



Parks, Recreation and Historic Preservation

FORCES

Friends of Recreation, Conservation, and Environmental Stewardship

Fall 2020 Newsletter

Vol. 5 Issue 3

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The FORCES mission is to engage New York State college students to simultaneously improve OPRHP resources and enrich student academic, recreational, and career opportunities.

Field Teams of Dreams

Tom Hughes, NRS Biologist
Central Region FORCES Program Manager

In this issue, you may notice a departure from our usual content with fewer Regional and FORCES club updates. Yep, unfortunately the COVID-19 pandemic does continue to have some operational impacts on our participating staff, students and institutions. However, rest assured our stewardship and environmental management efforts remain strong! I feel this is a great opportunity to recognize our Environmental and other outstanding agency Field Team partners. For example, read all about the accomplishments of our Finger Lakes, Niagara and Central Environmental Field Teams (EFTs) and our FORCES Stewards in the 'Region Updates' (pages 4-8 and photo right).



Please email the Finger Lakes Environmental Field Team (EFT) at: EnvironmentalFieldTeam@parks.ny.gov



Finger Lakes EFT Grassland/Flood Plain Field Technician Lydia Martin (center) provides a tour of the Oak Unit at Ganondagan SHS for FORCES Program Specialists Cara Gannon (left) and Allie Tillman (right). Photo: OPRHP



NYS OPRHP Statewide Scaling Team from left to right - Andrew Chouinard, Sonny Howard (Coordinator), Hillary Acomb and Jason Pragle at Clark Reservation. Photo: OPRHP



Our agency's Statewide Scaling Team (photo left) visits parks and facilities all around the state, including Clark Reservation back in August, to make our miles of trails and scenic areas safe from rock falls for our park patrons and FORCES Stewards. Thank you Sonny and Team for sticking with me during pouring rain to explore fern habitats!

FORCES Staff Highlight: Cara Gannon

NYS Parks Corps SCA AmeriCorps FORCES Program Specialist



My name is Cara Gannon and I am the NYS Parks Corps, Student Conservation Association AmeriCorps FORCES Program Specialist for the Central Region. I received my Bachelor of Science in Sport and Recreation Management from Coastal Carolina University. During my last semester of college, I completed a full internship as an assistant interpretive ranger at Myrtle Beach State Park which helped me discover my passion for education and conservation.



I spent my first few weeks visiting and becoming familiar with projects in the Central Region Parks. I participated in two FORCES steward project days at Sandy Island Beach State Park with help from members of the ESF FORCES club. For one of the FORCES projects we took down the protected bird area fencing and completed a beach cleanup. For the other project we cut down *Phragmites* from inside the protected bird area! I have also spent a lot of time pulling invasive species such as pale swallow-wort and purple loosestrife from Green Lakes State Park. I've had the opportunity to work on dewberry and milkweed assessments in some of the region's parks!

I've also been working with Katie Mulverhill, Central Region's Environmental Educator. Each week our education team has been going through the Green Lakes State Park campgrounds with a craft cart and handing out craft kits for kids that are related to nature! We have also been setting up storybook trails throughout many of the region's parks with books about the environment and wildlife! This is a socially distanced way we are still able to educate and engage people in our parks. I have been assisting in brainstorming ideas for virtual fieldtrips and have also been learning lesson plans for an upcoming in person field trip we will be having at Green Lakes.

In September, the SCA offered a virtual Wilderness Medicine Essential training that I was able to become certified in! I have gained so much knowledge through both the SCA and my FORCES/environmental education position that I will continue to use in my future endeavors. I am thoroughly looking forward to all the upcoming projects and programs taking place in our Central Region Parks!

Attention FORCES Alumni

What is your legacy? We want to hear your stories and learn what you are now up to. Please send us an update!

Contact: Amy.Kochem@parks.ny.gov

For more information about 2020 FORCES Stewards, see the *Who's Who* publication coming soon to our website!

FORCES
Friends of Recreation, Conservation and Environmental Stewardship

2020 FORCES STEWARDS: THE FORCE BEHIND FORCES

Kit Atanasoff
Inv.Sp. Mgmt. Steward

Kit majors in Environmental Studies at Ithaca College. He is from Foxboro, MA and is interested in forest health, GIS, trail work, hiking, kayaking, unicycling, making little wire bonsai trees. Last summer, Kit served as an Invasive Species Management Steward in the Finger Lakes Region. His goal is to get more involved in volunteer work, doing conservation projects around the country.

Rachael Bealer
Env. Interp. Steward

While attending SUNY ESF, Rachael majors in Environmental Biology. She grew up in Bancor, PA and her interests include Ducks Unlimited, aquatics and microbiology, and wetland ecosystems. Rachael served as an Environmental Interpretation Steward in the Central Region. Her career goal to graduate with her Bachelor's in environmental biology and land a position working in wetlands or a related ecosystem.

Coordinator's Corner

Amy Kochem, FORCES Program Coordinator

The summer of 2020 was very different than I expected. Not because of Covid, I think we all knew it would be a different kind of field season, but because we had such a large number of dedicated, enthusiastic FORCES Stewards despite Covid! It was a slow start to on-board Stewards at the end of May but as soon as we realized that we were able to safely take them on, the flood gates opened. We had a total of 32 Stewards across the state working on conservation projects! I was continuously amazed at the professionalism and respect demonstrated as they worked under rigorous safety conditions. Wearing a mask in the heat was not ideal but I never once heard complaints. Cheers to each of you!

I was able to get into the field more this summer than ever. My goal was to fully understand each of our projects in more detail and to establish a close communication with our project coordinators in order to offer as much support as I could. It was a fantastic experience to be a part of each of the teams as I got my hands dirty and learned so much about the planning, organization, and implementation of each project.

Three of our four projects worked with endangered species populations - the American hart's-tongue fern (AHTF), the Chittenango ovate amber snail (COAS), and the Great Lakes piping plovers. All three of these projects obtained media coverage from news articles and the creation of a podcast (pages 6 and 8), to a specifically brewed beer to honor a species (page 11). Our efforts are recognized and highlighted in ways we never could have imagined.

As always, check out our FORCES webpage to read about the 2020 FORCES Stewards in the *FORCES Who's Who*, posted at the end of January.

FORCES alumni! Where are you? Are you working in your field of choice? Has your experience with FORCES helped you get to where you are today? Thank you to those who have gotten in touch with us so far, we enjoy learning more about your adventures. We'd love to hear from many more, please send us an update! Amy.Kochem@parks.ny.gov

"One of the most appealing aspects of this position was that it was mostly fieldwork. I really wanted to get more fieldwork experience this summer and this internship definitely fulfilled that!"

Madeline Czymmeck, Cornell University

Affiliated Institutions

SUNY Alfred	Alfred University	Pace University
SUNY Binghamton	Cazenovia College	Paul Smith's College
SUNY Brockport	Columbia College	Rochester Institute of Technology
SUNY Cobleskill	Corning Community College	St. Bonaventure University
SUNY Cortland	Cornell University	St. John Fisher College
SUNY ESF*	Finger Lakes Community College	Siena College
SUNY Geneseo*	Hartwick College*	Syracuse University
SUNY Morrisville	Hobart & William Smith Colleges	University of Buffalo
SUNY New Paltz	Hudson Valley Community College	University of Rochester
SUNY Oneonta*	Ithaca College	Wells College*
SUNY Oswego	Le Moyne College*	
SUNY Purchase	Medaille College	
	Niagara Community College	*Denotes active FORCES Clubs
	Niagara University	
	Onondaga Community College	

Finger Lakes Region Update

Carlin Wakefield, FORCES Program Specialist, Finger Lakes Region

It was a busy summer here in the Finger Lakes despite the added challenges of this year. Stewards rose to the occasion and navigated new social distance norms and precautionary procedures while completing their field work. Conservation Steward, Maddy Czymmeck, and Invasive Species Management Steward, Jasmine Umriger, both from Cornell University, worked on a wide array of projects across eleven Finger Lakes State Parks.

Each steward assisted SUNY Cortland Researcher, Andrea Dávalos, with worm and vegetation surveys as part of her pale swallow-wort research at Buttermilk Falls and Green Lakes State Parks. They monitored ash seedlings, jack-in-the pulpit, and Canada mayflower for Cornell's Assessing the Vegetative Impact of Deer (AVID) plots at Taughannock Falls and Buttermilk Falls State Parks. They also monitored FORCES coverboard array plots for eastern red-backed salamanders at Jennings Pond and Taughannock Falls State Parks with help from the Three Gorges Stewardship Corps. This study contributes data to the Three Gorges Project on population abundance and average length of salamanders within invasive species management areas.



Jasmine and Maddie pulling water chestnut from Sterling Pond at Fairhaven Beach State Park. Photo: OPRHP



Maddy Czymmeck monitoring for organophosphates in Buttermilk Creek at upper Buttermilk Falls State Park. Photo: OPRHP

Both stewards participated in multiple invasive species removal efforts including honeysuckle pulls at Jennings Pond, wild parsnip pulls at Ganondagan State Historic Site, European water chestnut pulls at Fair Haven Beach State Park, pale swallow-wort removal in the pollinator meadow at Cayuga Lake State Park, as well as around native twinleaf populations at Sampson State Park. Maddy worked on repairing old bluebird nesting boxes at Robert H. Treman, conducting water quality monitoring at each of the Three Gorges Parks, and assisting EFT Project Manager, Kyle Webster, with wetland delineation at Seneca Lake State Park.

Our partnerships with the Finger Lake's Environmental Field Team (EFT, see below) and Plant Materials Program (PMP), continued strong this season.

Stewards assisted with systematic transect mapping of key invasive species at Ganondagan State Historic Site, lead by Stewardship Project Technician, Lydia Martin; and at Robert H. Treman State Park alongside the Three Gorges Stewardship Corps. Stewards spent a day in Canandaigua, up-potting pitch pines with Plant Materials Program Technician, Elizabeth Padgett, at the Sonnenberg Gardens greenhouses.

Other notable collaborations this season included invasive species surveys at Watkins Glen with SCA Education Stewards Jackson Beckman, Carly Legg, and Angela Novacek. Despite the limited capacity this season, we got a lot done and had a lot of fun. We look forward to future years where we can again lead volunteers at I Love My Park Day, as well as host education and outreach events for National Invasive Species Awareness Week.



FORCES Stewards and Three Gorges Stewardship Corps monitoring cover boards for eastern red-backed salamanders at Jennings Pond. Photo: OPRHP



Finger Lakes Environmental Field Team (EFT): EnvironmentalFieldTeam@parks.ny.gov

Niagara Region Update

Alexandra Tillman, FORCES Program Specialist, Niagara Region

Even with the everchanging times of the COVID-19 crisis; the FORCES Program in the Niagara Region pressed on with our scheduled projects and had a very successful summer season. We hosted the largest group of Stewards the region has ever had, 10! The students were broken up into five groups- Wildlife Management, Water Quality, Greenhouse Assistance, Pollinator Surveying, and for the first time Environmental Education.



Anthony, Lucy, & Victoria at the newly installed Artpark State Park Pollinator Garden Clean-Up Day. Photo: OPRHP

The Wildlife Management team consisted of three students- Sean Colby, Amber Ciesielski, and Zaw Win 'Francis' Naung. For the first part of their internship, they focused on migratory birding and habitat observation in the Niagara River Corridor, which is a newly designated RAMSAR site. For the second half of their time with FORCES, they created and installed AVID (Assessing Vegetation Impact from Deer) plots at Knox Farm State Park; where there is an overabundance of white tail deer affecting the native vegetation throughout the park. Future stewards will be monitoring the plots each season to check on the impact.

Our two Water Quality Stewards, Anthony DeAngelis and Victoria Summers, were responsible for the daily testing at multiple site locations at Woodlawn Beach State Park. Every day the stewards took samples from Lake Erie and Rush Creek, completed field sheets regarding turbidity, environmental factors, recent weather events etc., submitted the data into our online system, AND delivered the samples to the testing lab all by 9:00am! The work they did was essential to keeping our beaches open for patron use and maintaining public health safety and standards as well.

The Pollinator Stewards, Joy Fleckenstein and Lucy DesJardins, focused on surveying for native pollinators throughout the region in natural regeneration areas and sanctioned pollinator gardens. They submitted their findings to the Empire State Native Pollinator Survey, contributing over 700 observations to their data!

Our region hosted two Environmental Education Stewards, Carly Guido and Nicole Hertel, at both DeVeaux Woods SP and Evangola SP. They worked directly with our Interpretive Staff to educate park patrons about current trail conditions, local ecosystems and how they are affected, historic aspects of the parks, watercraft safety, and so much more! They also assisted with the Camper Recreation Programs throughout the region, and even had the opportunity to host a few programs themselves; which is an awesome opportunity for these young professionals.

Cameron Haberl, our resident Greenhouse Steward, finally had the chance to join our Western District Nursery staff; after having her original spring internship pushed to summer due to COVID-19. She was able to assist with growing native plants from seed, caring for the already existing stock, and ultimately transplanting them into native restoration areas. Cameron is continuing her time with FORCES into the fall and is gaining even more insight to the full cycle of operations the facility goes through each growing season.

Another accomplishment for the Niagara Region this summer was that we hosted our first FORCES Project Expo! This was an event to showcase all the hard work the stewards had completed on various projects throughout the season. Each group gave a 20-minute PowerPoint presentation explaining in detail their projects to NYSOPRHP staff. I look forward to this being a recurring event in the region, and to continuing the momentum the program has gained this past summer.

Central Region Update

Mike Serviss, Regional Project Coordinator; James Boyd Regional Invasive Species Field Technician;
Kate Noonan, NYS Parks Corps SCA AmeriCorps Piping Plover Steward; Delaney Kalsman, COAS Project Coordinator

First things first-the big hart's-tongue fern news! Over the last two years NYS Parks has worked with the U.S. Fish and Wildlife Service (FWS) and other stakeholders throughout the US and Canada to complete an official Species Status Assessment (<https://ecos.fws.gov/ServCat/DownloadFile/174090>) and Five Year Review (https://ecos.fws.gov/docs/five_year_review/doc6488.pdf) for the federally threatened American hart's-tongue fern (AHTF). Upon review of these documents and largely thanks to the robust conservation efforts taken on by Parks, FORCES, and other stakeholders, FWS will be proposing the hart's-tongue fern for delisting from the Endangered Species List due to recovery. In other words, we have helped to achieve a huge win for the conservation of this species! However, our work is not yet done. We are now assisting with the formation of a Post-delisting Monitoring Plan for the fern, which will likely see the species closely monitored for at least the next 15 years. Our propagation and reintroduction work at Sonnenberg Gardens will continue as planned and the species will remain listed as threatened by New York State. The FWS Northeast Region released an in depth article about the history and recovery of the hart's-tongue fern in August- check it out here (<https://medium.com/usfishandwildlifeservicenortheast/this-hart-is-in-the-right-place-one-plants-recovery-story-a6f6009d5298>) and look for the FORCES shout out!



The crew up-potting immature AHTF at Sonnenberg Gardens. Photo: OPRHP

Otherwise, it was another highly active field season on the fern project with six ESF students contributing over 1,000 hours. Highlights include a census of three wild AHTF populations and monitoring of transplanted populations, setting up earthworm and fern interaction experiments at Cornell and earthworm field sampling at Clark Reservation and Chittenango Falls, up-potting 2,500 AHTF at Sonnenberg Gardens, and creating videos for a virtual plant program at Clark Reservation (<https://www.youtube.com/playlist?list=PL6tOXzhf4NsB-dHKc32Qirm44Kosw2GMC>).



James Boyd and Peter Sterbak using hand saws to remove fruiting buckthorns in the BCA area. Photo: OPRHP

Peter Sterbak, the Regional Field Technician, and I have been working on several invasive species management projects throughout the Central Region but mostly focused at Green Lakes State Park. For much of the summer, we had three SUNY ESF students with us- Invasive Management Stewards Miranda Gregory, Doug Veditago, and Mary Martin. Most notably, has been the pale swallow-wort and garlic mustard control efforts where we have removed over 100 fifty-gallon trash bags worth of plant material from points in the park like the trails around both Round and Green Lake and along the Bird Conservation Area (BCA) trails. Our most current project, however, has been employing "bird and animal friendly" mowing practices like rotational mowing and mowing later in the year, to many of the northern BCA Fields. We do this to inhibit large woody invaders from establishing themselves and fragmenting the habitat. We hope to see you out on the trails this fall!

Central Region Update (Cont'd)

Mike Serviss, Regional Project Coordinator; James Boyd Regional Invasive Species Field Technician;
Kate Noonan, NYS Parks Corps SCA AmeriCorps Piping Plover Steward; Delaney Kalsman, COAS Project Coordinator

The Chittenango ovate amber snail (COAS) has been the center of attention at Chittenango Falls State Park for many decades now; with FORCES, SUNY ESF, USFWS, and the Snailblazers being the driving forces behind conservation efforts. One of the lesser thought of jobs for COAS is the leaf collection process, which is essential for feeding the lab reared COAS year-round. The task is especially important in the summer and fall months to ensure there is enough to feed, the upwards of four hundred, propagates throughout the winter. Even though this seems relatively easy, COAS are very picky eaters preferring leaves, at specific decomposition stages, from black cherry, American paw paw, ash, sugar maple and pignut hickory. These conditions create a very labor-intensive search for the right leaves.

One of the ongoing duties of the FORCES COAS Project has been to help alleviate the amount of work that goes into leaf collection. The most logical way was to have all the necessary tree species in one area, in one propagation garden. A garden such as this will be particularly important in the spring. Fall foliage that has sat under snowpack for a couple months makes a tasty snack for COAS and will help replenish stores until spring foliage returns.



Aster in a sea of golden rod at Chittenango Falls State Park's old campground. Photo: OPRHP

Chittenango Falls State Park's old campground was chosen as the perfect locale for this garden. The campground has laid unused since its closure, in 2005, succeeding into a beautiful meadow system. Having the garden within the park also presents a great opportunity to provide patron education on COAS and other environmental factors at Chittenango. The vision is to have an area within the propagation garden, where visitors can walk, sit, and read interpretive signs.

The COAS Propagation Garden is still early in the works. Over the summer, a plant community and ground cover survey were completed to get a better understanding of what was there and how the land may be used. The surveys allowed us to solidify an overall plan for the layout and use of the campground. Splitting the available space between a propagation garden, in the southern end, and a managed pollinator meadow in the north. The other importance of the survey was to identify species of

interest for both invasive removal and native propagation. Moving forward, we would like to propagate the native park flora to replace zones of invasive plants, and for the garden itself, including milkweed, aster species, black cherry and ash saplings. The next step is to work with Park's Landscape Architects to create a design for the propagation garden.



Bird nest in a bitternut hickory at Chittenango Falls State Park's old campground. Photo: OPRHP

"The variety of things we did this summer was very valuable to me and focusing my decision of what I want to do with my degree after I graduate. I was able to use this internship to learn all about the work and upkeep necessary to aid in the survival of a threatened/endangered species. This was very beneficial to me because all I've done so far is theory or lab work behind endangered species, and to finally see and take part in the work to help these species survive was very eye opening."

Amanda Varhol, SUNY ESF

Central Region Update (Cont'd)

Mike Serviss, Regional Project Coordinator; James Boyd Regional Invasive Species Field Technician; Kate Noonan, NYS Parks Corps SCA AmeriCorps Piping Plover Steward; Delaney Kalsman, COAS Project Coordinator



The Plover Team (L to R) Shaina Johnson; Claire Nellis, and Kate Noonan. Photo: OPRHP

Our Piping Plover team at Sandy Island Beach State Park has been hard at work this summer, monitoring the birds and educating the public when possible. This season, our returning plovers, Aragorn and Arwen, mated and made another nest at Sandy Island Beach, and successfully fledged two chicks; Stevie Nicks and Buckingham. The birds migrated in late July and will hopefully be sighted in Florida over the next few months at their wintering grounds. This was also the first year we had a stopover from a returning chick! Chewie, one of the fledged birds from 2019, returned to SIB for a few days on Fourth of July weekend. Hopefully she decides to make her nest here next year! The Piping Plover team was also able to survey additional sites along the 17-mile-long Eastern Lake Ontario Dune and Wetland Ecosystem for signs of plovers and potential habitat. Another exciting development this season, our plovers



Buckingham. Photo: OPRHP

at SIB embraced fame and were featured on a Field Guides podcast episode <http://www.thefieldguidespodcast.com/new-blog/2020/9/2/ep> and were the subject of a news article by the Watertown Daily Times https://www.nny360.com/news/oswegocounty/the-piping-plover-making-a-comeback-at-sandy-island-beach-pulaski-native-who-s-come/article_2c570b03-01ce-5bbb-b1c1-9d1c10900571.html

Embracing the changes that came with this year led to many exciting field projects and using creative methods of outreach. One of our most successful methods of engagement on the beach was a giant Lake Ontario Ecosystem Jenga game, that was implemented this year! Currently, we are putting the finishing touches on an educational video that will be able to be distributed to classrooms and teachers. A beach user survey was also distributed and developed for the patrons of SIB, and we received over 300 responses from passionate community members!



Park Staff, SUNY ESF FORCES members, and former FORCES Stewards at the Sandy Island Beach clean up day. Photo: OPRHP

We are so grateful to have had help from our dedicated FORCES club members and collaborate with other team members at Parks! We hosted a beach clean-up and fencing removal volunteer day, as well as an invasive species removal day with Park Staff, SUNY ESF FORCES members, and former FORCES Stewards that came back to volunteer! Thank you to all the members who came out this month and put in the hard work to make the habitat better for our birds! We also want to give a big shout out to Meghan Morral! Meghan was one of our seasonal Stewards this summer and put in a lot of hours with us out on the beach. We couldn't have done it without her hard work and amazing attitude!

"Overall, FORCES gave me a valuable perspective of what conservation field work actually looks like. I made connections with many people in my field and learned skills that I will take with me throughout my career. FORCES was incredibly flexible and gave me the chance to work on projects that I enjoyed on a schedule that fit well with mine."

Meaghan Morral, SUNY ESF

Steward Spotlight: Sean Colby

Conservation/Wildlife Management Steward, Niagara Region



As an undergrad at University at Buffalo, I was in search of an internship to complete my degree, and one of my advisors directed me to FORCES. Having an interest in invasive species, plant identification, and forest management, I found that the Conservation Steward position would be the most beneficial for my education. I started the position in the fall of 2019. I was supervised by Allie Tillman and was paired up with a fellow student from University at Buffalo. After thoroughly enjoying my first internship with FORCES, I decided to return during the summer of 2020 as a Wildlife Management Steward.

Through my time with FORCES I gained tons of field experience which strengthened my identification skills. I learned invasive species removal practices, how to bird watch properly, and strengthened my map reading & surveying skills.

One of the most memorable experiences I had with FORCES was the removal of the invasive shrub buckthorn along the Niagara Gorge. During this event, we partnered with Western New York PRISM and NYS OPRHP Invasive Species Strike Teams and identified, cut, and treated an incredibly large buckthorn stand that lined the gorge rim trails. Some of us cut over 500 shrubs each day ourselves! Not only did this event lead us to promoting the diversity and health of native species along the Niagara Gorge but it also spiked my interest in invasive species removal and taught me a lot about buckthorn specifically.

Moving forward, I am now enrolled in graduate school at University at Buffalo. My experiences with FORCES have led me to pursue research in identifying how buckthorn effects ecosystems, as well as management methods to remove the invasive shrub. However, FORCES impacted me in more ways than just that. Something that I learned in FORCES was how to make connections and how that can help for years to come. For instance, there was a project I worked on at the university that required the planting of native wildflowers but I didn't know where to get dependable, naturally sourced plants. Thanks to FORCES, I had networked and met park managers that were involved with the region's greenhouse and nursery and had them as a resource for my project. Another very valuable lesson that FORCES taught me was how to lead a group. During my first internship I was more timid but by the end of the semester, and into my next internship, I was confident enough to take the lead on projects and help my crewmates when needed.



Sean working on the Niagara Gorge Rim Trail Buckthorn Removal Project. Photo: OPRHP

Overall, FORCES has helped me find my personal interests in science, make connections with professionals I would normally have never met, and learn a lot of new concepts. Joining FORCES helps students and college graduates alike to get practical experience in environmental work and to learn about different career opportunities that exist in state agencies. I was very happy to be a part of FORCES and being a part of a positive change in the environment which promotes species diversity, ecosystem health, and public awareness on the importance of nature.

Working hands-on always helps me. I get to physically do the work instead of just learning about it. To future stewards, I would say to take any opportunities or assignments given to you. Everything that you learn now will help you in the future and you will be glad to have learned it sooner rather than later!"

~Joy Fleckenstein SUNY University at Buffalo

Partner Highlight: The Hemlock Preservation Program

Josh Vogel, OPRHP Forest Health Technician, Finger Lakes Region

The Hemlock Preservation Program (HPP) is dedicated to preserving and maintaining eastern hemlock forest throughout NYS Parks. Chemical treatments are applied by the program to prevent hemlock woolly adelgid (HWA) from damaging our aesthetically and ecologically important hemlocks. Before chemical treatments, hemlocks are pre-monitored for HWA presences. Treatment is then applied to the bark and the tree is left with a metal tag at its base. The tag helps us continue our monitoring protocols by giving the tree identification. The last step is post-monitoring; typically, one year after treatment, our staff and occasionally some



Top left to right: Josh Vogel (Forest Health Technician), Anna Bornstein (3G Stewardship Corps), Elaina Sherman (HPP Tech), Jen Skala, (HPP Tech), Chenga Drury (3G Stewardship Corps). **Bottom left to right:** Carlin Wakefield (FORCES Program Specialist), Erika Hudkins (3G Stewardship Corps), Christina Morrow (3G Stewardship Corps Lead), Maddy Czymmeck (FORCES Conservation Steward).

FORCES Stewards will go out and find the treated tree to see if there is any new growth or HWA present. Measuring HWA and growth after treatments will tell us the effectiveness of the chemical treatment; no HWA present signifies that the treatment worked.

Chemical treatments provide short term protection, about 7 years, in hopes that the implementation of bio-controls, like *Leucopis spp.* or *Laricobius spp.* will become the primary method of controlling HWA. The HPP team consists of Regional Biologist Whitney Carleton, Hemlock Program Coordinator Josh Vogel, Certified Pesticide Applicator Bill Farrand, Supplies Coordinator Tori Srnka, Pesticide Technicians, Pesticide Apprentices, and last but not least, the incredibly valued contractors that chemically treat the majority of hemlocks in the region.

In the past year, FORCES assisted the HPP by monitoring treatment sites and surveying for HWA. They have surveyed and monitored in a number of our parks, such as Robert H. Treman, Watkins Glen, Buttermilk Falls, Taughannock Falls, and Fillmore Glen. Specifically, at Watkins Glen, an area known as the 'Punchbowl', received an incredible amount of attention by the FORCES program. Here, the students assisted in the assembly of a treatment area. They prepared the site by marking individual trees with yellow flagging that would help the sprayers see which trees to treat. However, more importantly, since we are using a chemical, there are restrictions on how much we can spray. The FORCES Stewards, armed with a map, outlined the areas to ensure we did not overspray. The combined effort between FORCES and the HPP we allowed us complete the project on a shorter time frame!

"Before starting I had hoped to learn more about plants and surveying. The experience brought me that and much more, immersing me in all sorts of field techniques and scenarios as well as incorporating my own interests such as plant identification. This has made me more aware of the academic direction I want to take and has also expanded my skillset for future job opportunities."

~Jordan Stransky, SUNY ESF

Brew-Gooders Raise More Than a Glass for Wildlife

Robyn A. Niver, Endangered Species Biologist, US Fish & Wildlife Service



Globally rare snail inspires Critz Farms' Endangered Species Ale. Photo: USFWS

Beer enthusiasts can lift a glass this fall to wildlife conservation, as Critz Farms in Cazenovia, New York will donate a portion of proceeds from their new Endangered Species Ale to recovery efforts for a local endangered species, the Chittenango ovate amber snail.

This fund-raising initiative was inspired by a creature smaller than a thumbnail, whose entire global population is at Chittenango Falls State Park, just 8 miles north of Critz Farms. The beer will be available in the farm's tasting room this fall starting Saturday, October 3.

The Chittenango ovate amber snail is a state and federally protected land snail that survives exclusively near the waterfall at the state park. Fortunately the snail has a number of speedy advocates acting on its behalf. The beer fundraiser represents a partnership with Critz Farms, New York State Office of

Parks, Recreation and Historic Preservation (NYS Parks), U.S. Fish and Wildlife Service, SUNY College of Environmental Science and Forestry (SUNY-ESF), New York State Department of Environmental Conservation, and Rosamond Gifford Zoo. The species is threatened by events that could wipe out most, if not all, of its wild population, such as floods or the collapse of rock ledges around the falls. NYS Parks works to minimize invasive plants and trampling of the habitat and species by park visitors. Two captive populations are being maintained at SUNY-ESF, and have supported the release of captive snails into the wild over the past 5 years.



Critz Farms is located at 3232 Rippleton Rd, Cazenovia, NY 13035. Photo: USFWS

Contact Us

Amy Kochem
FORCES Program Coordinator
amy.kochem@parks.ny.gov

Central Regional Office
6105 East Seneca Turnpike
Jamesville, NY 13078
(315) 492-1756

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EnvironmentalFieldTeam@parks.ny.gov

Featured Project: Storybook Trails: Good for the Mind, Body and Soul

Katie Mulverhill, Environmental Educator, Central Region



Kai Mulverhill reads a page of "Yellow Time" along the Storybook Trail. Photo: OPRHP

Sunlight filters through the leaves as we follow the wooded path. "Look Mommy!" my 5-year-old shouts. "Wow," I answer, "the first page of the story."

"No," he promptly replies, "that's the cover. The first page is over there."

Since he loves to read, and we love to be outside (I especially love to see him without a screen in front of his face!) we have searched out this Storybook Trail. It's exactly what it sounds like. Pages of a story spaced out along the trail.

"What's it called?" he asks as we examine the beautifully illustrated trees on the cover. "Yellow Time," I read the title aloud. "What do you think it will be about?" I ask as we start toward the next sign. "Fall!" he shouts out, "because that's when the leaves turn yellow!"

Storybook Trails, or Story Walks®, are more than just something fun for families to do together. They connect people to nature, promote physical activity, and build early literacy skills.

Last spring COVID-19 changed everything. We suddenly found ourselves stuck at home, spending countless hours in front of the computer. (I even had to buy a laptop for my son in pre-k!) Looking for a safe place to get fresh air and exercise lots of people started visiting state parks. As an environmental educator I knew I had to find a different way to engage families so, I decided to give Storybook Trails a try. We have 10 state parks with campgrounds in the Central Region. A good place to start. Each park manager suggested a trail between 1/4 -1/2 miles long while I started buying supplies: children's books about nature, animals, or spending time outside, signs and posts, and lamination and Velcro. The first time I cut a book out of its binding was tough, but once I saw families stopping along the trail to read a page together it was worth it. Especially because every one of them had a bright smile on their face.

My team spent many days this past summer traveling from park to park switching out stories along the trails so that local families would be able to read new stories together. Every time we stop in a park office, we hear about how much families have enjoyed them. The Storybook Trails have been such a success we have decided to keep them up this fall through October. That means you still have time to explore a Storybook Trail on your own!



Kai and Kirk Mulverhill reading along the Storybook Trail. Photo: OPRHP

"This experience has improved my academic experience by allowing me to see and physically experience the process needed to conduct a state funded field study. By experiencing it firsthand, I am also able to use my new knowledge in a professional aspect moving forward. The skills we learned ranged from camera trapping, aquatic animal trapping and release, turtle markings, small mammal trapping, trail maintenance, and much more. These newly acquired skills far exceeded my expectations for the better."

Felix Gonzalez, PACE University

The Force Behind FORCES Picture Page



The Fern Crew sets up an earthworm experiment at the Cornell University Resource Ecology and Management Lab.



Christina Morrow, measures the total length of an eastern red-backed salamander at Jennings Pond in Buttermilk Falls State Park.



Maddy Czymmeck and Jasmine Umrigar remove pale swallow-wort from the pollinator meadow at Cayuga Lake State Park.

Photos: OPRHP



Maddy Czymmeck replaces a nest box at Robert H. Treman State Park.



FL FORCES and Three Gorges Stewardship Corps monitoring cover boards for eastern red-backed salamanders at Jennings Pond in Buttermilk Falls State Park.



SUNY Cortland professor Andrea Davalos collects biomass data on young American hart's-tongue ferns for an earthworm experiment.



ESF Boat Stewards, FL FORCES Stewards and staff, Hemlock Preservation Program staff, and Environmental Field Team staff posing before a water chestnut pull at Fair Haven Beach State Park.



Amanda Varhol pots up young American hart's-tongue ferns at Sonnenberg Gardens.



Victoria Summers, taking a water column sample to determine the turbidity of the swimming area in Lake Erie at Woodlawn Beach SP.



Friends of Recreation, Conservation
and Environmental Stewardship

New York State
Office of Parks, Recreation and Historic Preservation
Central Region
6105 East Seneca Turnpike
Jamesville, NY 13078
(315) 492-1756

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FORCES Team

Tom Hughes

Natural Resource Stewardship Biologist
FORCES Program Manager, Central Region

Josh Teeter

Environmental Educator
FORCES Program Manager, Finger Lakes Region

Amy Kochem

FORCES Program Coordinator

Cara Gannon

Student Conservation Association, NY Parks Corps
FORCES Program Specialist, Central Region

Carlin Wakefield

FORCES Program Specialist, Finger Lakes Region

Alexandra Tillman

FORCES Program Specialist, Niagara Region

Philip Corney

Conservation Coordinator, Saratoga/Capital Region

Josh DiPaola

Natural Resource Specialist, Taconic Region

Jeremy Brady

Stewardship Specialist, Genesee Region

Adele Wellman

Environmental Educator, Allegany Region

Tom LeBlanc

Naturalist, Allegany Region



The FORCES mission is to engage New York State college students to simultaneously improve OPRHP resources and enrich student academic, recreational, and career opportunities.
