



In this issue: Page:

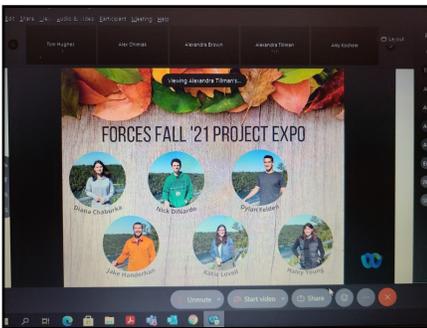
Featured Project.....	4
Staff Highlight.....	5
Partner Highlight.....	7-8
Steward Spotlight	9
2021 Stewards.....	13



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

FORCES is Flying High into 2022

Tom Hughes, NRS Biologist
Central Region FORCES Program Manager



As we enter another year we are really hoping to come out of our shells and take our first steps into a more “maskless” world. As I sat at my computer screen (photo left) back in early December for the Niagara Region’s FORCES Fall ‘21 Project Expo (page 2), I longed for the days when we can break away from our

virtual realities and get back full force into the field and classrooms. Today, I am more optimistic than ever. In this issue of our newsletter, you will learn about how FORCES is taking on additional projects and creating new and exciting partnerships. For example, our FORCES Stewards and Environmental Field Team staff continue to provide leadership for understanding and promoting Forest Health throughout our Regions, including monitoring of eastern red-backed salamanders (page 4) and hemlock woolly adelgid (HWA) surveys, monitoring and biocontrol efforts (page 11). We are excited to work with our HWA partners again in the coming year, including the Finger Lakes’ Hemlock Conservation Program and the NYS Hemlock Initiative (NYSHI). We also have re-energized our collaborative efforts with the NYS Department of Environmental Conservation (NYS DEC) to connect FORCES Stewards to additional opportunities within the agency. To get things rolling, we will be working with DEC’s Richard E. Reynolds Game Farm in Ithaca, NY (pages 7-8 and photos right). We believe this is a terrific fit, as our Stewards have been releasing pheasants at our NYS Parks for years, and now we have the opportunity to see where the birds are from and play a significant role in sustaining both the birds and the wonderful programs at the Game Farm. We expect our partnership with the DEC will take off! Stay tuned...



Our FORCES leadership team held a recent meeting at NYS DEC’s Richard E. Reynolds Game Farm in Ithaca, NY, and Manager Evan Willis treated us to a tour of the pheasant rearing facilities. This truly is a special facility with so much history, and we know that our FORCES Stewards will appreciate being part of it. Photo: OPRHP



NYS OPRHP Stewardship Specialist Jillian Harris and Niagara University FORCES Campus Ambassador Ivette Leon, releasing pheasants at Wilson Tuscarora State Park in 2018. These birds were raised at DEC’s Game Farm. Photo: OPRHP

Niagara Region Update

Alexandra Tillman, FORCES Program Specialist

Fall of 2021 was a very productive season for the FORCES group here in the Niagara Region. In total, this group dedicated almost 800 hours of volunteer time to OPRHP while still attending classes full time. Our group was compiled solely of students from the University at Buffalo, all working through similar coursework.

On Mondays and Wednesdays, we had four Stewards working together. Diana Chaburka, Jake Handerhan, Kathryn Lovell, and Haley Young were tasked with numerous types of projects throughout the region. They mainly focused on mapping invasive species at Golden Hill State Park, where they completed surveys along all trail systems. This important groundwork will allow staff to create a management plan to begin taking back the natural areas from the invasive species slowly creeping in. This group also contributed to a handful of native plant transplants and plantings, assisting staff throughout the region.



Group photo after dogwood plantings at Artpark SP. Photo: OPRHP

Our Tuesday and Thursday crew members were Nicholas DiNardo and Dylan Feiden, who focused on surveying for invasive species at Knox Farm State Park. This park had minimal surveying completed, giving these Stewards the opportunity to learn the management process from beginning to (almost) end. Nick and Dylan were able to collect invasive species data in ~85% of the park, with just one northern area they could not squeeze into the semester. The data collected will now be used to create a management plan, combining the interests of park operations, the Knox Friends Group, and stewardship staff. Nick and Dylan were also able to assist staff with erosion issues at Woodlawn Beach water sampling sites, by applying jute matting and native seed application; hopefully creating a safer sampling site for future Stewards.



Stewards & Invasive Species Techs moving a log for natural looking protection along a shoreline restoration project site at Wilson-Tuscarora SP. Photo: OPRHP

There were also a couple unique projects that both groups worked on. One being assisting a contractor by collecting information within an active work zone at the Niagara Falls Visitor Center. This is a massive, two-year, \$38 million dollar project that the Stewards got an inside look at. They spent two days on site working hand in hand with staff, reading construction plans and maps, and evaluating tree health throughout the project area. This gave the Stewards the opportunity to work in an active construction site, work with different types of engineers and capital staff, and see what a possible career with OPRHP could look like.

Each group presented their work at our Fall FORCES Project Expo discussing their assignments, data findings, and conclusions and recommendations on the next steps staff should take on each project. This includes a question-and-answer portion

to each presentation, where Stewards field inquiries about their work from staff throughout the region. I received numerous compliments from OPRHP Staff on the presentations and would like to congratulate the Stewards on a job well done.

Something we try to do each semester is have a recreation day with the Stewards. This is a 1-day trip, out of region, where we visit a state park they may never see on their own. We go on hikes, sight-see, check out other FORCES projects, and discuss the recreation aspect of the agency. This semester we trekked to Taughannock Falls State Park in Trumansburg, NY. We hiked to the waterfall, around the gorge and upper trails, and enjoyed a nice picnic lunch by the lake.

Overall, the Fall 2021 season was one for the books. This group was able to make the best out of anything, whether it be inclement weather or what seemed like never-ending poison ivy fields. I wish these Stewards all the best in their future endeavors and look forward to what the spring has in store for the Niagara FORCES group.

Coordinator's Corner

Amy Kochem, FORCES Program Coordinator



FORCES Membership gathering participants at Inspiration Point. Photo: OPRHP

We started off the semester with our 6th Annual FORCES Membership Gathering at Letchworth State Park. A big thank you to our host and Environmental Educator, Elijah Kruger, for a

behind the scenes tour of the parks maple sugaring process and a guided hike on The Autism Nature Trail at Letchworth State Park. The remainder of the day included sessions on interview skills/SCA networking, the restorative effects of nature, and a hike to Inspiration Point.

We said goodbye to Emily Purce, SCA Parks Corps FORCES Program Specialist. We are grateful for all of Emily's assistance with field work and environmental education projects in the Central Region. Her positive, enthusiastic spirit will be missed! You may have noticed that our FORCES social media pages have gotten lots of extra attention thanks to Emily's initiative with fun and creative posts. We encourage you to like our Facebook page and connect with us on Instagram and LinkedIn!

Our 2021 edition of the FORCES *Who's Who* that highlights 79 FORCES Stewards and 4 Jr. Conservation Stewards from the Niagara, Taconic, Allegany, Finger Lakes, and Central Regions has been published on the FORCES web page, go take a look!

Our spring 2022 internship positions are filling quickly. We have a variety of projects from invasive species management to environmental education to monitoring for piping plovers and eastern red-backed salamanders, happening across NYS. See pages 7-8 for a new internship opportunity as we partner with the NYS DEC to host FORCES Stewards at the Reynolds Game Farm in Ithaca.

Contact Us

Amy Kochem
FORCES Program Coordinator
amy.kochem@parks.ny.gov
Central Office
6105 East Seneca Turnpike
Jamesville, NY 13078
(315) 492-1756

Carlin Wakefield
Finger Lakes Office
2221 Taughannock Road
Trumansburg, NY 14886
(607) 387-7041

Alexandra Tillman
Niagara Region Office
3180 De Veaux Woods Dr E
Niagara Falls, NY 14305
(716) 299-0804

Find us on Social Media

FORCES NYS Parks, Recreation and Historic Preservation Use #forcesnys on Facebook, LinkedIn, and Instagram accounts!



To subscribe or unsubscribe to the newsletter email: forces@parks.ny.gov

Affiliated Institutions

SUNY Alfred
SUNY Binghamton
SUNY Brockport
SUNY Cobleskill
SUNY Cortland
SUNY ESF*
SUNY Geneseo*
SUNY Morrisville
SUNY New Paltz
SUNY Oneonta*
SUNY Oswego
SUNY Potsdam
SUNY Purchase
SUNY Westchester
Alfred University
Canisius College
Cazenovia College
Clarkson University

Columbia College
Cornell University
Eckerd College
Finger Lakes Community College
Hartwick College*
Hobart & William Smith Colleges
Houghton College
Hudson Valley Community College
Ithaca College
Jamestown Community College
Le Moyne College*
Medaille College
Niagara Community College
Niagara University
Onondaga Community College
Pace University
Paul Smith's College
Penn State University
Rochester Institute of Technology

St. Bonaventure University
St. John Fisher College
Siena College
Syracuse University
University at Buffalo
University of Connecticut
University of Rochester
University of Vermont
Vassar College
Wells College*

*Denotes active FORCES Clubs

Orleans/Niagara BOCES
Ossining High School
Pittsford Mendon High School
Pittsford Sutherland High School
Scarsdale High School

Featured Project: Indicating Forest Health with Eastern Red-backed Salamanders

Carlin Wakefield- Finger Lakes FORCES Program Specialist

One of the more exciting projects that Finger Lakes Stewards participate in each year is monitoring eastern red-backed salamanders (*Plethodon cinereus*) at Taughannock Falls and Buttermilk Falls State Parks. *Plethodon* species are lungless salamanders which rely on cutaneous respiration. This means rather than breathing through lungs, or with gills, gas exchange occurs across their skin and the tissues lining their mouths. Eastern red-backs are NYS's most abundant salamander, and may be our most numerous forest vertebrate. They are sensitive to environmental changes within their small home ranges, so tracking population abundance over time can provide insight to forest health (Welsh & Droege, 2001).



Red-backed salamander. Photo: OPRHP

Invasive species threaten the diversity of our native landscapes and are managed fittingly, including the use of chemical treatment when needed. Exposure to off-target pesticide impacts could affect the abundance of *Plethodon* populations living in management areas (Gertzog et al., 2011). Finger Lakes FORCES Staff decided to adapt a monitoring protocol to determine if off-target pesticides could be impacting our eastern red-backed salamander populations. Eastern red-backs rely on natural cover objects like logs for protection and to keep cool and moist. To set up our project at Taughannock Falls, we used square wooden cover boards placed in rows of five, spaced 1 meter apart. 50 of these boards were placed inside a pale swallow-wort (*Cynanchum rossicum*) treatment area, and 50 more were placed in nearby un-treated control plot. The project was then replicated with two control plots at Jennings Pond in Buttermilk Falls, a more intact forest without pale swallowwort infestation.

Plots are visited three times in spring and fall breeding season where FORCES Stewards monitor the abundance of salamanders to determine if populations are significantly different to each other. Through the 5+ years of monitoring, no significant difference has been observed between our treatment and control plots, indicating that populations have been minimally impacted by off-target pesticides. All cover board arrays were placed in hemlock-northern hardwood forest. As invasive hemlock woolly adelgid (HWA) continues to threaten eastern hemlock (*Tsuga canadensis*) forests in NY, Finger Lake's Hemlock Conservation Program is stepping up to manage impacted areas, including at Jennings Pond. Moving forward, we plan to adjust our plots at Jennings Pond to monitor cover boards within an HWA treatment area so we can capture population response to two different pesticide applications.

Looking for salamanders is so much fun- whether you are doing a formal cover board project, or informal log-lifting, you can learn a lot about the state of the ecosystem around you. Over time, Finger Lakes FORCES Staff have adapted our protocol to be observation only in an effort to reduce contact and disturbance of our populations. Be aware that the oils and salts from our hands can be damaging to the sensitive skin and respiratory systems of *Plethodon* species and many other amphibians. If you need to handle a salamander, make sure to wash and thoroughly wet your hands before touching; and keep contact to a minimum. Happy herping!

References:

Gertzog, B. J., Kaplan, L. J., Nichols, D., Smith, G. R., & Rettig, J. E. (2011). Avoidance of three herbicide formulations by Eastern Red-Backed Salamanders (*Plethodon cinereus*). *Herpetological Conservation and Biology*, 6(2), 237-241.

Welsh Jr, H.H., & Droege, S. (2001). A case for using plethodontid salamanders for monitoring biodiversity and ecosystem integrity of North American forests. *Conservation Biology*, 15(3), 558-569.

Staff Highlight: Amelia Kaufman

Graphic Designer, Finger Lakes Region



I've been working as a Graphic Designer for the NYS Parks since the summer of 2021 and have been loving it! I work mainly with signs, both wayfinding and interpretive, and enjoy using my creativity to convey information in an accessible and attractive way. Plus with the new print shop at the Taughannock Regional Office, it's been a rewarding process seeing my designs go from digital to physical.

I've always been interested in art and design, but for so long was shy to learn digital art. Then several years after graduating college, I discovered the Graphic Design Program at Tompkins Cortland Community College. Enrolling in that program was one of the best decisions I've ever made. With the help of amazing teachers and classmates, I learned so much in the two years I was there and graduated with an Associates Degree in Graphic Design that helped propel me into several design jobs, including this one.

Working as a Graphic Designer for the Parks combines my interests in art and the outdoors. When I'm not at my desk absorbed in Adobe software, I enjoy spending time on the vast amount of public land we are lucky to have in Tompkins County. Long distance trail running is my main outdoor activity, but I also do a lot of biking, rollerblading, and cross country skiing. Even though I grew up in Ithaca and have been coming to these parks for years, the natural beauty of this area never ceases to inspire and captivate me.

Allegany Region Update

Kristin Fitzgerald, Stewardship Specialist, Allegany Region

Allegany Region Natural Resource Management Department was excited to have our first FORCES Conservation Steward for Fall of 2021. Luke Thompson was busy helping with projects throughout the department and discovering his interests with natural resource management. Luke engaged with invasive species management, wildlife, and Stewardship Staff helping with many projects during his semester with us.

He started his time helping with surveying and management of invasive Japanese stilt grass. Luke also helped with surveys for beech leaf disease, water quality data collection, and Rare, Threatened, and Endangered (RTE) species surveys. Later in his semester, Luke worked with our wildlife staff on pheasant releases, tracking black bears using telemetry, winter waterfowl surveys, and tagging monarch butterflies. Overall, Luke got to dabble in a little bit of everything during his time at Allegany and learn what parts of natural resources management appeal to him most.



Luke Thompson using telemetry equipment to track a black bear. Photo: OPRHP

Overall, Luke felt working with invasive species management to be the most worthwhile "Although surveys could be tedious at times, I always left feeling satisfied with my small contributions to the preservation of local native biodiversity. My ultimate goal is to work in invasive species management". Our staff is very thankful for the time Luke spent with us; he brought another set of hands for fieldwork, but also contributed excitement, passion, and unique perspectives that made the season more valuable.

Finger Lakes Region Update

Carlin Wakefield, FORCES Program Specialist



Conservation Steward, Margo Lee, monitoring abundance of hemlock woolly adelgid and assessing canopy health of eastern hemlocks at Fillmore Glen State Park. Photo: OPRHP

Finger Lakes had two Conservation Stewards this fall, Margo Lee and Adam Lampal, who worked on a variety of projects across six parks and contributed a total of 77 volunteer hours. Their work focused primarily on the Three Gorges: Invasive Species Control and Restoration Project which covers Taughannock Falls, Buttermilk Falls and Robert H. Treman State Parks. This project which has been ongoing since 2018 is responsible for surveying, mapping, and managing target invasive species in the Ithaca, NY area.

Conservation Stewards completed photo reference monitoring, surveyed for porcelainberry and Japanese stiltgrass, as well as completed removals of populations at Buttermilk Falls State Park. An important aspect of the Three Gorges Project includes restoring areas disturbed by invasive species management. In October, Conservation Stewards planted a variety of native sedges, asters, woodland goldenrod, and sycamore saplings to help mitigate disturbance. Margo and Adam assisted staff in installing a Three Gorges Project informational sign near the restoration area on the Lake Treman Loop at Buttermilk Falls. Multiple groups including Finger Lakes and Central Region Stewards, Environmental Field Team Staff, and Ithaca College's Fall 2021 Conservation Biology class helped complete fall monitoring of our Eastern red-backed salamander cover boards at Taughannock Falls and Buttermilk Falls State Parks. To learn more about this exciting survey, check out this issue's Featured Project article on Page 4.

Stewards spent several weeks assisting our regional Hemlock Conservation Program staff with annual post-treatment monitoring of hemlock woolly adelgid (HWA) density and canopy health at multiple Finger Lakes parks. This intensive monitoring protocol allows Stewardship Staff to track management efforts, success of treatment, and current health of the trees. Stewards also assisted in helping prepare a stand of hemlocks for our in-house HWA treatment team. They do so by measuring the diameter at breast height (DBH) of the tree, marking this information on flagging tape, and labeling each tree with a unique identification tag that tells managers when treatment occurred. The in-house team consists of Park Staff throughout the region certified to apply treatment. Thank you to the Stewards and staff, who's combined effort this fall played an integral role in protecting the health of our hemlocks!

In addition to the above, Margo assisted the Plant Materials Program (PMP) with seed collection for propagation efforts in the Plant Materials Center (PMC) greenhouses located at Sonnenberg Gardens & Mansion State Historic Park in Canandaigua, NY. The PMP is responsible for collecting and propagating native plant material for restoration projects like the Three Gorges Project at parks across the state. Adam additionally completed an early detection and rapid response (EDRR) survey for invasive spotted lanternfly and their host species, tree of heaven, at Buttermilk Falls State Park after sightings of the pest were reported in the area.

Special shout out and big thank you to Three Gorges Project Lead, Christina Morrow, and SCA Hemlock Technician, Jasmine Schmidt, for taking on extra duties and coordinating Finger Lakes Stewards this fall while I was on leave—we are so lucky to call you part of the FORCES family!



Conservation Stewards, Margo and Adam installing Three Gorges Project information signs near the active restoration area at Buttermilk Falls State Park on the Lake Treman Trail. Photo: OPRHP

Partner Highlight: Richard E. Reynolds Game Farm

Evan Wills, Fish & Wildlife Technician III, NYSDEC Richard E. Reynolds Game Farm Manager



Evan Wills holding fully grown rooster pheasants ready for release.
Photo: NYS DEC

My name is Evan Wills and I am a Fish & Wildlife Technician III and manager of the NYSDEC Richard E. Reynolds Game Farm located in Ithaca NY. This facility has been in operation since 1927 and is now the sole producer of ring-neck pheasants to be raised and released by the department, as well as to provide pheasant chicks to members of the public who would like to raise and release them later in the year. The properties lengthy name comes from long time manager Richard E. Reynolds who was critical to the production of pheasants at the farm for decades and pioneered many influential studies on gamebird propagation, management, and nutrition.

My career with the NYSDEC didn't begin here though, and there were many influential paths I've traveled to get where I am today. I grew up in the upper Hudson Valley; hunting, fishing and trapping pretty much anything I could. Mixed in with all this was a healthy dose of participation in 4H, including cattle showmanship and more specifically poultry and gamebirds. Through 4H's involvement and collaboration with the DEC's Day Old Pheasant Chick Program, I got my first involvement with rearing pheasants for release at a young age.

This personal interest in the outdoors led me to pursue a career path in the environmental field. Upon graduating from SUNY Cobleskill with a Bachelors Degree in Wildlife Management, I worked a short seasonal gig in South Carolina installing and monitoring wood duck boxes with the South Carolina Waterfowl Association. While the learning experience is something I'll never forget, I was content to return to the northeast where the wildlife is a little more inviting and not nearly as apt to bite, sting, or inflict other bodily harm (to be fair, NY does have its fair share of venomous snakes and biting insects). Soon after, I was fortunate enough to start my career with the department as a seasonal Wildlife Technician, assisting biologists with all aspects of wildlife; and more importantly people management; as where there is wildlife and humans there will always be conflict. This position led me across multiple regions and assisting in work that varied from aerial surveys across the Adirondacks keeping tabs on moose populations to doing my part to keep water chestnut out of Wildlife Management Area's along the Hudson. In 2016, I was offered a position at the Reynolds Game Farm in Ithaca. This would mean uprooting myself and family from an area we were comfortable and settled in but the allure of getting to be such a part of an iconic facility in the state that would muddle my past agricultural experience with that of wildlife management, was just too tempting.

Working and managing the farm has been a great experience for me and my family. Being the manager means living onsite to address off hour concerns as faulty incubators, power outages, or carefully orchestrated pheasant escapes rarely stick to your typical 9-5 grind. But what a great spot to raise your children and allow them to experience the thrill of tens of thousands of chicks hatching for weeks on end each spring. Although there's only so many times they fall for my attempts at them coming out to join me for yet another "easter egg hunt". With over 7,000 breeder hens kept on site for egg and chick production they only fell for that a time or two.

A pheasant rearing program that used to span over a dozen facilities across NY has been streamlined so that as stated before all pheasants released by the NYSDEC and its partners (including those pheasants released by FORCES Stewards assisting in the Niagara Region) are reared in Ithaca. Annual production goals of 30-35K adult pheasants released each fall and over 30K chicks distributed to the public are completed by a staff of 12 hardworking individuals with a mix of both seasonal and full time employment. Things tend to work in a cyclic fashion around the facility with springtime eggs collected from large laying pens with small hutches to encourage the hens to lay in easy to find areas. These eggs are collected multiple times a day; after which they are brought into a room to be washed, sorted, counted, and then placed in cool storage (not too cold) until set in the incubators once a week. (Continued page 8).

Partner Highlight: Richard E. Reynolds Game Farm (cont'd)

Evan Wills, Fish & Wildlife Technician III, NYSDEC Richard E. Reynolds Game Farm Manager



Just a "few" eggs to be picked, washed and sorted.
Photo: NYS DEC

After a few weeks (20 days to be precise), the eggs are transferred to a hatcher unit that while keeping the young developing chicks in similar conditions as the incubators, the hatchers allow the chick to safely hatch and dry off. Thanks to the wonders and specificity of mother nature, we know exactly when the chicks will hatch (23 days). So, every Monday morning for about 10-12 weeks, we will remove the chicks from the hatcher and from there they will either be divvied up to be sent out to Day Old Chick Participants or remain on the farm (Fun Fact; day old chicks can survive the rigors of shipping and delivery without food or water because they absorb the last bit of yolk sac prior to hatching and this provides nourishment for up to 72 hrs post hatching!). Nothing gets rid of a case of the Mondays like picking up and counting handfuls of cute little fluffballs.

Chicks staying on the farm get placed immediately into nurseries where fresh water, feed and a warm heater unit above inches of cozy pine shavings await them. They will continue to be raised in the nurseries for the next 6 weeks while their feathers develop and they can become better suited to take on outdoor temperatures of chilly nights and cool rains.

Once they hit the magical 6 week mark, the young birds are moved from the nurseries to the flight pens. This is the time when we can sort out the hens from the roosters to make fall shipping needs easier and also place those funny little sunglasses upon the pheasants (peepers or specs to those in the business). "What's on the birds faces?" is usually the number one question from visitors to the facility. These "specs" as we call them, help prevent picking and excessive stress to the birds. Although the pheasants have been raised in captivity, they still retain much of their wild and flighty characteristics and these specs are removed prior to release each fall.



Freshly hatched chicks await sorting. Photo: NYS DEC

A pheasant's wild explosive flight is what has led it to become America's number one upland gamebird. Although not native and originally introduced from Asia, the ring-neck pheasant has filled a niche in the landscape without outcompeting or degrading effects to our native species. Long-term grassland habitat loss and land use changes in New York have led to a near elimination of wild populations that peaked in the late 1960's. While isolated pockets of pheasants may exist in the state, it is widely accepted that habitat loss is too great to overcome for this species. New York still has a long-standing tradition of pheasant hunting and a following of thousands of hunters who enjoy pursuing pheasants for both the challenge and excellent table fare.

Alongside the annual production of pheasants, we are always trying to inform and educate the public any chance we may have through cooperative agreements, volunteer stewardship, and college internships. We strongly encourage visits from the public as well as school groups and any other interested parties. One adventure that we're excited to be moving forward with, is the completion of a publicly accessible rail trail that traverses the facilities property. This is a crucial connector trail to other area trails and allows an opportunity to inform and educate the public about the game farm and its mission. The facility is proud to have been a part of the community and NY State for the last 94 years and hopes it can continue to serve its purpose to future generations of sportsmen and women to come. So next time you may be so lucky to harvest a pheasant in NY or even to catch a glimpse of one in a hedgerow or roadside you can be confident it likely has roots to the Richard E. Reynolds Game Farm.

Steward Spotlight: Ellie VanHouten

Jr. Graphic Design Steward, Finger Lakes Region



My senior year of high school was a little wonky, to say the least. Since in-person clubs and extra-curricular activities were rightfully restricted because of the pandemic, I decided to look for opportunities that could be done remotely. While scrolling through our school's virtual community service opportunities, I stumbled across the FORCES program and saw they were looking for students interested in graphic design and environmental interpretation to create some material for conservation projects. I have always loved graphic design and especially designing natural themes and elements, so this seemed like the perfect opportunity! I immediately emailed FORCES Program Specialist Carlin Wakefield and was so excited when I got a response.

During my time with FORCES, I worked with FORCES Program Specialist Carlin Wakefield and Environmental Educator Josh Teeter to create visuals for the Thanksgiving address, which would eventually be a part of the Naturalist Training program called Kamana. The purpose for creating these visuals was to help kids consider different aspects of their environment so they could create their own unique and personalized Thanksgiving address. Kamana as a whole is such a meaningful and important program, and I can't wait to see its impact on communities. I hope my designs reflect the significance of the messages Kamana addresses.

Throughout the design process, it was occasionally hard to portray more complex and illustrative elements (e.g., animals and trees) due to the program I was using, but it was so fun and rewarding to experiment with different design styles while incorporating the importance of the page's respective topic. I think my favorite two pages ended up being 'water' and 'stars,' as they both conveyed important themes while remaining fairly concise. I'm thankful for the freedom I was afforded in creating each page, and I am also very grateful for Carlin and Josh's helpful suggestions and critiques which helped me grow as a designer.

As of now, I'm majoring in Environmental Science and Communication at Cornell University. Ultimately, I hope to study how various perspectives of—and relationships with—nature impact policy-making and environmental change. More specifically, how the social forces embedded within our landscapes can be effectively utilized to bridge the divide between humans and nature and ensure a more equitable, greener world. Creative approaches to environmental and social justice issues will continue to be essential in education and advocacy because they communicate important issues while also helping people realize a personal relationship with the world around them. I'm very fortunate to have had this experience designing for FORCES, because it solidified what I'm interested in studying, and compelled me to pause and reflect on the beauty, power, and life-giving aspects of nature.

"Before doing the internship, I didn't realize that I would be working on real projects with real, positive outcomes and I'm amazed and grateful that I got the opportunity to do this. I feel proud that I can say I made a difference because some plants I was working with will eventually be brought to parks around New York State to restore their population. This internship opened many doors for me that I'd like to explore, and I feel that I have a fundamental understanding of what working for New York State Parks, Recreation and Historic Preservation would be like."

~ Danielle Spyra, Jr. Conservation Steward, Pittsford Sutherland High School

Central Region Update

Claire Nellis, Piping Plover Project Coordinator; Delaney Kalsman, COAS Project Coordinator;
James Boyd, BCA Project Coordinator; Mike Serviss, Regional Conservation Project Coordinator; Alex Brown, Stewardship Specialist

As usual the piping plover project has gotten quiet during this 'off season' while the plovers are in the southern United States. Sarah Forestiere finished her SCA term with us and is working on finishing her BS Degree online with Unity Maine. Project Technician, Kennedy Sullivan, has also finished up and is back to educating local high school students as a substitute teacher. This fall has been especially quiet on the project since I'd been on Maternity leave, however, I am back now and my little one is growing like a weed and will be spotting birds on the beach in no time it seems!

Before Sarah and Kennedy left us they put in a lot of hard work helping other projects with invasive species removals at Selkirk Shores, deer surveys at Green Lakes and jumping worm surveys. They also helped with a salamander survey led by SCA member Jasmine Schmidt with Ithaca College. The help from all team members of the Environmental Field Team is greatly appreciated and I know they both gained a lot working with so many other FORCES projects.

Additionally, Sarah organized a beach grass transplant out at Sandy Island Beach to help protect the dunes. Nine people attended and transplanted 600 feet of grass. After transplanting, three rolls of snow fencing was installed to protect the grass from foot traffic and help it accrete sand.

We are missing the summer FORCES Stewards and our project team members but are looking forward to meeting our new SCA intern! We have gotten one report from October that our 2021 piping plover dad 'Ajax' is back in Tybee Island, Georgia! Hopefully the rest of his family is enjoying some southern sunshine and worms also. Last winter, I closed our update wishing for Aragorn and Arwen, our 4 year returning plover pair to bring newcomers with them and it happened, Ajax and Arlene found there way to SIB! So, this year I am anxiously awaiting the return of hopefully two pairs and possibly some more new birds or one of their now adult chicks with a new mate! ~Claire



A section of the beach after dune grass transplanting. Photo: OPRHP



FORCES COAS Project Stewards and Project Coordinator. L to R: Orchid Kinzie-Middleton, Foster Valle, Delaney Kalsman, Madison Stevens, Tori Wright. Photo: OPRHP

From September to December, FORCES Stewards with the COAS (Chittenango Ovale Amber Snail) project assist in seasonal removals of herbaceous and woody invasive species including purple loosestrife, European dewberry, burning bush, and European buckthorn. These removals are done around Chittenango Falls State Park and in the COAS habitat zone to help protect the native species that are important food and habitat sources for the endangered COAS.

Stewards had the opportunity to work directly with the endangered snails in the SUNY ESF COAS lab on campus. During their time, Stewards help sort leaves by decomposition and species. This process is extremely important for feeding the hundreds of reared COAS in the lab. With help from the SUNY ESF FORCES Club, 11 new eastern blue bird boxes were posted in various locations around the park including the historical old campground, which is being used by the COAS project for a future propagation garden and pollinator meadow.

~Delaney

"I will never forget the whiteboard we had in the office at my host site that my supervisor wrote 'We make a difference everyday!'"
~Haley Pond, Environmental Interpretation Steward, Canisius College.

Central Region Update cont'd

Claire Nellis, Piping Plover Project Coordinator; Delaney Kalsman, COAS Project Coordinator;
James Boyd, BCA Project Coordinator; Mike Serviss, Regional Conservation Project Coordinator; Alex Brown, Stewardship Specialist

This Fall season, the BCA team began to wind down some of our projects. We held our final grassland bird survey at the end of September and held another owl Survey where we got a good look at a barred owl. We also replaced all and relocated some of our bluebird boxes to more suitable areas with boxes made at the New York State Fair. Another fun activity we got to work on were salamander surveys with the Finger Lakes Region. Our team aided in two surveys, where we turned over boards and counted and sexed salamanders found. We also took note of eggs, centipedes, millipedes, worms, and other critters we found in the soil. Lastly, the team worked with park managers at Chenango Valley and Glimmerglass State Parks to produce maps of reduced mowing areas and gave recommendations regarding the best times for maintenance crews to mow.



Regional Stewardship Techs Billy Sullivan and Kanika Jakhmola installing bluebird next boxes in the Bird Conservation Area. Photo: OPRHP

In terms of Invasive species removals, the Bird Conservation Area (BCA) team switched over from mostly herbaceous to woody invasive removals at Green Lakes State Park and other Central Region Parks. Overall, the team removed over 170 Japanese barberry stems, 240 oriental bittersweet stems, 480 honeysuckle stems, just over 680 multiflora stems, and just under 830 common and glossy buckthorn stems from Green Lakes and other Central Region parks. Another method used to suppress woody vegetation within the grassland is by mowing. This year, we were able to mow five units in the northern part of the grassland. This will hopefully make for better habitat for grassland birds come next year's growing season.

Forest pest surveys for dispar moth, spotted lantern fly, and hemlock woolly adelgid were conducted throughout the Central Region. Our Environmental Field Team spent a half day scraping dispar moth egg masses from trees at Verona Beach State Park picnic area and parking lot. More so, we signed up through iMap Invasives to survey four quadrants at Green Lakes for spotted lantern fly and luckily, found nothing! As of the end of November, we are participating in hemlock woolly adelgid surveys in Central Region Parks containing established hemlock forests. Unfortunately, HWA has already been confirmed at Chenango Valley and Robert V. Riddell State Parks in heavier infestations than when it was first confirmed in 2020. ~James



Mat Bilz and James Boyd search for HWA at Chenango Valley State Park. Photo: OPRHP

It was a busy end to 2021 as we focused our attention on invasive species management and forest pest surveys here in the Central Region. We started off September by collecting data on chemical-free management methods for the invasive common buckthorn shrub at Clark Reservation. We found that the "buckthorn baggie" method was quite slow to kill any stumps, but about 70% efficacy was observed after nearly 36 months. We concluded two years of Asian jumping worm experiments and field sampling with our partners at Cornell and SUNY Cortland. Data collected from these experiments are currently being analyzed and we intend to publish this research in a peer-reviewed journal later on in 2022. Annual

surveys for hemlock woolly adelgid (HWA) started back up at the end of November and in just one month we have surveyed over 1,500 acres of hemlock forest in eight Parks across the region. Unfortunately, we observed expansions of HWA infestations at Chenango Valley and Robert V. Riddell State Parks as well as a new HWA infestation at Selkirk Shores. To help manage the spread of HWA in our Parks, we have partnered with the New York State Hemlock Initiative (NYSHI) to conduct biocontrol releases in 2022 and plan to work with our colleagues from the Finger Lakes Region to apply chemical controls in appropriate areas.

To end on a positive note, we conducted censuses of our recently transplanted American hart's-tongue ferns in October and found that a whopping 98% of transplants had survived their first four months in their new home at the Three Falls Woods Preserve- a property belonging to our partners at the Central New York Land Trust. That's a great way to end 2021 and look forward to a new year! ~Mike

Central Region Update cont'd

Claire Nellis, Piping Plover Project Coordinator; Delaney Kalsman, COAS Project Coordinator;
James Boyd, BCA Project Coordinator; Mike Serviss, Regional Conservation Project Coordinator; Alex Brown, Stewardship Specialist

In September, members of the Central EFT staff installed a culvert protection fence at Glimmerglass State Park. The beavers in "Beaver Pond" had been busy damming up a culvert located downstream of the pond, causing it to flood the surrounding area. With a Beaver Permit obtained from the NYSDEC, Park Staff were able to remove debris that were causing the culvert to back up. Unfortunately, clearing the debris was only a temporary solution. Beaver instinctually dam near the sound of running water, so although the culvert was being cleared, the beavers continued to dam it back up daily. Removing the debris that dammed the culvert became a timely everyday task for Park Staff. Culvert protection fencing provides a long-term solution in preventing culvert damming. Increasing the surface area, creates more work for the beaver and ultimately making it less desirable to dam. The trapezoidal shape of the fencing also presents an obstacle for the beaver. The fence will angle the beaver farther away from the inlet as they build the dam, discouraging the beaver to continue to build.



Installation of culvert protection fencing at Glimmerglass State Park. Photo: OPRHP

Deer Impact Assessment surveys were revived and implemented this field season in Green Lakes State Park (GLSP). These surveys serve as part of the monitoring program for the GLSP Deer Management Plan. The results of the monitoring efforts will ultimately determine if the goals and objectives of the deer management plan are being met. The surveys consist of vegetation monitoring at 20 different randomly generated points within GLSP. At each survey point (plot) two perpendicular 100 meter transects were established centered on the point location. Four 2 x 10-meter subplots were established along the transects at 20 meters from the center point. Vegetation Profile Board measurements were taken at 15 and 50 meters from the center point along the transects. Percent cover of all vegetation was recorded by species using cover classes. Number of woody stems 50-182 cm tall and within 1 meter of either side of the transect were counted by species, the number of those stems that showed signs of browsing by deer were recorded, as well as any signs of deer (pellets or deer runs).

We had an outstanding effort to complete deer impact surveys at GLSP- Alex Brown, Emily Purce, Kennedy Sullivan, Sarah Forestiere, James Boyd, Peter Sterbak and Kanika Jakhmola, all worked together to carry out the project. Surveys were conducted from mid-September to mid-November. A total of 86 plant species were identified in the ~20 acres that were surveyed. White ash, herb-Robert and sugar maple were the most frequent plant species identified within the survey. In most areas of the park, vegetation was sparse and dominated by moderate to low browse sensitive species. The more heavily used sections of the park had the most browse sensitive species. ~Alex

"It was so great to meet like-minded people with similar passions and love for the Earth. I'm looking forward to applying the insight, awareness, and knowledge that I've gained through FORCES when I return to the classroom this spring."

~Margo Lee, Conservation Steward, Canisius College

2021 FORCES Stewards

Canisius College

Celine Kawalek, Pollinator Steward
Caroline Opalenick, COAS/Invasive Species Management Steward
Haley Pond, Environmental Interpretation Steward

Clarkson College

Elaina Porter, Piping Plover Steward

Cornell University

Jenna DeRario, Regional Planning Steward

Eckerd College

Madeline Was, Conservation Steward

Hartwick College

Tarra Smith, FORCES Club President
Margot Zeitoun, FORCES Club President

Ithaca College

Bridget Hagen, Conservation and Invasive Species Management Steward
Megan Holman, Conservation and Invasive Species Management Steward
Adam Lampal, Conservation Steward
Grace Ziehnert, Invasive Species Management Steward

Jamestown Community College

Luke Thompson, Natural Resources Management Steward

Le Moyne College

Luke Giunta, FORCES Club Co-President
Mikael Melfi, FORCES Club President
Haley Synan, FORCES Club Co-President

Medaille College

Kaitlynn Webber, Conservation Steward

Niagara County Community College

Michael Bruch, Trail Management Steward

Niagara University

Brendan DeCoff, Conservation Steward
Thomas DeVantier, Pollinator Steward
Hannah Frasier, Regional Conservation Steward
Noah Kaczmarek, Conservation Steward
Emily O'Brien, Conservation Steward

Penn State University

Samantha Calus, Environmental Field Team Steward

SUNY Binghamton

Ben Oppedisano, Invasive Species Management Steward

SUNY Cortland

Nora Gagnon, Pollinator Steward
Magen Rant, Conserv. Steward/Three Gorges Stewardship Corps Member
Jared Skrotzki, Environmental Field Team Steward
Allison Winden, Environmental Field Team Steward

SUNY ESF

Avrey Baron, COAS Conservation Steward
Jordan Card, Interpretive Design Steward
Mack Conan, Piping Plover Steward
Richard Crescenzi, AHTF Conservation Steward
Shannon Croft, COAS Conservation Steward
Spring DeFranco, Piping Plover Steward
Kristyn Ehleben, Environmental Education Center Host Steward
Alexandria Evans, Piping Plover Steward
Rachael Foote, Natural Resources Management Steward
Mary Hildebrand, Interpretive Design Steward
Bridget Jones, Environmental Interpretation Steward
Orchid Kinzie-Middleton, COAS Conservation Steward
Fiona Koye, Invasive Species Management Steward
Marissa Kurmis, COAS Conservation Steward
Emily Link, FORCES Club President
Michael Malone, AHTF Conservation Steward
Jill Marianacci, Environmental Field Team Steward
Aiden McCarthy, Invasive Species Management Steward
Rebecca Miller, COAS Conservation Steward
Shawna Mulvihill, AHTF Conservation Steward

SUNY ESF (cont'd)

Emily Parsons, COAS Conservation Steward
Sarah Petty, Avian Conservation Steward
Devin Reiss, COAS Conservation Steward
Sophia Roemer, AHTF Conservation Steward
Elizabeth Rolon, AHTF Conservation Steward
Helen Sanders, COAS/Invasive Species Management Steward
Vanessa Shores, Piping Plover Steward
Grace Sensebox, Plant Materials Program Steward
Madison Stevens, FORCES Club President
Meagan Terry, Environmental Education and Conservation Steward
Clara Tyrel, Invasive Species Management Steward
Foster Valle, COAS Conservation Steward
Tori Wright, COAS Conservation Steward
Siela Zembsch, COAS Conservation Steward

SUNY Geneseo

Jenny Bartholomay, FORCES Club President

SUNY Oneonta

Chloe Dymek, FORCES Club President
Sophie Millar, FORCES Club President

SUNY Westchester

Angelica Termine, Conservation Steward

University at Buffalo

Diana Chaburka, Conservation Steward
Alexandra Chimiak, Invasive Species Management Steward
Nicholas Di Nardo, Conservation Steward
Dylan Feiden, Conservation Steward
Julia Flowers, Trail Management Steward
Jake Handerman, Conservation Steward
Laura Kahle, Trail Management Steward
Eian Loomis, Trail Management Steward
Katie Lovell, Conservation Steward
Christopher Pinkosh, Invasive Species Management Steward
Emily Pinto, Environmental Education Steward
Katherine Turri, Pollinator Steward
Cole Twomey, Regional Conservation Steward
Haley Young, Conservation Steward

University of Connecticut

Madeline Scherff, COAS Conservation Steward

University of Vermont

Will Starkey, Flora and Fauna Steward

Wells College

Nicole D'Aurizio, Chimney Bluffs Trail Steward
Stephanie Minarik, Conservation Steward
Dan Popp, FORCES Club President

Non-Collegiate Stewards

Oliver Knox, AHTF Conservation Steward
Margo Lee, Conservation Steward
Jillian Smith, Conservation Steward
Victoria Yargeau, Data Management Steward

HIGH SCHOOLS

Pittsford Mendon High School

Ellie VanHouten, Jr. Graphic Design Steward

Pittsford Sutherland High School

Danielle Spyra, Jr. Conservation Steward

Orleans/Niagara BOCES

Niagara Career & Technical Education Center
Logan Fournier, Jr. Conservation Steward
Lawrence Shwarzmueller, Jr. Conservation Steward

The Force Behind FORCES Picture Page



Finger Lakes and Central Stewards, and Staff on a tour of the Taughannock Falls State Park Gorge Trail after an eastern red-backed salamander survey.



Conservation Steward, Adam Lampal, planting native sedges at Buttermilk Falls State Park.

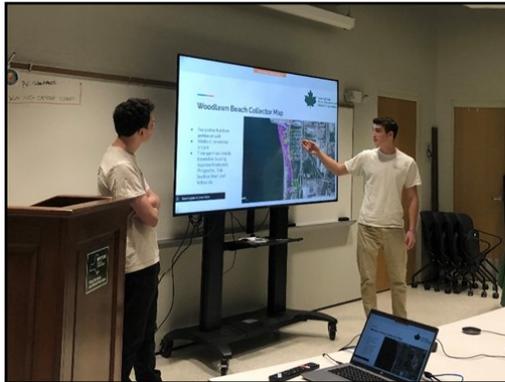
Photos: OPRHP



Niagara Region Stewards learning the tree tagging system at the Niagara Falls Visitor Center project site.



Niagara Region Stewards installing deer enclosures to protect maple and sycamore saplings planted at Beaver Island SP.



Niagara Region Stewards Nick DiNardo and Dylan Feiden presenting at the Niagara Region's Fall Project Expo.



SUNY ESF FORCES Club members and COAS Stewards posting a blue bird box in the old campground at Chittenango Falls State Park.



Stewardship Specialist, Alex Brown, samples for earthworms at Clark Reservation using the liquid mustard extraction method.



FORCES Steward Tori Wright sorting leaves in the SUNY ESF COAS lab. COAS prefer leaves that are paper thin and semi-transparent from tree species including black cherry, ash, sugar maple, and American pawpaw.



**New York State
Parks, Recreation and
Historic Preservation**

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

FORCES Newsletter
Spring Edition 2022

FORCES Team

Amy Kochem

FORCES Program Coordinator

Tom Hughes

Natural Resource Stewardship Biologist
FORCES Program Manager, Central Region

Josh Teeter

Environmental Educator
FORCES Program Manager, Finger Lakes Region

Carlin Wakefield

FORCES Program Specialist, Finger Lakes Region

Alexandra Tillman

FORCES Program Specialist, Niagara Region

Emily Purce

NYS Parks Corps SCA AmeriCorps
FORCES Program Specialist, Central Region

Joshua DiPaola

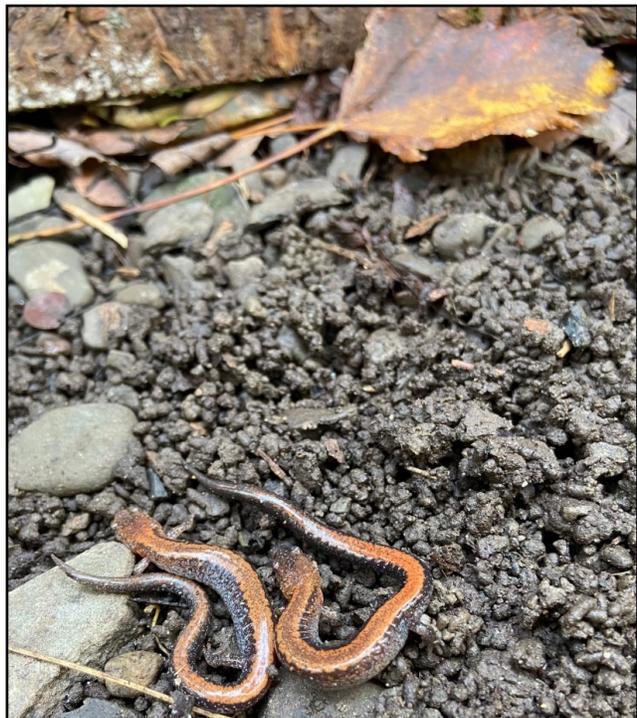
Natural Resource Specialist, Taconic Region

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.
