ES and director of YPCCC. “However, many simply don’t know yet which products are better for the climate, so powerful, “ Gillingham said.

Can Wood Construction Make Cities a Carbon Sink?

The world’s growing urban population will drive an enormous demand for new housing, commercial buildings, and other infrastructure across the planet by midcentury. This building boom will likely escalate global carbon emissions to dangerous levels and intensify climate change — especially if it relies on traditional materials such as concrete and steel.

However, if society transitions to more wood-based products to meet building demand, urban growth might actually present an opportunity to mitigate climate change, according to a recent paper led by researchers at F&ES and the Potsdam Institute for Climate Impact Research (PIK). Writing in the journal Nature Sustainability, a multidisciplinary team of researchers and architects predicted that designing midsize urban buildings with engineered timber — rather than relying mainly on carbon-intensive materials — has the potential to create a vast “bank vault” that can store within these buildings 10 to 68 million tons of carbon annually that might otherwise be released into the atmosphere. (That would be the equivalent of the yearly emissions from 17 coal-powered plants.)

Simultaneously, society would drastically reduce carbon emissions associated with the construction sector, says Galina Churkina, who led the collaborative research while she was a visiting fellow at PIK. “Since the beginning of the industrial revolution, we have been releasing into the atmosphere all of this carbon that had been stored in forests and in the ground,” said Churkina, who is a senior scientist at PIK. “We wanted to show that there can be a vision for returning much of this carbon back into the land.”

Other contributors included Barbara Reck, a senior research scientist and industrial ecologist at F&ES, and Thomas Graedel, professor emeritus of industrial ecology at F&ES.
You Can’t Be a Forester without Understanding Chad’s Work

BY RICHARD CONNIFF

The idea that forests are dynamic systems — that disturbance is the norm — might seem obvious now. But that’s only because it was demonstrated by F&ES Professor Chad Oliver, one of the many ways the retiring professor has impacted forestry and forest education throughout his 45-year teaching career.
visiting the Changbai Mountains on China’s northeastern border, Chad Oliver listened quietly as local forest scientists described the surrounding landscape. They had inherited the old idea of the forest steadily progressing over time, with the bigger trees having arrived first, to prepare the way for the smaller, younger trees around them, which would eventually grow up in their place. It was a Peaceable Kingdom vision of nature, with a stable climax forest as the end result.

The next morning, Oliver woke up early and led a small group back to the site. There, says Xuemei Han ’11 Ph.D., Oliver’s doctoral student at the time, he took a core sample from a big tree and cut down some of the smaller trees nearby. His listeners joined him in aging the trees by counting tree rings. It turned out, of course, that the bigger trees weren’t any older than their smaller neighbors. In fact, the smaller trees were smaller, as Oliver puts it, in his soft Southern accent, “because the bigger trees had suppressed ’em.

It was a simple demonstration — and the heart of what he has taught over a 45-year career, first at the University of Washington and more recently as Pinchot Professor of Forestry and Environmental Studies at Yale: There is no such thing as a balance of nature or some imaginary climax state. Forests are dynamic, and disturbance is the norm, whether by fires, droughts, wind storms, disease, insects, logging, or other factors. A mosaic of habitats is the usual result, from grasslands and scrub to dense forest, with each tree stand consisting mostly of even-aged trees, all of them having gotten their start in the aftermath of the same local disturbance. It’s a big idea that can seem obvious now.

But that’s only because it has become so widely accepted and influences how people manage forests in so many places. "It is impossible to imagine the field of forestry without Chad’s contribution," says Kori Covy ‘10 M.F., ’16 Ph.D., a former student now teaching environmental science at Skidmore College. "You can’t be a forester, and you can’t be a forest ecologist, without understanding Chad’s work. It is fundamental to our field in a way that is very rare for a scientist to achieve."

Groundbreaking Work at Yale-Myers

Chadwick D. Oliver began to work in the woods at 10 or 11, with the land survey crew for his father’s forest management company in Camden, South Carolina. His official title was water boy, he says, “but every chance I got, I’d pick up a bush ax for cutting a line through the trees, so the person with the transit could get a straight shot.” He backed away from forestry for a time as an undergraduate, to separate himself from his father’s influence. But when he revisited forestry in junior year, it took hold hard. Oliver went on to study with the Yale School of Forestry’s David M. Smith, a legendary figure known for his ability to read a stand of trees from seemingly trivial clues and reveal its secret life. Smith suspected from the history of his own family’s woodlot in Massachusetts that even-aged stands were commonplace. Oliver set out to test the hypothesis on study plots in the Yale-Myers Forest, conducting a kind of archaeological reconstruction of their history.

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When his findings — the disturbances, the even-aged stands, the single species dominating the others — eventually appeared in the journal Ecology, the celebrated ecologist Robert MacArthur remarked that it might be true for the heavily disturbed forests of New England, “but it’s not true of the rest of the world.” Oliver, his own students, and others then went on to demonstrate the same pattern in the Douglas fir forests of Washington, the Sitka spruce forests of Alaska, the cherrybark oak forests of the American South, and elsewhere until the Harvard forester Peter Ashton half-jokingly remarked, “OK, but not in the tropics.” Then he invited Oliver to send a student to his own study plots in Thailand, and the pattern held true there, too.

Recognizing the even-aged character of most tree stands was of course only a start. It meant that managing any given stand, typically anywhere from 10 to 60 acres in area, needed to happen in relation to other stands in a larger landscape that might cover 1,000 or 100,000 acres. That led Oliver and Jim McCarter, then a data-oriented doctoral student at the University of Washington, to develop a computer platform called the Landscape Management System for taking account of different values — economic output, protection of wildlife, carbon capture and sequestration, recreation — in the context of the larger ecosystem.

The U.S. Forest Service now uses its own version of the program, called Suppose, to manage the 294,000-square-mile national forest system. Oliver’s science has sometimes put him at odds with environmentalists. During the spotted owl fight in the Pacific Northwest in the late 1980s, for instance, he took the side of local communities, pointing out that Douglas fir regeneration occurs only in full, or nearly full, sunlight in the aftermath of major disturbance. Clear cuts fit this natural pattern and also benefit other plant and animal species. He advocated an approach that would prevent further cutting of the old growth on which spotted owls depend but also manage younger stands to maximize future old growth and sustain the local logging economy at the same time. Neither that proposal nor another to open up dense young growth for forest fire prevention were implemented at the time.

Ecological Benefits

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Oliver’s work has also produced some environmental success stories; for instance, in the aftermath of that demonstration of tree stand dynamics in the Changbai Mountains. It was 2006, and Oliver was just beginning to work with a team led by ecologist Jianping Ge at Beijing Normal University. The focus was on a vast area of northeastern China that had been indifferently logged in the 1950s and then left to regrow into a dense, scrubby forest. Ge wanted to know what it would take to make it suitable habitat for the Amur leopard and the Amur tiger, both critically endangered and hanging on just across the border in Siberian Russia. He thought Oliver could help.

“We felt like old friends already at our first meeting,” says Ge, who had read “Forest Stand Dynamics” in the 1990s. “Professor Chad’s profound knowledge and global ecological strategic vision provided key support for us to formulate a scientific protection plan for tigers and leopards in Northeast China.” That plan set out to recover the forest habitat; rebuild the population of deer, wild boar, and other prey species; and encourage some of the tigers and leopards that had been visiting the area from Russia to settle down and call it home. As a result, the Chinese government in 2016 created the Northeast China Tiger and Leopard National Park, protecting an area just north of the Changbai Mountains that is 1.6 times larger than Yellowstone National Park. Together with the surrounding forests, it could eventually support as many as 100 tigers and 200 leopards.

Oliver, meanwhile, will retire from Yale this June. He plans to divide his time thereafter between New Haven and Istanbul, where his wife, Fatma Arp Oliver, grew up. He will also certainly continue to be found, in person and in spirit, in forests almost anywhere.
Over the past few decades, it has become increasingly clear that the existence and growth of cities are significantly linked to environmental issues. At F&ES, where a new urban specialization will be added this fall, nearly every member of the faculty is doing something that relates to the urban environment.

When she was 12 years old, Karen Seto boarded a train traveling from Hong Kong to Guangzhou, roughly 90 miles, during a family trip to China. It was her first glimpse of the enormity of urbanization.

As the train pulled away from Hong Kong (“which is like New York City on steroids”), Seto was transfixed by fields of rice that seemed to go on forever, a verdant eternity that fed millions of people. But within minutes, those bucolic fields gave way to growing villages and tall buildings. Soon another city appeared: Guangzhou, which at the time was home to nearly 2 million but today, just four decades later, has a population of nearly 14 million people.

“That train ride had a really big impact on me,” Seto says. “I thought, ‘Oh, I’m leaving the city,’ but the city was never really that far behind — even in the countryside. It occurred to me that, from the urban to the rural, all of these systems — food, economy, transportation — were interconnected.”

Over the past couple of decades, Seto, Frederick C. Hixon Professor of Geography and Urbanization Science at F&ES, has become one of the world’s leading scholars on urbanization. Through pioneering work integrating satellite remote sensing imagery with socioeconomic data, she has helped advance scientific understanding of just how much humans are changing the face of the planet and what it means for the future.
“Over time it has become increasingly clear that the consequences of urban growth across the planet are linked to every environmental issue.”

Indy Burke, Carl W. Knobloch, Jr. Dean, Yale School of Forestry & Environmental Studies

At F&ES, she is not alone in studying cities. Across the School, scholars and researchers are exploring the many dimensions of urbanization or working to create healthier urban systems. And beginning this fall, F&ES will offer a new urban specialization to integrate the disparate but related challenges and fields of inquiry related to urbanization. The curriculum will include core courses in urban ecology and urbanization as well as a range of electives that draw on the wide array of experts and disciplines across F&ES and Yale.

The fact is, there might not be any faculty member whose work doesn’t connect with urban issues in some way, says F&ES Dean Indy Burke. “In the past, people didn’t really think of urbanization as an environmental focus of study – it was too local, relevant only in certain places, and detached from global concerns,” she says. “But over time it has become increasingly clear that the consequences of urban growth across the planet are linked to every environmental issue.”

In the new specialization, Burke says, students will examine how environmental change affects urban areas and how urban areas affect the environment, from local studies in New Haven to the region and the globe.

Shaping the cities of tomorrow

It is estimated that about 55 percent of the world’s population now live in urban areas. By midcentury it will be more like 70 percent, including a surge in the number of megacities (those with populations of more than 10 million), largely in the developing world.

Researchers expect that this growth will intensify the burden on resources, consume vast areas of valuable agricultural land, and threaten biological diversity through habitat fragmentation in all corners of the planet. Increased demand for energy and loss of natural spaces will also likely exacerbate climate change.

Within the cities themselves there is an added risk; in many metropolitan areas, the urban heat island (UHI) effect, a common phenomenon that makes urban areas significantly warmer than surrounding areas, will only compound the consequences of climate change, increasing health risks for city dwellers.

Xuhui Lee, Sara Shallenberger Brown Professor of Meteorology at F&ES, studies how the UHI effect and other factors are already changing life in the world’s cities – and what these changes will look like in the future. Sometimes that work is applied in a very practical way locally. Three years ago, he and Brad Gentry, Frederick K. Weyerhaeuser Professor in the Practice of Forest Resources Management and Policy at F&ES, taught a capstone course that allowed students to evaluate the biophysical threats and social impacts of climate change in New Haven – and to make recommendations to city planners and administrators.

It can also be used to shape the cities of the future. In China, Lee’s insights have helped inform the design of Xiongan, which will eventually be used as the country’s second capital. For the design, planners have tried to incorporate numerous sustainability strategies. Some are conventional: Many of the buildings will utilize the latest in green design. Others are more adventurous. During a recent trip, Lee was shown a system of riderless vehicles that transport food around the city’s streets. Consumers are able to stop the vehicles and, with the swipe of a card, purchase groceries before sending the vehicle back on its way.

Researchers from China have reached out to Lee as they plan the city’s layout, including the placement of streets and infrastructure. “They’re asking me, ‘If you were to plan a city in such and such a way, would it create more of an urban heat island or less?’ If you’re careful, you can configure cities in a way that promotes the kinds of outcomes you want.”

Street-level insights

There is also an urgency to reconfigure the cities of today. As sea levels rise, many coastal cities can expect increased flooding, including when rivers and other inlets push more water farther inland during extraordinarily high tides and storm surges.

One of the ideas often considered to confront this threat is actually an old one: tide gates, which utilize flap valves that open and close to manage tidal flow, have been used for a variety of reasons for centuries. They are now being eyed as a climate mitigation strategy. In New Haven alone, tide gates have been used on two different rivers, the Mill and West rivers, for decades. But the environmental results haven’t always been positive, says Gaboury Benoit, Grinstein Class of 1954 Professor of Environmental Chemistry at F&ES and co-director of the Hixon Center for Urban Ecology. On the West River estuary, for instance, by automatically closing when the tide rolled in, the gates controlled flooding but altered the freshwater tidal system and

Karen Seto discusses urban design with community leaders in Nepal.
“Because I have these very interesting local examples, it’s a New Haven-based research topic that has potentially global repercussions.”

The project is one of many research areas that allow Benoit to examine the impact of human communities on water in greater New Haven. Benoit and his lab are also studying how litter and road salts affect water quality, the abundance of microplastics in the environment, and the potential benefits of other green infrastructure technologies.

For instance, working closely with the F&ES-based Urban Resources Initiative, the city of New Haven, and several other partner groups, Benoit has helped install and monitor a network of bioswales – landscaped areas near roadways that capture and filter stormwater before it can reach the sewer system. The bioswales, which are in place throughout the city, reduce stormwater flooding, decrease contaminated discharge into the Long Island Sound, and have advanced the understanding of the benefits of this low-cost technology.

“I love that kind of work because it has an immediate positive effect,” he says. “It’s very applied, and the nice thing about it is that I think it makes people much more aware of the water cycle in cities.”

**Equity and justice**

Across the world, advances in technology and innovative policies are creating new opportunities for billions of city residents every year. But often these benefits don’t reach the world’s middle-income and poor people, says Nara Narasimha Rao, an assistant professor of energy systems at F&ES. Rao, who came to Yale in 2019, studies the relationship between energy systems and human society. Perhaps nowhere are these links more complex than in the world’s urban areas. While millions of people stream into cities each year, he says, many are making that decision for the wrong reasons. They’re not lured by the promise of new opportunities but are forced to move because of lost jobs or livelihoods.

And when they arrive, they encounter a host of risks, from the high cost of living to elevated health threats. Using a combination of qualitative and quantitative research, Rao is examining why it is that so many people struggle to achieve well-being — including access to healthy foods and affordable air-conditioning — despite being surrounded by vast wealth. In India, for instance, he has found that urban populations have access to a less nutritious and diverse diet than rural ones, despite the seemingly endless food offerings found in cities. Why? Because access to many food options are too expensive or simply unavailable to poor communities.

“The challenge is that you often find greater inequality in cities compared with rural areas,” he says. “Yes, there are higher concentrations of wealth, but you also have stark poverty, so often these innovative developments aren’t available to a broad population.”

**Looking to the city**

As a student, Karen Seto never intended to specialize in urbanization science. As a matter of fact, she never even took a class on urbanization. Her interest in the subject emerged from her interest in land system science. In time she came to see that you simply can’t separate land use from urban growth. During the early 1990s at Boston University, she became part of a group of scholars that, long before Google Earth or the availability of data from commercial satellites, was taking advantage of NASA satellite data and advances in remote sensing to monitor, characterize, and map global land use. “It was incredibly novel back then,” she says. “We were on the forefront of using data and integrating them with other types of data and analysis. The bird’s-eye perspective and regular observations of the planet available through satellite data enabled us to see things that the naked eye couldn’t see.”

Over the years she has explored how urban growth is exerting pressure on biodiversity, food systems, and the climate (including as one of two coordinating lead authors of the urban mitigation chapter in the UN Intergovernmental Panel on Climate Change’s critical climate reports). But this work has also revealed promising insights into the relationship between urban form and environmental impacts.

And it has put a spotlight on numerous cities that have become models for sustainable design and green policies. From Taipei (which has invested in green energy, public transportation, and sustainable waste management) to Minneapolis (which has prioritized transit-oriented development), a growing number of cities have embraced sustainable practices and seen reductions in carbon emissions.

“Most of the world’s population will live in urban places in the decades ahead, so that’s where the demand for energy, for food, for resources will be greatest,” she says. “But cities are also the places where so many sectors come together — and where you’re more likely to get things done. It can be difficult to roll out a strategy on a national scale, but if you can test solutions in a few cities and show that they work, then it’s easier to adopt them at a larger scale. That’s pretty exciting.”

The design of Xiong’an New Area, which will serve as a second capital for China, will incorporate sustainable urban design. © SOM.
The Natural Areas Conservancy, led by Sarah Charlop-Powers ’09 M.E.M., is helping to preserve and restore critical urban forests in New York City and beyond.

Clara Pregitzer, a doctoral student at F&ES and conservation scientist with the Natural Areas Conservancy, helped create a massive ecological assessment of New York City’s forests, which required 25 field biologists and more than 1,000 land plots.
Sarah Charlop-Powers ’09 M.E.M. remembers growing up in the Bronx, the child of a community organizer who helped establish Greening for Breathing, a group dedicated to tree equity in the borough’s Hunts Point neighborhood.

As she tells it, an impromptu study by the group found an urban landscape in Hunts Point akin to a war zone, in that it was almost completely devoid of any vegetation.

By 2010, Charlop-Powers was making her own mark on New York City’s ecology. She had recently graduated from the Yale School of Forestry & Environmental Studies (F&ES) and was working in the Hudson Valley when she was given the opportunity to write the business plan for a nonprofit organization that would work as a partner to NYC Parks to advance the management of the city’s natural areas. Working closely with F&ES graduate Bram Gunther ’91 M.E.M., she wrote the plan and secured the funds that led to the launch of the Natural Areas Conservancy (NAC) in June 2012.

Today the NAC is leveraging the decades of management expertise of the NYC Parks Natural Resources group, partnering with them to increase awareness and improve the management of New York City’s 20,000 acres of forests and wetlands.

“Most of the natural areas in New York City are on parkland in the outer boroughs. They have low visibility compared to NYC’s flagship parks,” says Charlop-Powers, now executive director of the NAC, whose leadership was recognized by F&ES in 2018 with the Alumni Association Board’s Prospect Street Award. “The NAC is interested in not only increasing the visibility of the city’s natural areas but utilizing science and data to inform their management. By working on a citywide scale, the NAC has been able to use the kinds of rigorous evaluation and best practices found in rural land management and strategically apply them to conservation across the city.”

In 2018, the NAC partnered with NYC Parks to create the innovative Forest Management Framework to project a forest management budget for New York City for the next 25 years. It also undertook a massive field-based ecological assessment of the city to gather quantitative data, utilizing 25 field biologists and more than 1,000 land plots.

Its efforts recently expanded with a national survey distributed to 125 cities and organizations across the United States, aimed at gaining a better understanding of how urban forests and natural areas are being managed. The survey garnered an overwhelming response, producing a landmark report that detailed a lack of sufficient staffing and funding, an increase of invasive species, and growing concern over a dearth of data to properly handle the effects of climate change.
The ranking isn’t a surprise to those in charge of the city’s natural areas. Tampa boasts a robust planning and urban design division, including an urban forest management plan, and completes a comprehensive tree canopy analysis every five years. The benefits are tangible: According to the most recent analysis completed in 2016, Tampa’s urban forests annually reduce an estimated 808 tons of air pollutants, decrease residential air-conditioning costs by $7 million, and reduce 50 million cubic feet of stormwater runoff.

And yet, even taking all of these measures, the city finds itself in a race against intense residential and commercial development, according to Charlop-Powers. In such a race, she adds, Tampa and Hillsborough County have created a comprehensive plan to acquire urban natural areas to protect the land.

In the fall of 2019, in the wake of the results of their national survey, the NAC hosted a workshop in New York City, “Forests in Cities.” Park and urban forestry leaders from 12 American cities—including Tampa—gathered to discuss shared challenges, opportunities for collaboration, and how urban forests can be part of a climate solution.

“Spending a week together—really digging into core themes around management and care of urban natural areas—created a lot of energy and excitement,” said Clara Pregitzer, a doctoral student at F&ES and a conservation scientist with the NAC. “We realized that cities face many of the same issues. We all agreed that we need to focus on how we can elevate this topic and raise awareness nationally to get some boots-on-the-ground work done.”

Pregitzer, a native of Michigan’s Upper Peninsula and a graduate of Northern Arizona University’s forestry program, had always focused on rural areas. Urban forestry was never part of her plan, but a work commitment for her now-husband brought her to New York City in 2010, where she landed a job with the Natural Resources group of NYC Parks.

“I helped with a vegetation inventory of Van Cortlandt Park in the Bronx,” she recalls. “It really changed my perspective as to what a forest could be in New York City. From there, I really began to see the potential in urban ecology.”

Eventually Pregitzer was recruited by Charlop-Powers to join the NAC as they prepared for the city’s ecological assessment. While working on the assessment, she met Mark Bradford, professor of soils and ecosystem ecology at F&ES, who encouraged her to pursue her Ph.D. at F&ES. Blending work from Yale and the NAC together, Pregitzer has used the data from the ecological assessment to understand how the urban context can influence forest structure and function and how best to manage complex and dynamic landscapes for the future.

“Urban forestry, she says, should not be viewed as “a nuanced type of forestry” but rather a vital part of forestry writ large. Though the social and political issues may differ from a rural setting, urban forests require the same types of management plans and scientific rigor.

“And with our world becoming more urban, we have the opportunity to make urban forests part of a larger dialogue,” adds Pregitzer. “We can invite millions of people to learn about forestry and forest management right in their own city.”

Native New Yorker Sarah Charlop-Powers ’09 M.E.M. (right) has helped guide the NAC by using rural land management strategies to conserve the city’s urban natural areas.

**POP QUIZ:** WHICH WORLD CITY HAS THE LARGEST PERCENTAGE of tree canopy cover over its streets?

If you guessed Tampa, Florida—and it’s likely you didn’t—you are correct! According to a study of horizontal street view imagery by the Senseable City Lab at the Massachusetts Institute of Technology, more than one-third, or 36.1 percent, of Tampa’s streets are given to tree cover, ahead of cities like Singapore, Oslo, Montréal, and Los Angeles.

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Clara Pregitzer, F&ES doctoral student

Native New Yorker Sarah Charlop-Powers ’09 M.E.M. (right) has helped guide the NAC by using rural land management strategies to conserve the city’s urban natural areas.
Gerald Torres, who joined the F&ES faculty in January as a professor of environmental justice, talks about two pivotal events in his career that continue to inform and inspire his work and teaching on environmental and social justice.

Whenever he gets tired, stressed, or starts to think his work is difficult, Gerald Torres looks up at a photo hanging in his office. It’s of a group of 30 Indian children and their elders standing in the ceremonial office of the Attorney General. It was taken in 1994 when Torres was serving as an advisor to then Attorney General Janet Reno. Several months before it was taken, Torres had accompanied Reno to the first “listening conference” with tribal leadership in Albuquerque, New Mexico. After the conference, the Attorney General Reno spoke at a pueblo in New Mexico. After speaking at length, Reno told those in attendance that they shouldn’t hesitate to reach out to her if she, or her office, could help with anything.

It may sound like typical “politician speak,” but the children in the audience took her at face value. They began organizing their pueblo and drafting a list of things they thought the Attorney General might be able to help them with, including improvements to the juvenile justice system in Indian Country and the establishment of a senior center on the pueblo. They wrote a petition and ran a relay race from Albuquerque to Washington, D.C., to present it to Reno at the Justice Department. So, several months after the listening conference, when the guard at the Justice Department gate asked Torres what to do about the group of children who were asking to see the attorney general without an appointment, he replied: “Let them in.” After talking with the children and their elders and
Torres says he looks at this 1994 photo of Indian children and their elders gathered in the ceremonial office of the U.S. Attorney General whenever he needs a reminder that words matter. 

Attorney General Reno was currently testifying on Capitol Hill, he asked the official Justice Department photographer if he were available to take a photo. “I look at that photo to remind me that words matter,” Torres says. “I remain moved to this day by the faith of those kids in the power of their own beliefs, in the belief that the government would listen to them. It reminds me that I have to take my work seriously because it may produce good for others beyond myself.”

The listening tour, itself, could be counted as among the good that Torres’ work at the Justice Department produced. Reno, who was very interested in Indian affairs law, had asked Torres to establish a different model for communicating with tribes and for setting priorities for the Justice Department’s work on tribal affairs. In conversations with Reno and Wilma Mankiller, the first woman elected to serve as Principal Chief of the Cherokee Nation, among others, the idea of the listening tour model created the basis for federal Indian affairs law and policy. It also was one of the catalysts for the creation of The Office of Tribal Justice. Formed in 1995, the Office serves as a central point of contact and advisor to the Attorney General on Indian country-specific legal and policy matters.

**THE ADVANCEMENT PROJECT**  

Although he doesn’t have a picture from that time hanging in his office, Torres also credits his work with the California-based Advancement Project beginning in the late ’90s as having a critical influence on his scholarship and thought on racial and social justice.

Dedicated to “transforming the public systems impacting the lives of low-income people of color in California,” Torres and his colleagues at the Advancement Project, including prominent civil rights activist and lawyer Connie Rice, wanted to track the public health dollars that California was spending by breaking it down to neighborhood level. Their goal was to understand how and where money was being spent and make that data more usable, particularly as a tool to inform political work.

“We were just talking, and we thought, ‘why don’t we do it in reverse? Why don’t we set the agenda, ‘” Torres says. “So, we created the first listening conference which brought all the tribes together with federal officers working on Indian issues, including three at cabinet level.”

The listening tour model created the basis for federal Indian policy in the Clinton administration and has had a lasting influence on the way federal agencies develop and carry out Indian affairs law and policy. To achieve their goal, the Advancement Project brought together interdisciplinary teams of experts, including geographers, public health workers, lawyers, economists, community organizers, sociologists, and others to try to define the myriad of problems closely linked to social and racial injustice in Los Angeles — and to develop solutions. It was an experience that Torres says reinforced for him how crucial interdisciplinary work is to not only in achieving solutions but even to define a problem sufficiently.

“That’s one of the many things that excites me about F&ES — you have people working in areas that have to become part of environmental justice scholarship,” Torres says. “In real estate, for example, I’ve been trying to convince people that we need this discipline to help us assess the regulatory framework we have, whether it’s capable of working the way we need it to, and to figuring out how to achieve the goals of the statutes.”

Another way that the Advancement Project differed from many other organizations focused on civil rights and social justice, Torres says, is that group didn’t think of litigation or even legislation as the sole methods of addressing the problems they were identifying. “We tried to look at what would offer the most redress to that set of problems in the community. It might be floating a bond; it might be helping to mount a political campaign or building a community organization so people could advocate for themselves,” he says. “We never assumed there was one solution or that the first solution you worked on would yield the results you wanted.”

When he looks back at those two pivotal times in his career, Torres says, two things come to mind: integrity of purpose — a purpose that was defined by goals that were larger than immediate objectives — and the importance of working in teams. “I’ve been fortunate to work with many talented and gifted people throughout my career, and I never saw them putting themselves on the back,” he says. “They realized that we rarely accomplish anything by ourselves, and we’re never as smart as we think we are. These are lessons I always try to pass on to my students — the importance of building teams and making sure that your work stays true to its principles — that and that no defeat or success is ever final.”

Note: Professor Torres uses the term “Indian” (as opposed to Native American) in conversation, explaining that many Native people feel that the term carries their history for the past several hundred years. In addition, many Native people prefer to be called by their specific tribal name whenever possible.

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As the COVID-19 pandemic escalated this spring, the F&ES community — faculty, staff, students, and alumni — pivoted their efforts to respond to the crisis in meaningful ways. In the days after the New Haven campus was shut down, faculty and staff worked together to shift the entire curriculum online. Students adapted to online learning and identified new opportunities for research. Several faculty members shifted their research to better understand the pandemic and its myriad effects. And the entire community found new ways to appreciate some of the things we often take for granted, including the beauty of nature in our back yards and in our own neighborhoods.

THE COMMUNITY RESPONDS TO A GLOBAL CRISIS

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Has the Virus Entered Rivers?

Many scientists are studying the various direct and indirect ways that humans are able to transmit the COVID-19 virus, from respiratory transmission to touching a contaminated surface. Peter Raymond, a professor of ecosystem ecology at F&ES, is leading a research project that could reveal whether it can also be transmitted through rivers and streams. In an interdisciplinary study, funded by the National Science Foundation, the Yale study will sample streams and rivers in impacted areas of Connecticut for the presence of the virus. If they find that the virus is present, Raymond says, the next step would be to determine if it can be transmitted to humans — perhaps through the inhalation of aerosols generated by contaminated waters. Research on past coronaviruses and other pathogenic viruses has shown that they can be delivered to waterways via wastewater effluent and urban runoff, particularly when heavy rainstorms cause untreated wastewater to overflow from sewer systems. Collaborators will include F&ES Professor Julie Zimmerman and researchers from the Yale School of Engineering, School of Public Health, Department of Ecology & Evolutionary Biology, and the U.S. Geological Survey.

Climate Communications Program Retools for a New Crisis

As the COVID-19 threat escalated across the U.S., the Yale Program on Climate Change Communication retooled its efforts to investigate how Americans are responding to the crisis. In April, the PCCC-based program conducted a survey of 3,933 Americans, seeking to understand how much they understood the disease, which leaders and media sources they found trustworthy, how they’d changed their behaviors, and how these responses play out across the political, social, and cultural “fault lines” of American society. “We saw an opportunity to look at the COVID-19 crisis from an angle that’s often not fully appreciated, which is the communication side of it,” said Anthony Leiserowitz, a senior research scientist at F&ES and the YPCCC director. “There obviously has been much attention and research looking at questions like, what is this disease? Where did it come from? Who is vulnerable? … And of course, that’s where much research attention should go. But when it comes to societal vulnerability and the actual impacts of the disease, communication arguably plays at least as big a role.

Assessing the Risks and Impacts of COVID-19

In March, as cases of COVID-19 began to surge in New York City, Detroit, and other early epicenters of the crisis in the United States, Eli Fenichel — whose work examines the economic value of ecosystems as the Knobloch Family Professor of Natural Resource Economics at F&ES — helped produce an online dashboard that estimated childcare demand for healthcare workers and others responding to the crisis. Days later, he and a team of collaborators published an interactive database that documented worker risks, by industry, for every U.S. county. Fenichel, who has studied the benefits and tradeoffs of using social distancing as a response to epidemics for more than a decade, said society’s response to the COVID-19 crisis can offer insights into how it might address other complex, global environmental challenges. “One of the things I think is really important for us to remember — and for our School community to keep in focus — is that this has basically just climate change at warp speed. And, it’s biodiversity loss at warp speed. It’s every one of these sort of social-environmental dilemmas, because this is an environmental-social dilemma,” he said. “We all need to roll up our sleeves and do what we can. We know how to work with data and how to solve big, complicated systems problems. Let’s do it.”

A Yale Health employee helps prepare the university’s COVID-19 response.
Socially Distant, Closer to Nature

An unexpected benefit of staying home in recent months has been the opportunity to get outdoors and explore. April’s F&ES Month of Wellness encouraged students, faculty, and staff to stay healthy and active. The Yale School Forests Instagram account (@yaleschoolforests) hosted Phenology Scavenger Hunts connecting everyone with local plant life.

During a spring walk in New Haven, Austin Dziki ’20 M.F. captured Wooster Square’s cherry blossoms blooming (right).

Virtual Tour of Yale-Myers

The trails, classrooms, and labs at Yale-Myers Forest were quiet this spring. But a virtual trail map of the forest, unveiled in May, made it possible for learning at the school forest to continue. The online “StoryMap,” created by the Yale School Forests, will be used to complement courses taught by F&ES faculty, but is also available to anyone else interested learning more about forest ecology and management.

Rock to Rock Shifts Gears

Each April, the F&ES-based Urban Resources Initiative (URI) convenes a team of cyclists, from across the School community and beyond, for the Rock to Rock Earth Day Ride, a New Haven event that has raised more than $1 million for local environmental organizations since 2008. The event looked significantly different this year, of course, as the URI team and other partner organizations urged riders to find alternate ways to support the cause while following guidance on social distancing. Participants took individual or family rides, biked to the top of East Rock and West Rock, and made calls urging political leaders to take climate action. And they decorated their homes. “My kids and I decorated our trees with ribbons and crepe paper, made signs, put chalk on the sidewalk,” said Anna Pickett ’10 M.E.Sc., the development and outreach manager at URI and a longtime organizer of the Rock to Rock event. “I saw someone on social media was going around with chalk and labeling all the trees in their neighborhood, and I was inspired to do that, too.

On April 24, the F&ES Leadership Council held its first-ever virtual annual meeting. Dean Indy Burke presented an update on the School, “The Yale School of the Environment: Why It’s Needed Now,” which discussed the reasoning behind the upcoming name change and stressed the importance of remaining focused on environmental challenges even in the midst of the COVID-19 pandemic. She was joined by senior members of F&ES leadership who detailed how the School has handled academics, internships, career placement, and student life through the pandemic.

Recent Grad Takes Lead at CitySeed

Organizations that fight for equal access to nutritious food have taken on a greater importance during the current global pandemic. In New Haven, CitySeed is dedicated to creating an equitable local food system that promotes economic and community development and sustainable agriculture. The nonprofit operates the city’s successful network of farmers markets, mentors and trains local food entrepreneurs, and works with city government to enact policies aimed at ensuring that all New Haven residents have access to healthy and affordable food. As of this April, CitySeed is led by executive director Cortney Ahern Renton ’19 M.E.M., who brings considerable leadership experience with nonprofits dedicated to food systems and agriculture.
In May, F&ES honored the Class of 2020 with a virtual celebration, which was livestreamed on YouTube, allowing the entire community, family and friends to recognize the accomplishments of this year’s 143 graduates. In addition to addresses by Dean Indy Burke, Gary Barrett ’96 M.F., president of F&ES Alumni Association Board, and New Haven Mayor Justin Elicker ’10 M.E.M./M.B.A., the one-hour celebration included a musical performance by the LoggerRhythms, the F&ES a cappella group; a presentation of student awards; an emotional photo slideshow; and a virtual Zoom photo session. Students celebrated from home in their own unique ways—and, in keeping with tradition, by creatively decorating their mortarboards.
Denotes a reunion class year. Reunion 2020 will be held October 9–11, 2020.

Editor’s note: Class Notes were collected prior to the global COVID-19 pandemic.

Peter Arnold writes: “Still here, though the infestations of old age are working me over. Finally quit bird hunting, though I did spend some pleasant hours in a duck blind watching my son miss a couple of birds. Biggest news is that, at almost 96, I am putting out a short book about hunting, fishing, dogs, etc. I am doing it at the behest of a New Zealand friend, himself a noted author who, I believe, has convinced me when I undertake putting it in readable form. Then the transcript went to Sicily, where a cousin who winters there did the final editing. Now back to California, where I hope to edit our next book, and plan to trekking.”

Mark Boyce writes: “If I had known that 2020 would be my 40th in the'field, I may have never retired in 2004. We all have done good work as environmental leaders and educators, but, alas, it has been enough—I hope so.”

Roy Deitchman writes: “I have ‘retired’ twice but now continue working on short-term EHS assignments. I have determined that my hobby now is work. Our sons work as a water lawyer in Sacramento and an energy analyst for the Georgia Public Service Commission, respectively.”

Terry Chester writes: “I live in a mountain paradise, Sun Valley, Idaho. I will be traveling back to Florida more often to see my new granddaughter. My company, AdBis.com, is still rolling. Livia is a dental hygienist.”

David Kavon writes: “Hi! All three years into retirement from my dental practice——not bored for a moment. Finding my fossil (of course), maintaining my amateur radio station, studying, and being with our 13 grandchildren.”

Hallic Metger writes: “Thank you to everyone in my class who nominated and voted for me for the Alumni Association Board! It is an incredible honor and also a responsibility; don’t hesitate to contact me with questions or comments.”

1. Mark Boyce photo by The Great White North, Edmonton, Alberta
2. Hallic Metger photo by Mark Boyce
3. The Stephen Van Auken Lab at Yale University, with students and researchers working on plant-based bioactive compounds.
writes: “After stepping down from the Yale School of Forestry & Environmental Studies, I am now retired. I am also trying to help organize a climate committee, registering voters, and the 2020 Census. I am currently teaching a graduate-level course in forest biometrics (growth and yield) at the Federal University of Lavras in Minas Gerais, Brazil, in fall 2019 as a visiting professor.”

John McIlgorm: “I taught a graduate-level course in forest biometrics (growth and yield) at the Federal University of Lavras in Minas Gerais, Brazil, in fall 2019 as a visiting professor.”

Eric See: “After 32 years of working for government in environmental roles and as an environmental consultant, I have retired but will be working part time on small projects. Best to all classmates.”

Robert Seymour: “I retired from the University of Maine faculty in 2017 after 39 years of teaching, mostly teaching and studying silviculture. I remain an active coursera, housing several field trips a year.”

William Golden: “Still enjoying retirement east of Colorado Springs, continuing to edit The Smoky Eye. Stop by if you’re (still) interested in forest policy and public lands issues and like friendly debate!”

Steven Hambro: “Still chief scientist for the Environmental Defense Fund, where I am leading the design and launch, in 2022, of a satellite to quantify methane emissions from oil and gas operations globally in order to address climate change!”

Charles Hewitt: “I am finishing two years at the Roux Institute at Northeastern University in Portland, Maine — a graduate education and research institute focused on digital engineering and life sciences.”

Howard Neufeld: “Just a short note about a story I was on in All Things Considered on NPR about Fraser fir and Christmas trees.”

Steven Strauss: “Well, ‘When I’m 64’ (Bread of, at least) is now. But managing to still run in the forest in Oregon, serene source, and professoriate. Also, I’m officially Everyman as I have joined a bowling league!”

Helen Waldorf: “I have been involved in the Massachusetts League of Women Voters (LWV), including the environmental committee and registering voters, and the 2020 Census. I am also trying to help organize a climate committee within the American Society for Testing and Materials (ASTM), with a focus on new international standards for businesses and organizations that are promoting climate-related products, goods, and services. Welcome hearing from anyone interested in participating with either LWV or ASTM in these endeavors — email me at hawaldorf@aol.com.”

Douglas Ryan: “I retired from U.S. Forest Service research in 2012. Lillain and I are living in Olympia, Washington, where we are busy traveling, enjoying our three grandchildren, and being environmentally and socially active.”

Priscilla Kollett (Cilla Leavitt): “I have a new name: Cilla Leavitt. Still running the wilderness program for first-years at Yale. I am on The Frick’s Board. I have a farm near the Vermont Law School and spend time in Chapel Hill, North Carolina.”

Beth Mullin: “I live in Washington, DC, and am an attorney with the city’s Department of Energy and Environment. Focus on environmental enforcement and development of the city’s energy strategy.”


Gail Kalson Reynolds: “Doing well in central Connecticut. Dan is keeping an eye on a logging operation on one of our Vermont properties. I’m busy institutionalizing the UConn master gardeners with my native plant agenda. Peace.”

Carol Youell: “After 16 years, I retired from the Hartford Metropolitan District Commission Water Supply Department, where I oversaw management of its 25,000+ acres of watershed forest and also its source water protection program. I have since become a snowbird, spending winters in Cape Coral, Florida, with my husband, Russ. I am still gardening, swimming, and exploring! I am also engaged in learning about the major water quality trends with Lake Okeechobee and its tributaries. My best news is that I am now a grandmother of five—two great-grandsons, ages 3 and 1 — they are such fun!”

Regina Rochefort: “I’m just retired from The Trust for Public Land with 25+ years in project management of its 25,000+ acres of watershed forest and also its source water protection program. I have since become a snowbird, spending winters in Cape Coral, Florida, with my husband, Russ. I am still gardening, swimming, and exploring! I am also engaged in learning about the major water quality trends with Lake Okeechobee and its tributaries. My best news is that I am now a grandmother of five—two great-grandsons, ages 3 and 1 — they are such fun!”

Safeguard the tradition and future of the Yale School of Forestry & Environmental Studies Contact us about available planned giving options!

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Let us know how you are doing! alumni.fes@yale.edu
Constance ("Dusti") Becker ‘84 and the Life Net Nature team in Kenya.

us to see, and asking, ‘How old do you think this writes: “During a terrestrial eco-

A pleasure!”

writes: “Doing gi-

in Arizona with my hubby, Tony. Email me at dustbecker@lifenetnature.org. ”

in Ec-

management, a survey research firm specializing in

Denise Schlener

writes: “This is my 30th year as the execu-

transition. ”

executive leadership during periods of organizational

have launched a consulting practice to provide ex-

Daniel Hellerstein

writes: “Aloha, I do research on

Christopher Pratt

writes: “A pleasurable day in the Southwest. Jerusalem continues to grow at a rapid pace — thankfully more up than sprawl — but it’s still a
downtown core where I live. Bright-white almond blossoms on the green hill-

Theodore B. Yanker ’72 in the Ngorongoro Crater touring annual additions and lamprey nesting.

Eric Carlson writes: “I’ve been back in Seattle for over six years. Here I work closely as an investor with clean-tech startups and with NGOs active in the recovery of salmon in the Salish Sea. Class-

says, hey if you’re in Seattle!”

Melissa Puy writes: “FKES was well represented at my birthday party this winter, held at a ski-

in the mountains of western Maine – a re-

eral, energy-efficient units. It is hard
to do more is surprising.”

Joshua Royte

writes: “I'd like to share these words of Mary Oliver: ‘It is a

minder of how deeply our F&ES friendships weave
together from Sebastopol, California — my email is

Jeffrey Campbell

writes: “I will be retiring in

Jeffrey Campbell

writes: “I enjoyed our 30th reunion and the chance to see F&ES again! I managed to

Laurie Bardin writes: “I enjoyed our 30th reunion and the chance to see F&ES again! I managed to

Greg Kostner writes: “Hi, I’m in Ply-

We’re active on our conservation commission, con-


Katherine K. Farhadian, farhadianfam@gmail.com

Mary Oliver: ‘It is a

God is faithful! This winter has brought a welcome

Melissa Paly

writes: “FKES was well represented at my birthday party this winter, held at a ski-

several years ago. I will be moving to Portland to become regional

Bruce ‘90, Melissa ‘90, and Ari Goldstein in Iceland.

Bruce ‘90, Melissa ‘90, and Ari Goldstein in Iceland.

Let us know how you are doing! alumni.fes@yale.edu
Susan Pulz writes: “Still with NOAA Fisheries, I recently (August) moved to Washington, DC, with my same four feet for six years in Hawaii. I’m now the deputy division chief of Habitats Protection and glad to be back!”

Mary Verner writes: “The Washington Department of Ecology keeps me busy managing the state’s water resources, and I’m restoring a sustainable heritage farm between Olympia and Portland. Come visit!”

Karen Fitzmaurice writes: “I am using the skills I learned at Yale and in life to follow my passion. I’m opening Poor Gert BBQ – a plant-based, gluten-free barbecue joint in New York City – this spring. Come visit at @poorgertgrill.”

Kathy Hogan writes: “I am currently living and working in Rochester, Minnesota, as a research fellow at the Mayo Clinic focusing on the biology of the autistic conditions in advanced maternal age. Soil science class prepared me well!”

James Jiler writes: “I just finished my sixth year of teaching at Florida International University and have begun working on a book, “Finding Success” New moving from Miami to Valencia, Spain, with my family. Look me up.”

Lindsey Bruce Martinez writes: “Celebrated my fifth anniversary running StarPoint Advisors; it has been rewarding helping companies scale sustainable finance solutions in the capital markets. Loved seeing my F&S classmates at reunion!”

Jonathan Schenzer writes: “I am finishing my sixth year as Hawaii’s Land Use Commission, a unique statewide zoning body, as well as my two-year term as chair of the Hawaiian Islands Land Trust. Cami, Saul, and I are well.”

Madeline Kass ’97 checks out the Antwerp Sewer System.}

Madeline Kaas writes: “Last year I visited Belgium on a Fulbright to research U.S./EU comparative environmental law. This spring I head to the University of Dundee in Scotland as a global scholar. And I’m getting married in July!”

Julie Herbert Bain writes: “I’m a district ranger for the Forest Service in Nebraska Sandhills. It’s been my great honor and pleasure to work on maintaining its intact, native, mixed-grass prairie.”

Kathy Hinds Thompson writes: “I have been honored as the yearling exhibition award for the Monterey Peninsula Foothill. A new year brings new friends.”

Cami, Saul, and I are well. “

Madeline Kass ‘97 checking out the Antwerp Sewer System.

Robert Sears writes: “I am making a livelihood as an international consultant; any leads related to finance and people, please send them over. Starting new work in Ladakh, India, on climate change adaptation.”

Ryan Valentine writes: “I am honored to continue as director of conservation science for the National Parks Conservation Association while also celebrating my 10th anniversary leading the agency program in Kenya at George Mason University.”

George Berghorn writes: “The land development team that I coach at Michigan State University took first place out of 400 proposals for the National Association of Home Builders Student Competition. Good work!”

Jessica Lawrence writes: “For the past 12 years at EarthJustice in San Francisco, I’ve been researching and lobbying on the ecological impacts of coal mines and power plants in China, Kenya, Bangladesh, Indonesia, and Australia.”

Katherine Lieberknecht writes: “I’m feeling fortunate to be back in Austin, close to friends and family and working as an assistant professor at the University of Texas in Austin.”

Kathy Jett writes: “Just began my fifth year working in the Environmental Protection Agency’s Office of Research and Development, where I have been developing an environmental science research portfolio.”

Madeline Kaas Horm by Dr. Ryan Valdez ’96.

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Madeline Kass ’97 checks out the Antwerp Sewer System.
Amada Mahaffey writes: “In 2019 I was promot- ed to deputy director of the Forests Nowhere Guild. I get to collaborate with Christopher Riely on proj- ects and occasionally see Beth and Keith Bisson around town here in Maine.”

Christopher Riely writes: “In 2019 I established Sweet Birch Consulting and started doing inde- pendent forestry and conservation work. Recently I have combined this with a part-time role at the University of Rhode Island.”

Godmundur Ingó Guðbrandsson writes: “In 2017 I took office as the minister for the environment and natural resources in Iceland, and last October I was elected as the vice-chairperson of the Left- Green Movement in my country.”

Kevin Ogeretal writes: “Living the dream in Chicago with my wife, Heather; our son, George; and our dog, Preddy. I lead sustainable non-cocoa sourcing in the Americas at Barry Callebaut and also chair the Sustainable Agricultural Initiative’s North America group.”

Jill Savory writes: “I moved to a full-time role with 11th Hour Racing as their sustainability director in 2019, after several years of consulting. I’ve lived in Reno, Nevada, for more than six years, and I love the mountains!”

Myra Simnot writes: “I have spent the last three years working on generation interconnection poli- cy and watching our electric transmission system change rapidly at the Federal Energy Regulatory Commission.”

Lauren Baker writes: “I moved to San Francisco for a de- cade and still in love. Last summer I became the responsible for the organization. Come visit!”

Suzette Cary writes: “I had an amazing time at our 15th reunion with Maminta Dutta and Ken Odaka sharing fun memories and making new ones. Fate brought me and Neha Samen (Menon) together the following week.”

Cecilia Blasco Hernández writes: “I now direct SmartFish, an NGO that incubates small-scale development and am enjoying work and life! Rio was amazing time at our 15th reunion with Ken Odaka sharing fun memories and making new ones. Fate brought me and Neha Samen (Menon) together the following week.”

Laura Baker ’05 and family at a recent weekender in Chesapeake Bay, Maryland. 

Dora Cudjoe writes: “Aside from managing green investment operations, I have recently taken on the responsibility of the stakeholder engagement portfolio for the Climate Investment Funds, a task hedged on building partnerships.”

Anna Maria Assisfal writes: “Living my career in coaching and leadership development! Pub- lished a book in Colombia about declaring one’s purpose — a powerful step in the path. Fun fact: I’ve officiated three weddings with my husband!”

Matthew Brewer writes: “Living in Bogotá, working with organic cacao and commercial mar- jumas. I’m still climbing, surfing, and making sure to snag my sweet 4-year-old daughter!”

Deborah Dease writes: “Hi, F&ESers! Still liv- ing in Colorado Springs, but I’ll be moving to Denver soon. Let me know if you’re in the area and want to catch up sometime. I’d love to have a chat session!”

Tara Moberg; seeking volunteers!

Jennifer Vogel, jennifer_vogel@yahoo.com

Laura Weaver, le.weaver@gmail.com

Chris Choo, chris.choo@colorado.edu

Alfredo Cordero, alfredo.cordero@worldbank.org

Virginia Lacy, virg.lacy@gmail.com

Benjamin Urophart, bunrhopurt@gmail.com

Lauren Baker writes: “I continue to work at the Policy Office at the U.S. Agency for International Development and am enjoying work and life! Rio was amazing time at our 15th reunion with Ken Odaka sharing fun memories and making new ones. Fate brought me and Neha Samen (Menon) together the following week.”

Dora Cudjoe writes: “Aside from managing green investment operations, I have recently taken on the responsibility of the stakeholder engagement portfolio for the Climate Investment Funds, a task hedged on building partnerships.”

Ann Goodman-Nagle writes: “I’m working in clu- ster adaptation policy for the City of Seattle at Seattle Public Utilities. Kids are now 6 (Sam) and 9 (Syria). Kyle and I are happy to be back in Washington — come visit!”

Andrea Johnson writes: “I’m consulting for the Climate and Land Use Alliance, The Forestland Group, and various NGOs; returning a degraded ranch; and training my horse in Costa Rica’s Osa Peninsula. Always love F&ES visits!”

Paula Randler writes: “In January I got to hang out with Julie Witherup and Yulsa Shimitd on a trip to the Bay Area! We are noodles, went to yoga, and Julie and I spent over an hour in a mystical cryosauna.”

Yulsa Shimitd writes: “Still an advisor to a commisionner at the California Public Utilities Commission, working on electric vehicles, re- newables, and many other policies. This year my partner and I moved to the East Bay and got a kit- ten. I’m trying to improve my skiing by reading a library book.”

Kevin Ogorzalek writes: “In 2019 I established Green Movement in my country. I was elected as the vice-chairperson of the Left- Green Movement in my country.”

Brandon Maddalw writes: “I am now in Seattle and have taken on a new role as director of Mis- sion’s Climate Innovation Fund. Fellow alumni Alina Sage and Anton Chion ‘08 visited us re- cently on Bainbridge Island!”

Jennifer McIvor writes: “Last year was a big year: I started a new job as chief environmental counsel at Berkline Hathaway Energy in January and got engaged in September! I hope three awesome new bonus kids, too.”

Christopher Clement writes: “I am inspired each day by the entrepreneurs I work with, building enlightened and impactful enterprises. My lovely partner, Danielle, and daughter, Graze (now near- ly 3), keep me happy and sane.”

Jill Savory, jlsavory@yahoo.com


Diana Dimitrova writes: “Since 2017 I have been managing a small NGO in Bulgaria. One of the fo- cuses of my work has been creating a framework and tools for the development of a network of community vegetable gardens in Sofia.”

Gonzalo Grinchenow writes: “Last year brought many changes for me. Professionally, I moved to the private sector after being in multilateral develop- ment banks for some time. I also moved back home and often catch up with many F&ESers. Life is good in the tropics!”

Jenny McIvor ’08 and Dan McIvor celebrating their wedding in Oakland, California, with fireworks.

Angelica Afanador Ardila, angelica.afanador@aya.yale.edu

Let us know how you are doing! alumni.fes@yale.edu

YULSA SHIMITD
F&ES for the reunion. “I’m enjoyed taking our family to Senegal for a two-month shrub species. I’m enjoying the challenge!”

Kathy Kidd Whorton “I was delighted to spend time with Jamie Opie and Terry Unger in the Phoenix area not too long ago. I’m also happy to show that Chip and I are expressing our third child, a daughter, in March.”

Julie Widdrington “Huge year! In no particular order, I ran a 30km race, engaged to take a break from work, and upgraded the dog kennel from standard wire to a custom wood and wrought iron statement piece.”

Yang Zhao “I’m currently leading Justice Kunohe to change the image of Chinese food in America. We have five stores in New Haven and New York – expanding rapidly. I also have a 2-year-old daughter named June.”

Mark Richard Evidente “I’ve been running, laughing, and cooking. “I’m always reprofessing to announce that I’m leaving Keo’s. High-end, carbon-negative queso coming via e-bike to you soon.”

Nia Ropeva Fakhri “I currently leading Junzi. My daughter, Flora, and her older brother, Daniel. “I’m living in Oakland, trying to get outside when possible. Come visit!”

Jude Wu, jude.wu@aya.yale.edu Simon Tudiver, tudiver@gmail.com Neelesh Shrestha, neelesh.shrestha@gmail.com

Jessica Sterba, reishel.chernault@gmail.com Simon Tidwell, ttdwrr@gmail.com Judith Wu, jude.wu@ya.yale.edu

Mark Richard Evidente “I’ve been mining a policy and planning sustainability consulting firm, working in tourism development, heritage conservation, and urban planning. Come visit the Philippine!”

Nancy Maree “Hi, F&ESers! I am (final-tember, getting married in San Diego in October, and about to spend hours chasing his husky mutt, June Bug, and doing jiu jitsu. Life is good.”

Leigh Whelpton, leigh whalepont@gmail.com

Randal Strobo, rastrobo@gmail.com Gabriel Mejias, gabrielmejias@gmail.com

Emily Schosid “I earned my Ph.D. in molecular biology at Harvard before becoming an independent consultant at L.E. K. Consulting in Boston. Currently head up strategy at Arbor Biotechnologies, a gene-editing startup.”

Alina Mills “I’m living and practicing ar- chitecture in Honolulu. Current projects include affordable housing in Kula on Maui, student housing in Bellingham, Washington, and a net-zero commercial building in Flagstaff, Arizona. I continue up with this tradition!”

Soojin Kim “I celebrated the first year of being an independent consultant. Being my own boss is challenging but super fun! I get to catch up with so many F&ESers in 2019, and I hope to keep up with this tradition!”

Lauren Sparandara “I’ve been working for Google’s real estate sustainability team for over six years now. Published a whitepaper this year with the Ellen MacArthur Foundation focused on com- mercial deconstruction.”

Tina Soo ‘12 "I’m currently leading Junzi. My daughter, Flora, and her older brother, Daniel. “I’m living in Oakland, trying to get outside when possible. Come visit!”

Karen Koeppen “I continue my work with the Natural Resources Defense Council on climate change and clean energy in India. My daughter, Anna, is now 6. If you’re in DC, let’s catch up!”

Sameer Kwatra “I continue my work with the National Resources Defense Council on climate change and clean energy in India. My daughter, Anna, is now 6. If you’re in DC, let’s catch up!”

ViveSolar in Guadalajara, Mexico. Please call us if you’re nearby.”

Faye Liu "Queso. High-end, carbon-negative queso coming via e-bike to you soon.”

Gilead Sciences as the company’s director of state policy, planning and sustainability consulting. Come and visit the 230-year-old brewery!”

Andrew Zingale “I began a new job at ViveSolar in Guadalajara, Mexico. Please call us if you’re nearby.”

Emily Schosid “Hi, friends! I’m still work- ing at the University of Denver as the sustainabil- ity director for students and faculty. I’m also aanne. Bats are still useful. Not much has changed.”

10

F&ES alumni and honorary alumni (left to right) Jasmin Qin ’15, Andrew Zingale ’20, Randal Lynam ’10, Yonathan Pineda ’19, Kristin Tracz ’09, and Mylee Michelle ’19. Let us know how you are doing! alumni.fes@yale.edu

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F&ES alumni and honorary alumni (left to right) Jasmin Qin ’15, Andrew Zingale ’20, Randal Lynam ’10, Yonathan Pineda ’19, Kristin Tracz ’09, and Mylee Michelle ’19. Let us know how you are doing! alumni.fes@yale.edu

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jobing life in the East Bay. I recently got a dog and named him Harem to pay homage to The Elm City!”


Mariana Kondol writes: “I am adorning in DC with a new husband and a new house! Lawyering and lobbying at Earthjustice by day, teaching wine ethics by night, and finding balance by running ultramarathons.”

Kayeell Mulligan writes: “It was an exciting year! In January 2019, Great Mall19 and I moved to California. We’re also expecting our first kids in May! If you’re passing through the Denver area, let’s connect.”


Katie Seideman writes: “I currently work as a tree climber for the Doisy Tree Company Expert, based out of the Hamden, Connecticut, office. I also work as a tree climber for New Canaan Crossfit and coach Crossfit classes.”

Lindsay Cronn writes: “Last year was a particularly busy year because I gave birth to a delightful baby, Wesley. I was born on April 19, 2019.”

Rebecca Gilber writes: “I had a braid 2019 — moved to Maine, started a new job in higher education, got married, and started looking for a house! Will love to connect with other F&Sers when they’re in town.”

Michelle Lewis writes: “I founded the Peace Garden Project (PGP). PGP examines the intersectionality between food justice and other justice issues while growing food. We have grown a ton of food. Check us out: peacergartenproject.com.”

Katherine Romano writes: “I’ve been leading the Hill Country Alliance for four years now, working to advance sound land use planning, water management, and land conservation in central Texas. Come see us in our new office in Leakey!”

Hank Seltzer writes: “After two years in Charleston, we (four of us) now moved back to Nashville and are acquainting the kids with The Music City.”

Mona Wang writes: “Took a leap of faith out of the sustainability sector and into community development. Conclusion: the old Gregg Goldman! Sustainable development needs significant integration with equitable development.”

Rui He writes: “I am back at school again getting a PhD in Environmental Science at Duke University. My research is about wild food, hunting, gathering, and environmental conservation – and it’s a love story!”

Samuel Miller-McDonald writes: “Finishing a PhD at University of Oxford in human geography. On the side, helping run The Trouble (the-trouble.com) and Epigyne (epigynemag.com), two new anthropocene mags. Check them out!”

Mahi Quinn writes: “Hi, everyone! I’m currently working in the climate and health space in Islamabad. In the past year I’ve traveled to some amazing spots in northern Pakistan: Hunza, Skardu, and Swat. Come read about it all in my blog: The Trouble (thetrouble.com).”


Maggie Thompson writes: “I started the year working on Jay Jay’s presidential campaign and am now the climate policy advisor for Elizabeth Warren’s presidential campaign.”

Brady Kiesling writes: “I recently moved to Colorado. We’re also expecting our first kiddo! I’ve been leading the Peace Garden Project (PGP). PGP examines the intersectionality between food justice and other justice issues while growing food. We have grown a ton of food. Check us out: peacegardenproject.net.”

Kathleen Ament, kathleen.ament@gmail.com writes: “I have been living in sunny Northern California. I started a combination of advising, deal structuring, and, as an added bonus, actually, asset management.”

Sarah Sax writes: “I’m now working as an environmental journalist and producer in New York, writing and reporting a lot of stories on forests, commodities, land rights, and climate change. Hit me up if you have a story tip!”

Farrukh Zaman writes: “I’m currently based in South Korea, where I work with Green Climate Fund. The fund just concluded its first replenishment, which will help us finance $1 billion in climate projects in developing countries.”

Eve Boyce writes: “I’m living in Brooklyn Heights and working on the public policy team at Lyft with Tommi Hayes’15!”

Raymond Wemmer writes: “Hello from San Francisco! Lisa Velle Wemmer ’17 and I have a beautiful baby girl in April, Kalima Velle Wemmer. We spent the holiday with family in Kansas and met up with some F&Sers as well!”

Siegfried King writes: “I’m working on sustainability challenges around the Ghana-fresh-food scene.”

Kevin Lee writes: “I live in sunny San Diego County—working as a consultant and compliance specialist with Dr. Bronner’s, an organic and fair-trade soap company!”

Luciana Murray writes: “From a copper mine in Arizona, to cardboard box manufacturing in Michigan, to the Peruvian rainforest – unimaginable places and experiences. It’s been a challenging, work to make companies do better.”

Let us know how you are doing! alumni.fes@yale.edu
Caitlin Chiquelin writes: “I got married again (kidding)! I have spent the past year gearing up for
Bronx since the beginning of September! The al-
Emily Dolhansky writes: “After a year of unemploy-
Frank Cervo writes: “I’m overseeing our opera-
Santiago Zabel writes: “I started a job at Upudu, a social impact tech startup in the inter-
David B. Kittredge Jr. ’80 M.F.S., ’86 Ph.D. (1956–2020) passed away on March 20, 2020 in Shutesbury, Massachusetts. Kittredge earned his bachelor’s degree in forestry from the University of Vermont before attending F&ES, where he earned a master’s degree in silviculture and earned a doctorate working with Pro-
Jean Tam ’80 M.F.S. (1949–2019) passed away on June 28, 2019, along with her husband, Scott Christie. Tam, a bird lover and devoted naturalist, served on the board of the Anchorage Audubon Society since the 1980s. The couple spearheaded a popular loon cam, complete with “the Cadillac of arti-
Herbert Winer ’42 B.A., ’49 M.F., ’56 Ph.D. (1921–2019) passed away on December 11, 2019, in New Haven, Connecticut. Winer was a member of Yale College Class of ’42, where he majored in classics and botany, later returning as a fellow of Berkeley College. Winer served in the U.S. Army in the Pacific during World War II before returning to Yale, earning a Master of Forestry degree and a Ph.D. in forestry. Winer stayed on, teaching at the School until 1964. He then moved to Mon-
Theodore L. Richardson ’48 M.F. (1921–2019) passed away on August 4, 2019 in Jessory Shore, Pennsylvania. Richardson received an undergraduate degree from Williams College before earning his Master of Forestry degree from F&ES, which he earned following service in the 10th Mountain Division and the 11th Airborne during World War II. A lifetime member of the Na-
Karen Zuber (left); Chloe [redacted] (right); and \( \frac{1}{2} \) of the School of Forestry and Environmental Studies (SFE) team. (Photo by Photo by SFE)
A Furious Sky: The Five-Hundred-Year History of America’s Hurricanes
by Eric Jay Dolin
Liveright
In "A Furious Sky," Eric Jay Dolin ’88 M.E.M. presents the story of American hurricanes from the nameless storms that threatened Columbus’s New World voyages to the devastation wrought by Hurricane Maria in Puerto Rico and the escalation of hurricane season as a result of global warming. This narrative is populated by unlikely heroes, such as Benito Viñes, the 19th century Jesuit priest whose revelatory methods for predicting hurricanes saved countless lives, and journalist Dan Rather, whose coverage of a 1961 hurricane changed broadcasting history. Dolin’s story uncovers the often surprising ways we respond to natural crises and offers important insights into what the country faces in the future. Available June 9.

Feasting Wild: In Search of the Last Untamed Food
by Gina Rae La Cerva
Greystone Books
Two centuries ago, nearly half the North American diet was found in the wild. Today so-called “wild foods” are becoming expensive commodities, served to the wealthy in top restaurants. In “Feasting Wild,” geographer and anthropologist Gina Rae La Cerva ’15 M.E.Sc. traces humankind’s relationship to wild foods and shows what is sacrificed when these foods are domesticated – including biodiversity, indigenous knowledge, and an important connection to nature. Along the way, she samples wild foods herself, sipping elusive bird’s nest soup in Borneo and smuggling Swedish moose meat home in her suitcase. The book challenges the reader to take a closer look at the food we eat today.

The Amazon: What Everyone Needs to Know
by Mark J. Plotkin
Oxford University Press
Did you know that the Amazon covers an area about the size of the continental U.S.? That the Amazon River discharges about 57 million gallons of water per second – enough in two minutes to supply every resident of New York City with water for a year? Or that one in four flowering plant species on Earth resides in this ecosystem? These are some of the incredible facts detailed by Mark J. Plotkin ’81 M.F.S., co-founder and CEO of the Amazon Conservation Team, in this new book, which is part of the “What Everyone Needs to Know” series. But beyond providing an overview of the incomparable ecosystem, Plotkin – who has spent 40 years studying the people, flora, and fauna of this region – takes a closer look at the challenges it faces in the coming decades.
PARADISE LOST OR FOUND?

While researching and writing his new book, “Billionaire Wilderness The Ultra-Wealthy and the Remaking of the American West,” sociologist and F&ES Professor Justin Farrell spent five years in Teton County, Wyoming — the richest county in the United States and the one with the greatest income inequality. He conducted hundreds of in-depth interviews with the area’s working poor and with the ultra-wealthy who come from across the country to find a paradise in this awe-inspiring wilderness. We were eager to find out more about his work and what he learned about wealth concentration and environmental conservation in this corner of the rapidly changing American West.

In the acknowledgments of “Billionaire Wilderness,” you write that this book was “far and away the most challenging piece of research and writing you’ve ever done.” Why was that the case?

The sensitive nature of the topic and the difficulty gaining access. The topic of ultra-wealth is hot-buttoned, and my study was always prone to be sucked into the vortex of our politicized and polemical age of “twitterized” impulsiveness. The book is not an exposé but is instead a carefully and scientifically designed piece of research, and it was difficult to describe the study and carry it out without being stereotyped as either unfairly targeting the rich or propping up privilege. And, as I explain in the introduction, my sampling and interviewing process was so difficult because these folks have all sorts of layers of protection, which is why they are rarely, if ever, systematically studied.

In the book, you describe the “environmental veneer,” which defines, at least partly, the philanthropic philosophy of the ultra-wealthy in Teton County. What is the environmental veneer?

It’s a popular assumption that environmental conservation is, in a vague sense, an altruistic public good rather than a vehicle for protecting wealth, achieving social status and integration, expressing group identity, sustaining societal advantages, and generally reinforcing many of the social mechanisms that give rise to environmental problems in the first place.

You also describe in detail what you call the “community veneer,” or the disconnect between the way Teton County’s ultra-wealthy and its lower-income residents perceive each other. For example, the ultra-wealthy often referenced what you call the “myth of the modern-day penniless nature-loving type,” such as the ski bum, when in reality the majority of the working poor in the area are Spanish-speaking immigrants working multiple jobs in the service sector. How do these differing perceptions affect the social and economic climates in Teton County?

Yes, that’s right. As I describe in the book, this “community veneer” deliberately conceals outward indicators of socioeconomic, racial, and ethnic inequities while rewarding trivial acts of individual charity and selective environmentalism. It hides patterns of structural harm, alleviates personal guilt, and ultimately forestalls the need for economic and political action to address pressing local and global problems.

The final chapter of “Billionaire Wilderness” is titled “The Future of Wealth and the West.” What does the future hold for environmental conservation and income inequality in the West? What factors will determine that future?

As I chart the future of the socioenvironmental policy in the West, I note in the epilogue just how rapidly the region is changing — from climate change to sharp population growth — and argue that it requires an all-hands-on-deck approach. And, frankly, better collaboration among scholars, policymakers, agencies, and the general public. That is why our School, and Yale as a whole, is so well positioned to be a leader and to train students who can develop the skills necessary to tackle these complex problems.

“Billionaire Wilderness” is published by Princeton University Press.
Knowledge and leadership for a sustainable future