



Parks, Recreation and Historic Preservation

FORCES

Friends of Recreation, Conservation, and Environmental Stewardship

Summer 2021 Newsletter

Vol. 6 Issue 2

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Territorial flight display. Photo: Matthew Brown

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

Skies and Birds of Blue

Tom Hughes, NRS Biologist
Central Region FORCES Program Manager

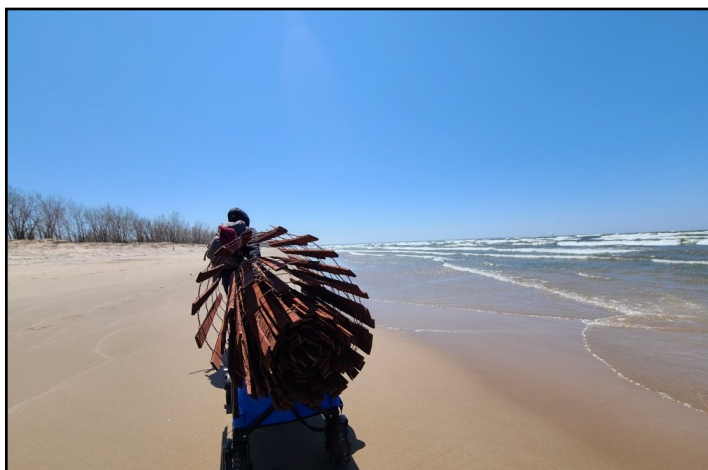
Typically, when I am feeling 'blue' I feel sad or disappointed. However, this spring our FORCES team has been seeing a lot of blue, and that makes me very happy!

Stunning blue skies accompanied us on our NYS Parks Corps SCA ice fishing outing (page 7) and then again at Sandy Island Beach as we conserve and protect our piping plovers (page 8). Of course, what could be more fitting than brilliant blue skies while doing annual monitoring for our official state bird, the eastern bluebird? (pages 9 and 14)

Throughout this issue of our FORCES newsletter, you'll learn about all the projects, events and Stewards that have made our program brighter and more brilliant than ever. Hopefully, as you turn the pages of this issue, its contents will bring you many smiles...perhaps maybe even until your face turns blue:)



SCA member Matt McCurvin proudly displays a largemouth bass prior to release—his first fish ever caught through the ice! (above). Eastern bluebird boxes at Green Lakes State Park (below). Photos: OPRHP



Piping Plover Project Coordinator Claire Nellis tows a section of barrier fencing at Sandy Island Beach. Photo: OPRHP



Niagara Region Update

Alexandra Tillman, FORCES Program Specialist

Last spring, the FORCES Stewards in Niagara were as busy as ever. With some scheduling difficulties, we took a different approach than usual to our projects. Each day of the week was “themed” around a type of project, and whoever was available would work on whatever was scheduled that day. This group of Stewards immediately showcased their skills as young professionals and mastered any task that was given to them! Alexandra Chimiak, Laura Kahle, Eian Loomis, Christopher Pinkosh, and Cole Twomey all joined us from the University at Buffalo and Hannah Frasier joined from Niagara University. We also had Matthew Clark, Logan Fournier, and Lawrence Schwarzmuller from Orleans/Niagara BOCES on the roster as our Jr. Conservation Stewards.



The Invasive Species Management Crew & SCA Rep. Will Walston, snowshoeing to hemlock stands at Knox Farm State Park. Photo: OPRHP

Our Invasive Species Management Stewards (Alex, Chris, and Cole) tirelessly worked on forest pest surveys such as the hemlock woolly adelgid and the gypsy moth, focusing on creating a protocol system and a treatment plan if necessary. They also conducted invasive species removals and assisted staff with surveying for invasives in multiple parks using ArcGIS Collector. All three of these individuals are now employed by NYS OPRHP seasonally for the summer!



Invasive Species Management Stewards Alex, Eian, Chris, and Cole at Amherst SP completing invasive surveys. Photo: OPRHP

Laura, Eian and Hannah served as our Trail Management Crew and put all their effort into ensuring our trail systems throughout the region were safe and ready to use for our patrons. They also created a new trail system map for Evangola State Park using a handheld GPS unit and ArcGIS. We are hoping that the new map and signage will be produced and installed in the park by this fall.

Hannah worked on a unique, individual project for the region as well. She was tasked with researching and evaluating the feasibility of a dog waste composting program for our facilities with dog parks. This entailed hours of research, creating a report for regional management review, and presenting a plan to managers. Per Hannah’s recommendation, we are hoping to continue looking into this sustainable option for our dog parks!

Our Jr. Conservation Stewards Matt, Logan, and Larry completed their work-based learning program mid-June. They completed many projects, such as creating and installing a turtle ramp along with native bird box surveys. They also had the opportunity to design a landscape area at the Discovery Center at Niagara Falls State Park, where they grew the annuals they would be using themselves!

After a tough year of hurdling obstacles for all, I am proud to share that we now have eight Niagara FORCES alumni working for NYSOPRHP in multiple locations throughout the state. If you see any of these young professionals out and about in your local parks- be sure to say hello!

Carly Guido (Summer 2020)- Niagara Region
Tad Townsend (Fall 2020)- Niagara Gorge Parks
Alexandra Chimiak (Spring 2021)- Niagara Region
Matthew Clark (Spring 2021)- Niagara Falls State Park
Logan Fournier (Spring 2021)- Niagara Falls State Park
Christopher Pinkosh (Spring 2021)- Long Island Region
Lawrence Schwarzmuller (Spring 2021)- Niagara Falls State Park

Coordinator's Corner

Amy Kochem, FORCES Program Coordinator

With a hearty number of Stewards working on projects ranging from Interpretive Design to Trail Management, and the addition of three Jr. Conservation Stewards, it certainly has been an exciting spring for FORCES! Word is catching on about our offerings across the state as we filled many of our summer positions by mid-April. It's never too early to inquire! We continue to take pride in the diverse opportunities that we offer and cherish the wonderful relationships that have developed with our Stewards over the years. We look forward to seeing more and more Jr. Conservation Stewards join in on the fun and gain valuable experiences with us at Parks.

Be sure to mark your calendars for the 6th Annual FORCES Membership Gathering on September 26th, at Letchworth State Park. This is open to all current and past FORCES Stewards and club members interested in networking, learning, and celebrating FORCES. We hope to see many of you there!

SAVE the DATE: FORCES Fall Gathering

Sunday, September 26, 2021
Letchworth State Park

The FORCES Gathering is an event for students to develop networking, attend natural history trainings, and to celebrate program accomplishments in a social setting.

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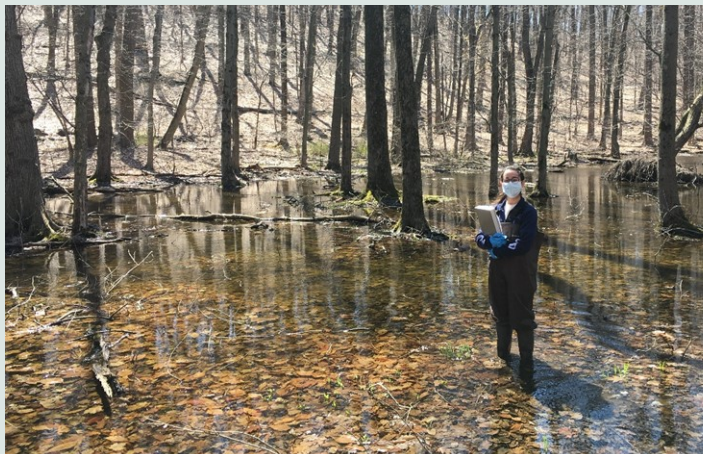
*Denotes active FORCES Clubs

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

Taconic Region Update

Joshua DiPaola, Natural Resource Specialist

Spring stewardship at Rockefeller State Park Preserve (RSPP) has taken to land, air, and water. Specifically, our full-time staff and FORCES Stewards have focused on planting native tree seedlings, improving habitat for sensitive bird species, and vernal-pool surveying. The newest member of our stewardship team, Devyani Mishra, has joined our full-time Rockefeller staff this spring as our Flora Steward, leading several land-based conservation initiatives. In the short time that she has been here, Devyani's invaluable knowledge on native flora has been leveraged to strategically plant native tree seedlings in locations throughout the preserve in areas which they are most likely to thrive. Over the course of several years, we intend to plant close to 400 seedlings with the hope to mollify some of the damage induced by herbivorous over-browsing.



FORCES Steward, Angelica Termine, assisting in a vernal pool survey. Photo: OPRHP



From an aerial approach, Angelica Termine, our current and only FORCES Steward at the moment, has devoted much of her time to monitor the new installations of cavity-nesting bird boxes within the preserve. Thus far, it has been a challenging nest year, with several instances of predation and competition-induced mortalities, but we have several completed nests and clutches on standby already (eastern bluebird, tree swallows, purple martins, Carolina wrens). Angelica has also supported the stewardship staff with monitoring vernal pools for indicator species, such as wood frogs and spotted salamanders. Vernal pools are sensitive ecosystems which host a variety of reliant fauna, and the stewardship staff has collaborated with its partnering land managers, Stone Barns Center, to head the first-ever routine surveillance of vernal pools within the preserve. Going forward through the spring and summer, we hope to recruit new FORCES interns and welcome back previous legacies to support all of the aforementioned initiatives.

The first American kestrel nest box installed at RSPP. The nest box and subsequent efforts to monitor it is part of a broader initiative to improve habitats for cavity-nesting birds. Photo: OPRHP

“What I really gained from this is valuable connections. Also, I continued to foster a strong work spirit, which aided me greatly in the relatively rough Covid semester at school. I think the experience fit into exactly what I was expecting from the description; we got outside, we got muddy, and we got things done.”

~Aiden McCarthy, SUNY ESF

Steward Spotlight: Stephanie Minarik

Stephanie Minarik, American Hart's-Tongue Fern Technician, Central Region



Stephanie examining an orb-weaver from my time abroad with The School for Field Studies in Panama. Photo: The School for Field Studies

My introduction to the FORCES program happened my freshman year in 2016 at the Wells College Club Fair. That summer, I completed a FORCES internship studying insect diversity in a newly established pollinator garden at Long Point State Park with Lindsay Dombroskie, former FORCES Program Specialist in the Finger Lakes Region. From that point on, I went from Wells College FORCES club member to FORCES Club President. We held campus events ranging from leisurely hikes, to wilderness survival fairs, to doing park cleanups. I graduated with a Bachelor's in Environmental Science in May 2020, during the height of the coronavirus pandemic. My goals and aspirations for post-college were on pause until my former advisor emailed me the position for Conservation Steward in the Finger Lakes Region starting February 2021. Carlin Wakefield, FORCES Program Specialist in the Finger Lakes Region, graciously accepted me onto her team with Conservation Steward Magen Rant, one of my favorite wilderness companions.

During my time in the Finger Lakes, we visited almost every park in the region assisting with various projects. We bat-proofed a pavilion at Stony Brook State Park, mapped and marked trails at Keuka Lake State Park and Two Rivers State Park Recreation Area, aided the Plant Materials Program (PMP) over at Sonnenberg Gardens & Mansion State Historic Site, and

many more. There were also days where we helped with hemlock woolly adelgid (HWA) surveys in already treated stands of hemlock trees. My favorite memory from this experience was when we were looking for otters or signs of their presence at Jennings Pond in Buttermilk Falls State Park. We thought we saw otter tracks and proceeded to track them, only to follow them to a tree with a fisher sitting in the canopy!

Not all of our days were spent in the field. Both Magen and I had separate projects to work on the Monday of each week. While Magen monitored bluebird nest boxes at different parks, I worked on Kira Broz's, Stewardship Project Coordinator in the Finger Lakes Region, project of creating bird species lists for Parks. The purpose of this project is to collect data from eBird and cross-reference to Rare, Threatened, and Species of Greatest Conservation Need lists and habitat info to aid Parks in making decisions about restoration efforts, capital projects, and park maintenance activities. With the help of my partner, Austin Heil, we created a program that would help us collect the data we needed from the eBird website faster than manually inputting it. From there, I sorted the data from each park into their own respective lists and created an overall bird species master list for each region. Unfortunately, I could not see this project to its finish because my internship was coming to an end. But, I got as much done as I could and happily prepared to start my position as the American Hart's-Tongue Fern (AHTF) Technician at Clark Reservation State Park.

Currently, I am serving as the American Hart's-Tongue Fern Technician assisting Mike Serviss, Regional Conservation Project Coordinator, with the conservation efforts on the threatened AHTF. I've been spending my days around the park pulling garlic mustard and pale swallow-wort around fern populations and in areas where we want to seed with natives from the PMP. We've also surveyed for tree of heaven and spotted lanternfly as a collaborative effort with citizens around the Central Region. The project I'm most looking forward to this season is the transplantation of AHTF to slopes in Three Falls Woods, a Central New York Land Trust Property.

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

Finger Lakes Region Update

Carlin Wakefield, FORCES Program Specialist



Grace Ziehnert and Carlin Wakefield at the Lucifer Falls overlook in Robert H. Treman State Park. Photo: OPRHP

FORCES in the Finger Lakes had a very busy spring, with Stewards starting in early February, we were out in the field and getting work done even in the cold winter weather, snowshoeing and ice-spikes included! Conservation Stewards, Magen Rant and Stephanie Minarik volunteered 20+ hours a week on a variety of projects including winter raptor surveys, trail marking and maintenance, deer pellet-group counts to assess abundance of overwintering deer populations, hemlock stand assessments, as well as plant and animal surveys. Magen worked independently monitoring bluebird nest boxes through Cornell's NestWatch, and Stephanie worked independently to create bird species master lists for parks around the state using eBird and NY Natural Heritage Program data.

Magen and Stephanie also helped lead volunteers in removing invasive species and seeding natives on I Love My Parks Day at Fillmore Glen State Park. Two other notable projects they worked on included bat-proofing the Clara Barton Shelter at Stony Brook State Park to ensure bats are not roosting in areas close to patrons and causing safety hazards, and cleaning out two turtle nesting sites of weeds, debris, and trash to provide a safe nesting area for turtle populations along Catherine Creek and the Catherine Valley Trail in Horseheads, NY.

Invasive Species Management Steward, Grace Ziehnert, worked hard on surveying all the Ithaca parks' picnic, parking, camping, and maintenance areas for Spotted Lanternfly (SLF), after an infestation was detected in the area Fall 2020. Grace found no signs of SLF in the Ithaca area parks as of now, however continued surveys of these areas along with all Tree of Heaven infestations will be ongoing to ensure SLF populations can be mitigated before they spread. Grace assisted the Hemlock Preservation Program with grant required hemlock monitoring and stand assessments in multiple Finger Lakes parks, as well as manually removed invasive shrubs at Jennings Pond in Danby, NY.



Invasive Species Steward, Grace Ziehnert, monitoring hemlocks for canopy health and HWA density at Robert H. Treman State Park. Photo: OPRHP

Regional Planning Steward, Jenna DeRario, worked closely with Senior Natural Resource Planner, Marcus Riehl on a GIS project prioritizing properties for future acquisition near Buttermilk Falls State Park as her final project to complete her Masters of Regional Planning at Cornell University. Check out her Featured Project article to learn more about the work she accomplished this semester.



Thank you to all our Stewards for the exemplary work this spring—you make us so proud! We would like to send a big congratulations to Magen Rant and Grace Ziehnert who were hired as Finger Lakes Region OPRHP staff under the 3 Gorges Project, and to Stephanie Minarik who was hired as Central Region OPRHP Staff under the American-Hart's Tongue Fern project this summer!

FORCES Program Specialist, Carlin Wakefield, leading volunteers in an invasive species removal and native species seeding for I Love My Park Day at Fillmore Glen State Park. Photo: OPRHP

FORCES Staff Highlight: Emily Purce

NYS Parks Corps SCA AmeriCorps FORCES Program Specialist, Central Region



Emily holding a yellow perch caught during an ice fishing clinic on Tully Lake in February. Photo: OPRHP

Hi all, I'm Emily, I'm a recent graduate of SUNY-ESF's Environmental Studies Department and am currently an SCA member with Parks with the title of NYS Parks Corps SCA AmeriCorps FORCES Program Specialist/Environmental Educator, Central Region. I'm based out of Selkirk Shores State Park, which is where my family used to go camping the most when I was a kid. I'm from nearby Oswego, New York so I'm very familiar with Lake Ontario and the Central Region in general. While in college, I volunteered as a FORCES Environmental Interpretation Steward at the Environmental Education Center at Green Lakes State Park, then I had an internship with the Planning and Engineering Department at the Central Regional Office. I also worked for the Adirondack Watershed Institute of Paul Smith's College as a Boat Steward in the Adirondacks and I have done social media/class development for a non-profit. Some of my favorite NY State Parks are Kring Point, Glimmerglass, and of course the Adirondack Park. Some things I really like outside of work are my cat named Ginger, houseplants, and true crime podcasts (SSDGM)!

Since my position started in January, I've been so busy and have learned so much! One of my favorite things I've done so far is ice fishing, which we were able to do three times this winter! I've also taken over and revamped the FORCES social medias, which has been very rewarding. I've been involved in a lot of fieldwork since January, like surveying for hemlock woolly adelgid, bird surveying, planting dune grass, and removing invasive plants, which have all been new experiences for me. This summer I will be splitting my time between fieldwork working with the piping plovers, the American hart's-tongue fern, invasive species, the Chittenango Ovate Amber Snail (COAS), and environmental education programming with campers at Selkirk Shores. I can't wait to see what this position has in store for me!

NYS Parks Corps SCA AmeriCorps Ice Fishing Clinic

Tom Hughes, NRS Biologist & Central Region FORCES Program Manager

NYS Parks Corps members from Central, Finger Lakes and Thousand Islands Regions all gathered on March 10th at Tully Lake south of Syracuse for a fun-filled day of ice fishing training and team building. There were a bunch of first time ice anglers on the trip, and there was even one member that caught his first fish ever, as I recall. It was a surprisingly warm day as can be seen by the water on top of the ice, but the ice was safe and the fishing was great. We caught plenty of yellow perch, chain pickerel and largemouth bass.

We had a BBQ lunch out on the ice, so we did not go hungry. At the end of the day, the eating did not end as I filleted our day's catch and sent several Parks Corps home with fresh fish for dinner. I was excited to get some texts and photos that evening with members showing off their culinary skills and their fish dinners:)

Let's do it again next year!!!



SCA members and Park staff with the day's catch!
Photo: OPRHP

Learn more about ice fishing at the
NYS DEC website- <https://www.dec.ny.gov/>

Central Region Update

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

With things slowly but surely returning to normal, our winter and spring season have been nothing short of exciting! In January, NYS Parks Corps SCA AmeriCorps Piping Plover Steward, Sarah Forestiere, joined the team. Weeks after, we jumped right into education and outreach and presented to a Syracuse City School class of 6th graders; this teacher is actually a frequent visitor at Sandy Island Beach State Park and we've been fortunate to make this connection which has led us to present with other classes in the Syracuse district! Locally, we presented to Sandy Creek Central Schools middle and high school biology classes. This summer, we have implemented a roving plan so we can communicate and connect with residents to better understand the importance of the plovers in this area. We completed Certified Interpretive Guide Training led by Katie Mulverhill in May and are ready to implement what we learned!



New fencing and sign along state and private property.
Photo: OPRHP



Vanessa, Alexa, and Anthony with new sign. Photo: OPRHP

Surveying began in mid-March and it was COLD! March brought three FORCES Stewards from SUNY ESF, Alexa Evans, Vanessa Shores, and Sarah Petty. During their time with us, they helped survey at Sandy Island Beach State Park (SIB), Black Pond, and Southwick Beach; installed new fencing and signage at the state park boundary at SIB; I Love My Park Day at Selkirk Shores State Park on May 1st; participated in five dune grass planting sessions with the North Pond Resiliency Project led by Sandy Bonnanno and Ron Fisher; and so many other projects. Their time with us ended in May, but Alexa and Vanessa will be volunteering this summer to continue helping us out on the beach while working their internships in Syracuse and Buffalo!

April brought warm weather and with warm weather comes the arrival of our plovers! Arwen, our resident five-year-old female, was spotted April 24th by Sarah, Alexa, and Colleen Andrews, an outreach coordinator with USFWS. A few days later, another plover was spotted at Sandy Island, but it was not our resident male! A nine-year-old bird from Michigan we named 'Veteran' was seen in New York for the first time. She was only around for a few days when she left, was not seen for weeks then observed back in North Manitou Island. On May 4th, Aragorn, our four-year-old resident male, was spotted! He and Arwen wasted no time and began making scrapes and a nest was found May 13th! Since then, they have been incubating and been doting parents.

Excitement continued when a fourth AND fifth plover, a 2020 female we named Arlene and a 2020, captive-reared male named Garfield (both from Michigan), were spotted on SIB but moved to Montario Point after our resident male chased them off. The young pair began scraping and made a nest but only laid one egg before it was lost. They moved back to SIB, only to be met with a SIXTH plover, another 2020 Michigan, captive-reared male named Ajax. In the battle of Ajax versus Garfield, Ajax won over Arlene and his territory on the north spit of the channel and Garfield flew elsewhere. Since the plover soap drama ended, we are excited to say we have TWO nests incubating at Sandy Island Beach!! Our summer FORCES Stewards joined in our excitement May 19th following PIPL Training led by The Project Coordinator Claire Nellis, Irene Mazzocchi (DEC Biologist), and Alison Kocek (SUNY ESF Researcher), and FORCES Stewards Sophia Roemer, Elaina Porter, Spring DeFranco, and Helen Sanders will be working with us this summer along with SUNY ESF Regional Parks Tech Mack Conan and Kennedy Sullivan, our Parks Technician. Many posts, signs and rolls of fencing have been installed to protect the birds safe haven and we have been sharing our love of plovers with the public. We have lots of chicks to look forward to this summer and as always, want to thank all partners for all the work they do for us! Peep soon!!

Central Region Update cont'd

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



BCA Stewards monitoring eastern bluebird nest boxes at Green Lakes State Park. Photo: OPRHP

During the spring months (mid March – early May) the Bird Conservation Area (BCA) Crew, comprised of James Boyd, Aidan McCarthy, and Fiona Koye, focused primarily on maintenance and monitoring of ten eastern bluebird nest boxes placed throughout the Farmers Hill and Vista Trails at Green Lakes State Park. Initially, boxes were cleared of old nests/debris, sanitized, then left open to air dry for at least 24 hours. For the next eight weeks, boxes were monitored weekly and progress was recorded. Currently, 14 nests have been observed, with seven of which containing a total of 24 eggs. Within the month of May, ten of the 24 eggs have hatched and five have been broken, likely by house wrens/sparrows. Monitoring and maintenance of the bluebird boxes is expected to continue throughout the summer season. The team is hopeful that it will be able to replace the nest boxes at the end of the season.

Three grassland bird surveys were also completed with the help of the Environmental Field Team, members of Audubon and FORCES. Future surveys are expected to be completed once a month and are following DEC standards and protocol.

Woody invasive species and garlic mustard removals have also been a part of the spring field season. In total, eighteen honeysuckle and five autumn olive stems were removed from immediate trail sides in the Green Lakes grassland and 2,879 garlic mustard stems have been removed from the interior of Green Lakes. Garlic mustard removals will continue until mid-June when pale swallow-wort will become the primary focus. By early June, a comprehensive survey of Green Lakes State Park is expected to be completed and efforts will be focused to high priority areas. Invasive Species Control Plans (ISCP) are being written and submitted for Chenango, Glimmerglass, and Robert V Riddell State Parks. The Invasive Species Technicians will be surveying most Central Region State Parks during the first part of the season (June-July) while also assisting with removals at Green Lakes. ISCPs will then be drafted and submitted for parks where management is deemed necessary and a priority. Once ISCPs have been approved, management will begin.



Eastern bluebird eggs found in a nest box. Photo: OPRHP

Chittenango Ovate Amber Snail (COAS) Stewards Emily Parson, Avrey Baron and Marisa Kurmis assisted in invasive management during the spring season. Including the removal of old and new European dewberry growth (*Rubus caesius*). Over 560 gallons of European dewberry clippings were removed between February and May in an effort to minimize drupe production later in the season. Additionally, 295 invasive woody species stems were removed between the same time frame. Removal efforts focused on common buckthorn (*R. cathartica*) occurring upstream from the COAS habitat zone. The COAS Outreach Program was created with the help of Devin Reiss, Avrey Baron, and Emily Parson. This included the creation of a steward manual that outlines roving, tabling, self-guided hikes and COAS craft programs. Avrey created a panel display that depicts Oneida Nation culture in the Chittenango Falls areas. Emily created COAS craft and word search handouts. Additional brochures and posters pertaining to COAS were also updated and produced. Avrey assisted with bird surveys conducted at Chittenango Falls State Park at locations where new bluebird boxes will be installed. The purpose of these surveys were to identify aggressive bird species that might reduce bluebird nesting. Thirteen species of bird were identified, but none that would impact bluebird nesting.



COAS Steward, Avery Baron, assisting in woody invasive removals in the future pollinator meadow and COAS propagation garden at Chittenango Falls State Park. Photo: OPRHP

Central Region Update cont'd

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



Rex Ramsgard (CNYLT) walks next to trash removed from fern transplant sites at Three Falls Woods. Photo: OPRHP

The American hart's-tongue fern crew has been getting their hands dirty quite often this spring and summer. Aside from our normal invasive plant management at Clark Reservation, we have now partnered with the Central New York Land Trust (CNYLT) to further the restoration and recovery of the hart's-tongue fern. We have been removing invasive plants from a CNYLT property called Three Falls Woods in Manlius, NY- just a few miles down the road from Clark Reservation- and helped to clean out A LOT of trash from the area (including an old motorcycle, a canoe, and a washing machine) in preparation of transplanting hart's-tongue ferns and creating a brand new population!

We transplanted 200 ferns at the site in June after carefully selecting, measuring, and transporting each plant from our stock at the Plant Materials Program at Sonnenberg Gardens. The ferns will now be monitored for survival and growth over the next several years. Additionally, we created a short video about the geologic history and conservation of Clark Reservation State Park for the upcoming (and virtual!) Environmental Field Days organized by Katie Mulverhill, our Environmental Educator.

Lastly, our Project Tech, Stephanie Minarik, has designed an insect diversity study that we plan to carry out in July and August to contribute to statewide insect diversity and data collection initiatives.



Liz Rolon (left) and Stephanie Minarik (right) record footage for an interpretive video about Clark Reservation State Park. Photo: OPRHP

"I loved meeting new people who share the same passions as I do. The program truly exceeded my expectations. This experience benefited me professionally by allowing me to network and showing me the basics of what is expected in this field. I learned how to conduct some surveys, improved on my identification skills, and got physically and mentally stronger in the process."

~Magen Rant, SUNY Cortland

"I have improved my interpretive writing, and I have gained skills in utilizing different design elements. I know also have a better appreciation for the amount of research and editing are required to make this type of content. This opportunity exceeded my expectations and I have come out of it a more prepared person. It made me excited to continue learning and growing in this field."

~Mary Hillebrand, SUNY ESF

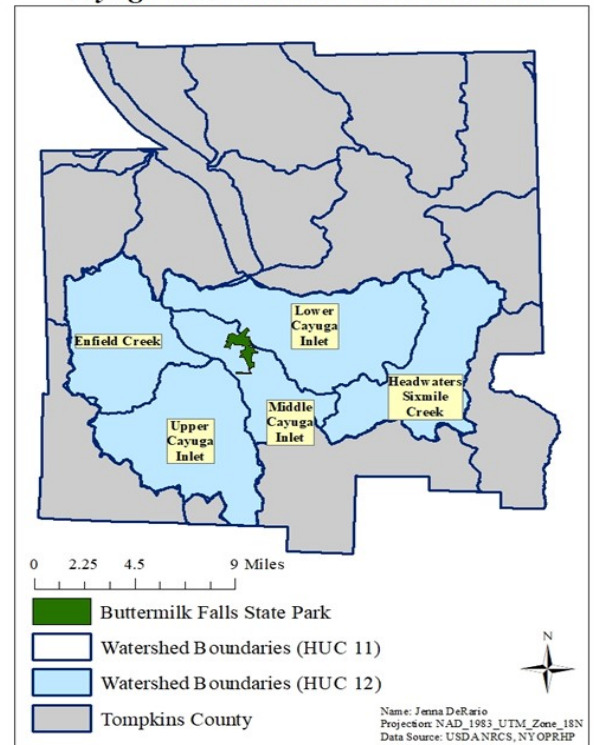
Featured Project: Prioritizing Water Quality in Buttermilk Falls State Park: A Hot Spot Analysis of Agricultural Land Use in the Upper & Middle Cayuga Inlet Sub-Watersheds

Jenna DeRario, FORCES Conservation Steward

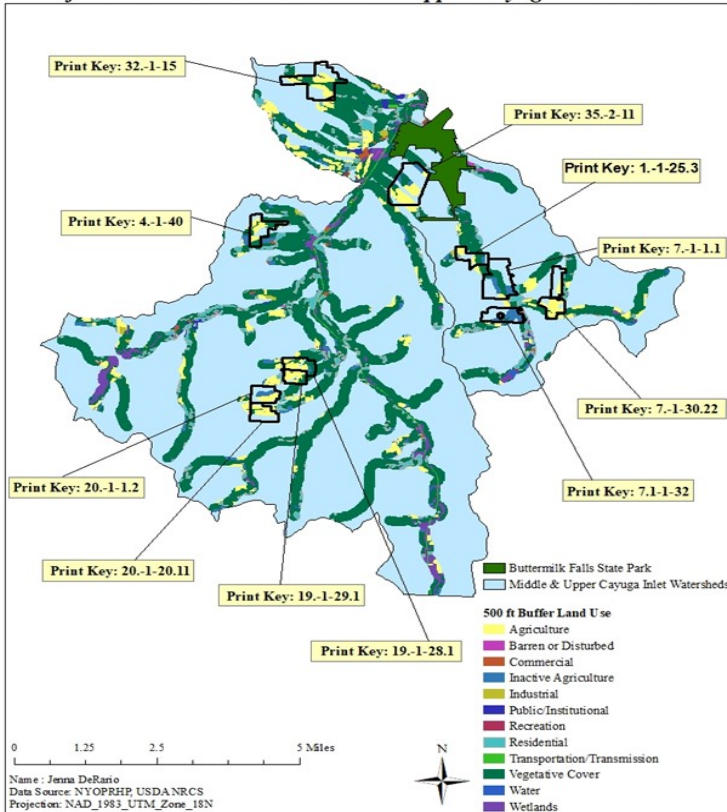
As a FORCES Conservation Steward, I had the opportunity to complete an internship during the Spring 2021 semester. I am currently enrolled as a Master of Regional Planning student at Cornell University with a concentration in Land Use and Environmental Planning. I had previously graduated from the State University of New York at Buffalo with a bachelor's degree in Environmental Studies and then subsequently served as a Peace Corps volunteer in Panama where I completed environmental conservation and community development projects.

This semester I worked with Marcus Riehl, the Environmental Program Specialist, from the Finger Lakes Office of Parks, Recreation, and Historic Preservation. I found the experience to be very rewarding as I had a lot of freedom to determine the direction of the project to tailor it to my interests. As a graduate student, I have focused on natural resource management, rural development, and the connection between environmental conservation and agricultural production. My project conducted a hot spot analysis on the watersheds that enter Buttermilk Falls State Park to determine priority areas where collaboration could be done between conservation organizations and farmers. Utilizing GIS, 11 tax parcels were chosen where the implementation of riparian stream buffers and other land management practices could have the largest effect on the overall recreational water quality downstream in the Park.

Cayuga Inlet and Its Sub-Watersheds



Identified Tax Parcels in the Middle & Upper Cayuga Inlet Watersheds



To develop the project agenda, I first spoke with Parks and Finger Lakes Land Trust staff to understand the current conservation efforts in Tompkins County. After identifying the Middle and Upper Cayuga Inlet sub-watersheds as the locations with incoming streams to Buttermilk Falls State Park, I developed a 500ft buffer zone in GIS around the sub-watersheds' streams. Then, by analyzing the land use in the buffer zone, I determined the tax parcels which might have the most potential as areas for conservation partners to collaborate with landowners. The chosen tax parcels had a high percentage of agricultural land where best management practices such as no-tillage, reduced pesticide use, and managed grazing could be implemented to ensure the water quality downstream and local biodiversity.

After completing the analysis, I presented my work to the Tompkins County HABS Council. This was a great opportunity to hear feedback and speak with individuals who are focused on water quality projects. Overall, I found the internship experience to be an enriching professional experience, with many chances to network within the area. Through conversations with those working with organizations in the Finger Lakes Region, I gained a deeper understanding of the extent and background on the work that is being done to conserve land and protect environmentally sensitive

areas. The skill sets that I learned through this experience, including GIS applications, research methodology, and professional collaboration, will be vital as I graduate and continue my career with an environmental focus.

Faculty Highlight: Paul Dewey

Paul Dewey, Conservation of Natural Resources Instructor, Niagara Career and Tech Center



Conservation of Natural Resources Instructor, Paul Dewey.
Photo: OPRHP

The Natural Resource Program at our facility in Sanborn, NY allows high school students from local districts the opportunity to experience multiple areas of study within the outdoor career arena. I have been working with Orleans/Niagara BOCES for 39 years on this program and enjoy it so much I haven't brought myself to "graduating" yet!

I enjoy instructing the Conservation/N.R. Program because the students get immediately submerged in real life experiences, which is what makes this program so dynamic and unique. A few weeks into their time with us, we are conducting timber cruises and identifying tree species and value of local woodlots; skills some individuals otherwise wouldn't learn until college. They gain experience with everything from small-engine mechanics to niche-ecosystem identification.

We work in collaboration with a handful of local agencies, including the Niagara County Soil & Water Conservation District and the NYS Office of Parks, Recreation & Historic Preservation. We take field trips to local waterways with NCSWCD staff and assist NYS OPRHP staff with field work, both valuable experiences giving the students insight to what a future career could look like. We have teamed with the FORCES program on numerous projects- developing indigenous landscapes, pollinator gardens, turtle ramps, and nest boxes.

In the past few years, our relationship with NYS OPRHP was able to grow thanks to the FORCES program and Ms. Alexandra Tillman, FORCES Program Specialist. This past spring, an awesome opportunity arose for my students with the Jr. Conservation Steward positions. We had three students participate, and I am happy to say this led all of them to seasonal positions with the Horticulture Department at Niagara Falls State Park!



Orleans/Niagara BOCES Conservation class on a work-based-learning field trip at Fort Niagara State Park.
Photo: OPRHP



Orleans/Niagara BOCES Conservation class on a work-based-learning field trip at Beaver Island State Park. Photo: OPRHP

While so many students were distance learning; our student team was on site, on time and working. This is truly the class that conquered COVID. The FORCES program provides a "cambium" between in class labs and on-site applications. The remainder of our students have worked in collaboration with their classmates preparing

materials and projects to be used by our interns, and hopefully will be working with the parks soon. Thanks to NYS OPRHP and the FORCES Team for several years of environmental partnership, I look forward to this fall and the new projects that come with it.



Jr. Conservation Stewards Larry, Matt, and Logan holding annuals grown in the Niagara Falls Horticulture Crew "green room." Photo: OPRHP

Partner Highlight: Zac Ballard

Zac Ballard, Regional Trail Coordinator



Before and after photo of the Fishkill Creek bridge at Robert H. Treman State Park. This bridge was a collaboration between the Regional Trail Crew, the Cayuga Trails Club, FORCES, and The Student Conservation Association. Photo: OPRHP

Here in the Finger Lakes, one of the best ways to access the natural beauty of the area is by taking a hike on the many trails that can be found within the region's State Parks. Each year thousands of hikers set out to experience a variety of environments including mature forests, meadows, lake shores, and wetlands, along with the deep gorges and dramatic cascades and waterfalls the region is famous for. This large volume of foot traffic, combined with the erosive effects of weather and time, can cause significant damage to a trail corridor. Eventually, as trail erosion increases and hikers begin to meander off established trails, damage spreads to the ecosystems through which the trail passes. Trails can be viewed as an area of focused impact; by planning, building, and maintaining sustainable trail systems, the Finger Lakes Trail Crew creates a place where we can focus and manage human impact in order to preserve the surrounding area.

Significant human effort must be put towards keeping our hiking trails well maintained and in good working order. Educating the public on responsible trail use also plays a large factor in keeping our open spaces in good shape. Since

2017 the Finger Lakes Regional Trail Crew has collaborated with FORCES Stewards to achieve this goal. FORCES Stewards provide much needed support to the Finger Lakes Regional Trail Crew through on the ground support for trail construction projects, helping build staircases, retaining walls, boardwalks, bridges, and other trail infrastructure throughout the region. FORCES Stewards also serve in the critical role of on the ground educators, teaching park patrons about Leave No Trace ethics and responsible trail use. These types of in person interactions are a valuable way of encouraging park patrons to help protect the unique natural resources found in our state parks.



Regional Trail Crew and FORCES Trail Stewards setting up rigging equipment to move stone treads for a staircase at Taughannock Falls SP. Each tread weighs upwards of 300 pounds! Photo: OPRHP

Trail work is an intense but rewarding experience. Through physical effort, creative problem solving, and education, FORCES Stewards from SUNY ESF, Ithaca College, and Wells College have helped improve



FORCES Steward Spencer King assisting with the completion of a 200 foot boardwalk at Chimney Bluffs State Park. Photo: OPRHP

the trail experience for countless park patrons across half a dozen parks and several miles of trail. I am always invigorated by the energy and enthusiasm that new Stewards bring to the parks each year and I hope to carry on the relationship well into the future.

SUNY Geneseo

Jenny Batholomay, Club President



Last semester, Geneseo FORCES went on a recreational hike at Indian Fort Nature Preserve, helped remove grapevines

from pine trees at Genesee County Park and Forest, and planted trees at the Geneseo eGarden. We are planning on having elections for next semester soon, and are excited to have more events in the fall!



Le Moyne College

Haley Synan, Club President



Le Moyne FORCES did a campus cleanup and a bottle bricking event. Although we haven't been able to get out into the state parks, we are happy we've gotten to have an impact on our campus.



Hartwick College

Tarah Smith, Club President



Environmental issues and sustainability themed Trivia Night via Zoom was a popular option under the COVID-19 restrictions. We were able to host an Earth Day Event, where participants were able to discuss "what Earth Day meant for them" and expressed it through drawings. While

this event was planned for the outdoors with some lawn games, the weather did not cooperate. However, we were able to bring it inside to the atrium of the science building. We got better luck with the weather for hosting an outdoor senior sendoff event with pizza, cupcakes, and a bocce ball tournament. Several of our events were not able to happen, due to the travel restrictions caused by the pandemic, but next fall we plan to teach students about sustainable agriculture, more efficient recycling, and we cannot wait to get out in the NY State Parks!



SUNY ESF

Emily Link, Club President



The spring of 2021 for ESF FORCES was devoted to a bluebird box project. There were many limitations this spring semester due to Covid restrictions. In order to combat some of the challenges, a remote volunteer opportunity building bluebird houses was initiated. Twenty-seven kits were retrieved from Clark

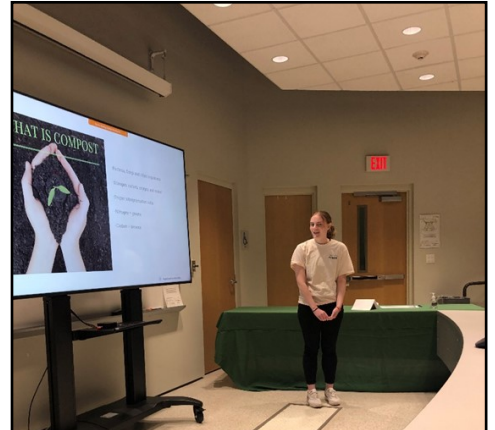
Reservation and then distributed to interested club members to be assembled. Once completed, the houses were picked up and donated back to the park system. The club hopes to implement a maintenance and monitoring plan for the boxes. The club is happy to announce we were able to select our officers for fall 2021. Good luck to President Madison Stevens, Vice-President Jessica Castellan, Secretary Michael Malone, Treasurer Maggie O'Brien and Social Media Chair Fiona Koye. The officers have spent the last couple months preparing for the fall and are hoping for a productive and fulfilling semester.



The Force Behind FORCES Picture Page



Hartwick College Earth Day Event participants discussed "what Earth Day meant for you" expressed it through drawings. Photo: Hartwick FORCES



Trail Mgmt. Steward Hannah Frasier, presenting her sustainability research at the Niagara Region's FORCES Spring Project Expo. Photo: OPRHP



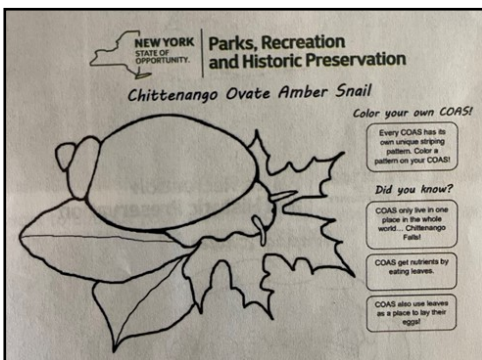
FORCES Program Manager and Environmental Educator, Josh Teeter, posing with Conservation Stewards and EFT Staff after successfully bat-proofing the Clara Barton Pavilion at Stony Brook State Park. Photo: OPRHP



The Excelsior Conservation Corps working with the Finger Lakes Trail Crew and FORCES Stewards to rebuild a timber staircase at Buttermilk Falls State Park. Photo: OPRHP



Trail Mgmt. Steward Hannah Frasier, Laura Kahle, and Eian Loomis posing for a photo opp. while completing trail work at DeVeaux Woods State Park. Photo: OPRHP



Worksheet created by COAS Steward, Emily Parsons. Several worksheets were designed for educational programs at Chittenango Falls State Park. Photo: OPRHP



Le Moyne FORCES club members with garbage and debris collected from a campus clean up. Photo: Le Moyne FORCES



AHTF Tech Stephanie Minarik and AHTF Stewards Elizabeth Padgett and Liz Rolon transplant hart's-tongue ferns at Three Falls Woods. Photo: OPRHP



Friends of Recreation, Conservation
and Environmental Stewardship

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FORCES Newsletter
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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.