# News from the ISSUE 16 | FALL 2020 **QUIET CORNER** BROUGHT TO YOU BY THE YALE FORESTS

### A Note from the QCI Manager

Without any of our usual social markers of time at Yale-Myers Forest, we've come to December. No research seminars, film screenings, or harvest festival. Instead, we engaged with the forest and you all in different ways. We embarked on a learning journey together about Indigenous history and relationships to land. Students lived in pods at our camp for Forest Crew and then our Management Plans class.

There are exciting things to look forward to in the new year. We'll debut our second digital interpretive trail, and we'll follow up on the "Get to Know Your Forester" webinar we held with CT DEEP in early December. We're also launching a new maple education and extension program, and I hope that some of you will join us as we tap into some sweet new knowledge.

We've had some staff changes at the Yale Forests. Jess Lloyd took over as Forest Manager, and Karam Sheban is our new Research Manager. Sara Santiago (Communications, Outreach, and Extension for The Forest School), Reid Lewis (Forest Carbon Assessment), and I round out the current cohort of postgraduate Forest Fellows. We're also bidding a proud farewell to QCI Assistant Eliot Nagele, who is moving on to a new role with the New York Botanical Garden.

I hope you all are staying safe and enjoying the forest. We're looking forward to connecting however we can.

### Rosa Goldman

Quiet Corner Initiative Manager Yale Forests

The Quiet Corner Initiative (QCI) supports local livelihoods, sustainable forest management, and rural economic development by building relationships between local landowners, conservation and forestry professionals, and students and faculty of The Forest School at the Yale School of the Environment. Thank you to our alumni and the rest of the Yale community for their support.

### Upcoming Maple Program Taps Into A Southern New England Resource

Eliot Nagele, QCI Assistant, MF '21



**Left**: Joe Orefice demonstrates installing tubing in the forthcoming maple education series. **Right**: Local CT Maple Syrup Stand, Maple Syrup Producers Association of CT.

Maple syrup: we all enjoy it, but how many of us know where it comes from? If you're sipping on store-bought 100% maple syrup that was produced in the U.S., chances are it's from northern New England. According to the USDA's 2019 Maple Syrup Production Report, of the 4.2 million gallons of maple syrup produced domestically in 2018, nearly 50% came from Vermont alone, and 20% from New York. States like Connecticut and Rhode Island, with hundreds of syrup producers and plenty of maple trees, didn't make up even 1% of production. This concentration in northern New England can be partially attributed to the fact that most educational resources and maple extension services are based there. Maple producers in southern New England also face more critical challenges due to climate change. As the climate continues to warm, it's projected that sugar maple (Acer saccharum) regeneration will decrease, sap yields will diminish, and we'll see more invasive pests, plants, and pathogens in our forests.

We are so excited to announce that the Yale Forests are launching a maple education and extension program in the new year, to support maple producers in southern New England and bring a bit more sweetness to our region. This endeavor is supported by a 2020 USDA Acer Access and Development Program Grant, and we'll be developing demonstration projects and programing for producers and amateurs alike. This work will provide local land managers and producers access to the most advanced and efficient technology and management practices for sap collection, maple syrup production, and maple silviculture.

Due to COVID-19 restrictions, programing will begin this winter with educational videos and virtual learning opportunities. We'll start in January with sessions on installing tubing systems and tapping trees. Over the course of the three-year program, as we build up our own production at Yale-Myers Forest, we'll cover everything from sap collection and storage to maple silviculture to syrup processing. Once we can hold in-person events again, we'll partner with local producers throughout Connecticut, Rhode Island and Massachusetts to host these workshops for experienced and aspiring maple producers, landowners, foresters, and anyone else with a burning (or should we say boiling) interest in all things maple.

To learn about upcoming maple events and happenings, be sure to subscribe to the QCI mailing list. You can also reach out to Joe Orefice, Director of Forest and Agricultural Operations (joseph.orefice@yale.edu), or Rosa Goldman, QCI Manager (rosa.goldman@yale.edu). \*

### **Research Spotlight: Invasive Species & Disturbance**

Karam Sheban, Research Manager, MF '20

Shortly before COVID-19 began spreading across the globe, Americans received what we hoped would be the worst news of 2020: the Asian Giant Hornet had been spotted in Washington state. Referred to as "murder hornets," these extremely large wasps feed on local honeybees.

The fear - aside from a painful sting - is that the new pest could threaten honeybee populations across the country, disrupting agricultural economies that depend on the pollinators and their honey. This flying interloper is just the latest on a long list of invasive species from around the world that have found their way into the United States; estimates put that number north of 50,000. The cost of invasion is just as staggering, totaling nearly \$120 billion each year. These costs include efforts like invasive plant removal. In natural areas, ranging from National Forests and city parks to privately owned forestland, land managers spend millions of dollars each year on invasive species removal. If you see a plant that shouldn't be there, the thinking goes, pull it out or spray it with herbicide and your problem is solved.

Or maybe not.

Eli Ward (MFS '18), a PhD student at the Yale School of the Environment, has studied invasive plants for years, in settings ranging from the forests of New England to New York City's urban parks. And if you asked her, Eli would tell you that it's not so simple.

Scientists have known for a while that invasive plants are particularly good at invading recently disturbed areas. When a wind storm or insect outbreak kills trees, or a logging road is installed in a forested area, the first plants to appear on the scene are often invasives. These species tend to have certain adaptations – such as rapid growth and profligate seed production – that make them fierce competitors in the battle for growing space.

But more recent research has shown that some invasive plants have the ability to alter the environments they grow in. By growing quickly and dropping nutrient-rich leaves onto the forest floor, some invasive plants actually increase the fertility of soil underneath them. And this elevated fertility actually makes it even easier for invasive species to beat out native species on that site.

It's a little like a school-yard bully stealing your lunch money; he was growing well before, but



Eli Ward collecting data at her research plots at Yale-Myers Forest, Eastford, CT. Photo: Eli Ward.

look out because now he's eating your lunch.

Other forces can change the soil fertility as well; it turns out that disturbances like logging or a wind storm can mix up the forest soil, potentially setting the stage for an invasive plant bonanza.

Disentangling exactly why invasive plants do so well in disturbed sites – whether it's the disturbance or the invasive plants themselves responsible for changes in the environment – is what Eli wants to better understand. "You never know what is a cause and what is a consequence," she said. "That's my entire field of study."

To better understand these dynamics, Eli set up an experiment at Yale-Myers Forest in northeast Connecticut. Step one: intentionally plant the invasive species that most forest owners in Connecticut are trying to get rid of.

Eli chose three invasive species particularly troublesome to the region for her study: Japanese honeysuckle, multiflora rose, and Asian bittersweet. She set up research plots in the forest where she planted a mixture of native tree seedlings as well as the invasives. Some areas had just one invasive planted, and in other areas the invasives were planted together. Some research plots were in areas that were logged in 2019, while the rest were in parts of the forest that hadn't been recently disturbed. Each year she will take measurements to compare how the fertility of the soil changes across all of her plots. Then, after three years, she should have enough data to begin teasing apart which factors are most responsible for changes in soil fertility.

Eli's hope is that her research will shed some light on the specific variables most responsible for invasive species' success. Armed with this knowledge, land managers who want to control the spread of invasive species might have a fighting chance.

"I'm hoping to bring more nuance to how people think about invasive species and forest disturbance" said Eli. For those who think logging is the problem, Eli is quick to point out the contrary. "There are a broad range of conditions that can arise from forest management," she said. "And they don't all lead to invasive plants."

That being said, there likely isn't an easy solution to the problem. Invasive species removal will definitely be part of the solution, and according to Eli, "It's not going to be a one-time event." We will likely have to learn to live with the majority of invasive species. Just hopefully not those hornets.

This Fall, QCI began an outreach initiative focused on highlighting why residents of the Quiet Corner cherish this beautiful land we are all working to protect. We hope to continue this section of our newsletter into the future. Keep an eye out for opportuntities to share your stories in our Spring 2021 Newsletter. Below is our first installment by our neighbor John Day, accompanied by his photos taken along Old Turnpike Rd.

My wife Jane Doyle and I, together with our three children, moved to a house near the sawmill on Old Turnpike Road in 2004. We had come from Shrewsbury, MA, a suburb of Worcester, and had both spent the majority of lives in and around cities. Jane was raised in New York City and I in Philadelphia. After getting married, we lived for a time in Providence and Boston but would talk often about trying to find a place in the country. We were excited to move here, but our children, two of whom were in high school and college, had significant reservations. ("Lame," they said then; now we are "smart," of course.) A number of things required getting used to: the distance to the grocery store, the incredible variety of spooky sounds we would hear at night (the barred owl was the least spooky!), the seemingly endless chores, but for me, the ready access to incredible cycling routes and the presence of a great swimming hole up the street near the YMCA camp took no getting used to.

We re-established an organic vegetable garden but were surprised when we had a very hard time with corn and tomatoes (after learning from the two Yale Forestry students who evaluated our property last year that the land has always been less than ideal for farming, we feel a little less incompetent...). When we arrived, the property had a lovely manicured lawn, but we have been reluctant to use any sort of treatment on it so, as a result, we have many weeds and a lot of moss which we have gotten quite used to. "After all," we tell ourselves, "the weeds and moss are green." The past sixteen years has largely been a matter of trying to understand our surroundings (Is it best to feed, or not feed, the birds? What is that bird? What is THAT horrible screeching sound in the middle of the night? Should we just let that part of the lawn turn into a meadow?), and minimize our impact on them, but equally important has been to discover the incredible cycling routes and walking trails around our house.

For me, nowhere does my appreciation for living here, basically in the middle of the Yale Forest, seem more vivid that the recurring moment when, after riding my bike up Rt. 89 from Mansfield, frequently buzzed by double cab Fords and Rams, taking a right at the church, I speed down the hill onto the dirt of Boston Hollow Road, underneath the green canopy, the sanctuary of the forest. "Boy, am I lucky," I think. Have we improved things since we moved here? Maybe we are putting a few less chemicals in the ground, maybe picking up the Jagermeister and Fireball Cinnamon Whiskey nips (and those humongous 2402 Foster's cans!) along Old Turnpike Road has made a little difference, but there seems like there's an awful lot more to do. Plans for the future? Keep working on the tomatoes, all-electric vehicles, and solar panels out back for the house.

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WORDS & IMAGES BY JOHN DAY, WOODSTOCK RESIDENT



## CHANGING NARRATIVES IN A PANDEMIC SUMMER

Reid Lewis, Ucross Highplains Stewardship Initiative Western Resources Fellow, MF '20

This past July, a group of Forest Fellows, students, and collaborators began a learning journey focused on better understanding the past, present, and future of the Indigenous peoples who have long held relationships with the land of the Yale Forests. At Yale-Myers Forest and in the Quiet Corner, we live and work on occupied land of the Nipmuc people. Over the course of the Yale Forests Reading Group, we have shared resources on topics including Indigenous erasure and the wilderness myth, King Philip's War, tribal sovereignty, state and federal recognition of Native Nations, and Indigenous food sovereignty. Here, incoming Forest Fellow Reid Lewis shares a bit about why this work is so important. This piece was originally published on September 22, 2020 as a <u>blog post</u> for the <u>Ucross High Plains Stewardship Initiative</u>, the Yale School of the Environment's program focused on stewardship and conservation of the American West.

When's the last time you were dancing? Really going for it, with sweat and chaos and flashing lights? For me it was New Year's Eve in a quaint, bizarre ballroom that seemed better designed for blackbox theater than a late night of revelry. It was warm and there was poor air circulation; a strange entry point for a year of a respiratory pandemic. On the wall, a local TV network repeatedly flashed their year-welcoming mantra:

### 2020: Perfect Vision.

The irony is almost painful, how a lack of foresight (and action) has caused so much preventable death and despair. Over the summer, as I've occasionally reflected back to the start of the year and the significance of a coincidental number and a local television's message, I've thought more and more about vision and perspective. I've thought about what we see and what we don't see based on the narratives we've been told, and how this vision – or lack thereof – shapes the impact we have on the world.

All of this thought took place in the context of immense fortune; I had my health, a stable home, and knew where my next meal was coming from. From this luxury of safety, I was able to work on a project during an incredibly tumultuous summer. With access to a great dataset and decent internet, I set out to remotely explore how people used the National Parks over the years.

As I worked on this project I continued to think more and more about narratives (discussed more fully <u>here</u>). What informed my own narrative about the National Parks? What narrative could I tell with the dataset I had? Who would it benefit?

Before thinking about the goal of my summer's work, I hadn't rigorously challenged my own narratives of the National Parks. Eventually, after gaining perspective from some <u>great</u> <u>resources</u>, I realized that starting the history of National Parks in 1901 (the first visitation data point) was not only a large omission, but a massive injustice to the Indigenous people who have powerful connections to the land. How do you convey narratives of Indigenous genocide, erasure, survivance, and immense cultural diversity from a dataset limited to one variable through a small slice of time?

As I learned more about Indigenous relationships with the lands we call the National Parks, I started to realize how difficult it would be to say something of significance. Instead, I committed the rest of my summer to learning. Throughout my past two years as a student of forestry, I've learned much about the forests around me, but little about the Indigenous nations that connect with them. Some fellow friends and colleagues (the Yale Forest Fellows) felt similarly, and we formed the Yale Forests Reading Group to unpack the past, present, and future of the forests we studied by centering the experiences of Indigenous communities.

Our suspicion was that we weren't the only people eager to learn more about Indigenous perspectives and histories of the forests of the Northeast and beyond, so we structured the group to be public facing through Instagram posts and an email listserv. We hoped to reach a few dozen folks who wanted to learn with us, engaging with comments and feedback from time to time. As I write this reflection, with summer turning to fall, we have 140 listserv members and more than 1,000 people engaging through Instagram. The content we've been learning from, that so many Indigenous scholars and activists have shared, has been revelatory in how I view and understand the Northeast: narratives of theft, greed, strength, survivance, sorrow, and joy. Learning by centering narratives of Indigenous nations of the Northeast will forever enrich the future I hope to help create.

To view past installments of the Yale Forests Reading Group, visit our <u>listserv archives</u> or take a scroll through our <u>Instagram</u>. If you want to receive future installments and learn about what we're currently work on, sign up for the listserv <u>here</u>. Thank you to all who have learned along with us so far; we deeply appreciate your engagement. \*

At the Yale Forests, students, fellows, and professors learn to read the landscape through clues that can tell us about human relationships with the land. While we have engaged with topics surrounding Indigenous relationships to land such as food and resource harvesting and management, these conversations alone do not tell the full story of settlercolonialism, oppression, and displacement of Indigenous peoples in the context of forested landscapes.







WHERE ARE WE?

Native-Land draws on maps from a variety of sources, prioritizing Native nations' delineations of their territories. On this map, Yale-Myers Forest sits on Nipmuc land. When we zoom out, it's clear that there are many other peoples who share this greater landscape: Mohegan, Narragansett, and other Algonquianspeaking peoples.

A selection from the first Yale Forests Reading Group post on Instagram, inviting participants to learn about the Indigenous peoples whose land they now occupy and to consider what it means to have relationships to land. July 14, 2020.

# FALL 2020 QCI NEWS & UPDATES

### Summer 2020 Forest Crew and Fall 2020 Management Plans Course:

Despite the pandemic, we were still able to host two groups of students at Yale-Myers Forest, first for Forest Crew this summer and then for our Management Plans for Protected Areas class in September. Students lived as pods at camp and followed strict protocols in order to be able to be around each other without masks.





Left: Forest Crew. L-R: Brittany Wienke '20 MF, Shrabya Timsina '20 MFS, Zhi Li '20 MFS, Austin Dziki '21 MF, Karam Sheban '20 MF, Devon Ericksen '20 MF, and Schuyler Borden '20 MF.

**Right:** The Management Plans for Protected Areas Class. L-R: Dr. Mark Ashton, Blanca Begert '20 MESc, Matt Valido '21 MF, Rosa Goldman, James Puerini '21 MF, Andrew Currie '21 MF, and Jon Johnson '21 MF. Photos by Jess Lloyd.



### Get to Know Your Forester: Why & How We Manage Forests Webinar:

In partnership with CT DEEP Service Foresters Andrea Urbano and Frank Cervo (MF '19, former Forest Manager), QCI held a webinar in December focused on the value of forest managmeent in Connecticut. This included an overview of forest management practices and a discussion about how forests are managed for different goals, from wildlife habitat to climate resiliency to water quality. We plan to continue this series in the Spring, stay tuned! In the meantime, you can access the webinar recording on our website.

### Red Front Lot Booklet and Virtual Trail StoryMap:

To accompany the previously released Red Front StoryMap, a platform that will take you on a virtual "walk" through the Red Front Trail, we also developed an updated Red Front Lot trail booklet. Just like the StoryMap, the booklet outlines the history and ecology of the trail in detail as you walk from stop to stop. You can find both on our <u>website</u>.

Red Front Trail Map at left by Damaris Chenoweth, MESc '21.

#### November 2020 Prescribed Burn:

On a November morning, with a green light from CT DEEP and under the guidance of Yale Forests staff, students conducted prescribed burns in the oak-hickory meadow of the Red Front Lot at Yale-Myers Forest. This fire maintained early successional wildlife habitat in addition to meeting our experiential education objectives, and was a welcome respite from Zoom screens!



Burning at Red Front in November 2020. Photo: Joe Orefice

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From all of us at QCI and the Yale Forests, we wish you good health during this time. We look forward to walking in the woods with you again soon!

Baby Snapping Turtle Found at Yale-Myers Forest during Management Plans Course Photo: Rosa Goldman