



Parks, Recreation and Historic Preservation

FORCES

Friends of Recreation, Conservation, and Environmental Stewardship

Summer 2019 Newsletter

Vol. 4 Issue 2

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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.

Spring Rains Bring FORCES Gains

Tom Hughes, NRS Biologist

Central Region FORCES Program Manager

This year, as we do every year, we brought on several new people and projects to our FORCES program. While it is not easy to say goodbye to our FORCES staff and Stewards, it sure is fun and exciting to welcome our new team members (see *FORCES Staff Highlights* on page 7). For me, it is especially gratifying to see our former FORCES Stewards become Park employees—congrats Carlin and Allie! Also, I wish thanks and good luck to our former FORCES Program Specialists Lindsay, Jillian and Regina (see *Coordinator’s Corner* on page 3). We are so grateful for all your amazing contributions to FORCES.



SUNY Oneonta Lake Management Steward and Masters student Luis Suatoni displays a white sucker collected from a trap net at Green Lakes State Park. Photo: OPRHP



SCA NYS Parks AmeriCorps and Excelsior Conservation Corps members learn aquatic ecology during orientation at SUNY Sullivan. Photo: OPRHP

Throughout the pages of this issue, you will learn about so many new people, projects and partnerships, including important research on invasive species ecology with Dr. Andrea Davalos (SUNY Cortland) with contributions from SUNY ESF, Yale University, Wells College and the Invasive Species Research Institute (see *Partner Highlight* on page 11). We started our field season out strong back in March when several of our Stewards and Student Conservation Association (SCA) NYS Parks AmeriCorps gathered at SUNY Sullivan campus for a week of orientation and training (see photo left). That week also presented a tremendous opportunity to socialize with members of the NYS Excelsior Conservation Corps (ECC) ahead of a summer full of collaborative projects between FORCES, SCA and ECC (collectively the *Empire State Conservation Corps*).

Lastly, I enthusiastically report that we started a long-time wish list project of mine— lake assessment of the rare meromictic lakes at Green Lakes (GL) and Clark Reservation. For this, we have teamed up with former GL Lifeguard Luis Suatoni and SUNY Oneonta’s Lake Management program (see photo above and *Central Region Update* page 2). I wish sunny skies and happy summer to all!

Central Region Environmental Field Team Update

Mike Serviss, AHTF Project Coordinator, Zoe Hutchins, SCA/NYS Parks Corp Dune Steward, & Tom Hughes, Natural Resource Steward Biologist

The American hart's-tongue fern (AHTF) conservation project hit the ground running this spring with new and exciting projects starting to take shape! The SUNY Morrisville Invasive Species Management Lab visited Clark Reservation in March and cut hundreds of invasive honeysuckles. They also cut and treated dozens of common buckthorn at a management site near an AHTF population using an herbicide-free cut and cover method. Three stewards from SUNY ESF logged hours in April and May, continuing the honeysuckle work started by the SUNY Morrisville lab. Nearly 5,000 invasive plants were removed or cut in total at Clark Reservation this spring, including honeysuckle, common buckthorn, and garlic mustard. Preparations and supply purchases for the AHTF propagation and reintroduction project at Sonnenberg Gardens in Canandaigua, NY were started with the assistance of the OPRHP Plant Materials Program. An AHTF terrarium was created and placed on display at the newly renovated Nature Center at Clark Reservation. Lastly, our abstract highlighting the integrated invasive species management approach used to help conserve AHTF was accepted by the North American Invasive Species Management Association for presentation at their upcoming annual conference in Saratoga Springs, NY this fall!



Emily Baxter, Mike Serviss, Leo Wahl, and Dave Rutherford visit a buckthorn restoration site at Clark Reservation. Photo: OPRHP



Zoe Hutchins posting signage in the bird sanctuary. Photo: OPRHP

The piping plover team at Sandy Island Beach State Park has been hard at work preparing for the birds return. Over the past five months, we've gone into a dozen classrooms and libraries, educating people about this unique bird and the struggles it's working to overcome. Hopefully, some of these new connections will continue to grow and allow us to reach more people each year. We've created numerous brochures to hand out to people while we're on the beach, allowing them to further educate themselves about the history of this endangered species. This spring we've also started working with a new tool called *Nest Story*. It's a web-based app designed by a researcher, that helps us more accurately keep track of the piping plovers' behavior. All the piping plover staff went through a training earlier this year to make sure we can effectively use this exciting new technology.

Our efforts finally paid off in late April when our adults from last year returned! Though exciting, this also meant the most exciting part was just beginning! We quickly set to work putting up our protected bird nesting area. This provides a safe space for the plovers to forage, rest and mate, away from people and pets. In mid-May the plover pair laid four eggs! We put up a nest enclosure to protect them from predators. Now we will watch and wait. Hopefully this summer we will see some piping plover chicks playing in our state park!



Piping plover eggs in nest. Photo: OPRHP



Late ice water quality on Glacier Lake.

Photo: OPRHP

In March, we began collecting water quality data and assessing invertebrate, fish and plant communities in both our globally rare meromictic lakes—Green Lake at Green Lakes State Park and Glacier Lake at Clark Reservation. This Natural Resource Stewardship project is a collaboration between OPRHP and SUNY Oneonta's Lake Management program—

<https://suny.oneonta.edu/biology-department/majors-programs/lake-management-ms>

Coordinator's Corner

Amy Kochem, FORCES Program Coordinator

Our 5th Annual FORCES Leadership Summit was held on April 14th at SUNY Geneseo. We had the honor of hosting Dr. Jim Kernan, FORCES Club Advisor, Associate Professor of Geography & Sponsored Professor for the Letchworth Partnership, as our key note speaker. He spoke on the value of environmental stewardship and empowered us all to continue our efforts.

Things are a changin' regarding our staff. I regret to announce that Lindsay Dombroskie, Finger Lake Region FORCES Program Specialist, Jillian Harris, Niagara Region FORCES Program Specialist, and Regina Bulson, SCA FORCES Program Specialist for the Central Region, have left FORCES to pursue other career opportunities. Lindsay's and Jillian's knowledge, creative ideas, incredible insight, and collegiate connections helped build the FORCES program over that last few years. Regina's energy and enthusiasm for the FORCES program allowed her to accomplish many tasks in her 5 months with us. We will miss each of them and we are very grateful for the time they spent with FORCES! Good luck Lindsay, Jillian, and Regina!

On that note, we would like to welcome Carlin Wakefield and Alexandra 'Allie' Tillman as the new FORCES Program Specialists in the Finger Lakes and Niagara Regions, respectively. You can hear more from Carlin and Allie on page 7. We look forward to continuing our success with these ladies on board!

Save the date for the 5th Annual FORCES Membership Gathering on Sunday, September 29th, at Fillmore Glen State Park!

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5th Annual FORCES Leadership Summit, April 14th, at SUNY Geneseo.
Photo: OPRHP

FORCES 2019 Summit Awards

Leadership Award: Kali Oaks, SUNY Cobleskill

Service Award: Hajar Faal-Mohammad Ali, SUNY ESF

Distinguished Service Award: Juliana Isnardi, Ithaca College

Club of the Year : SUNY Geneseo FORCES

Affiliated Institutions

SUNY Alfred
SUNY Binghamton
SUNY Brockport
SUNY Buffalo
SUNY Cobleskill
SUNY Cortland
SUNY ESF*
SUNY Geneseo*
SUNY Morrisville
SUNY New Paltz
SUNY Oneonta*
SUNY Oswego
SUNY Purchase

Alfred University
Bucknell University
Cazenovia College
Clarkson University
Columbia College
Cornell University
Finger Lakes Community College
Hartwick College*
Hobart & William Smith Colleges
Houghton College
Hudson Valley Community College
Ithaca College
Le Moyne College*
Niagara Community College

Niagara University
Onondaga Community College
Pace University
Paul Smith's College
Rochester Institute of Technology
Sienna College
St. John Fisher College
Syracuse University
University of Buffalo
University of Rochester
Vassar College
Wells College*

***Denotes active FORCES clubs**

Finger Lakes Region Environmental Field Team Update

Chenga Drury, Three Gorges FORCES Program Specialist, Finger Lakes Region

FORCES
Friends of Recreation, Conservation
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Parks, Recreation
and Historic Preservation



Great Lakes
RESTORATION



Kyle Webster, EFT's Stewardship Project Coordinator, laying fire at the 3rd annual prescribed burn at Ganondagan. Photo: OPRHP

The Environmental Field Team (EFT) welcomed spring stewards Isabel Schulman from Ithaca College and Nesa Rampersad from Finger Lakes Community College. The EFT conducted the 3rd annual prescribed burn at Ganondagan State Historic Site, encompassing 42 acres of the Bluestem Unit, a native grassland.

As a Conservation Steward, Isabel worked within the realms of the Three Gorges Project. She assisted in data processing and prepping spring planting sites with Wells FORCES Club. She also assisted with manual removals of non-native honeysuckle at I Love My Park Day at Robert H. Treman State Park.

As an Environmental Steward, Nesa assisted with wildlife surveys, vernal pool surveys, and data processing out of the Environmental Field Office (EFO), under the supervision of Kira Broz, Stewardship Project Coordinator.

10 Excelsior Conservation Corps (ECC) members assisted the Plant Materials Program with seeding in the greenhouses at Sonnenberg Gardens for a week.

Oneonta and Wells FORCES Clubs assisted the Three Gorges Project by manually removing honeysuckle and buckthorn in spring planting areas at Buttermilk Falls and Taughannock Falls State Parks. SUNY ESF's FORCES Club live-staked dogwoods along Buttermilk Creek at Upper Buttermilk Falls State Park.

Please email the Environmental Field Team if you are interested in an internship or volunteer opportunities:
EnvironmentalFieldTeam@parks.ny.gov

SAVE the DATE:
FORCES Fall Gathering
September 29, 2019
Fillmore Glen 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.

Attention FORCES Alumni

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

Contact: Amy.Kochem@parks.ny.gov

Niagara Region Update

Jillian Harris, FORCES Program Specialist



I Love My Park Day at Wilson Tuscarora State Park. Budd Termin, professor from Niagara County Community College; FORCES Stewards, David Stillinger and Zach Glaspy; and FORCES Program Specialist, Jillian Harris. Photo Credit: OPRHP

Our other three stewards came to us from the State University of New York at Buffalo. Chris Freer, who was with us in the fall as an Invasive Species Management Steward, switched roles to be a Conservation Steward. His main project was to survey for vernal pools in our parks and to assess what types of species were living in them. Chris found possible Jefferson salamander eggs at Evangola State Park! Invasive Species Management Stewards, Chris Bolt and Torey Kouril, worked on surveying the 8 mile long West River Trail located on Grand Island, New York. They quickly learned how to identify species such as buckthorn, honeysuckle, and European black alder based on their winter characteristics.

As this next season arrives, we're experiencing some shifts in the regional FORCES staff. I have accepted a new position as the region's Stewardship Specialist. While I will still be involved in the operations of the FORCES program, it won't be to the extent that I have been. Our new FORCES Program Specialist, Alexandra "Allie" Tillman will be leading the pack from now on. Allie earned her bachelors in geology from SUNY Cortland back in 2016 and had been working in the horticulture department at Niagara Falls State Park for the past year. She joins us with a background in volunteer coordination, club establishment, and a positive can-do attitude. We're very excited to have Allie on board as our FORCES Program Specialist and look forward to all that she is going to accomplish! Welcome Allie!

The Niagara Region had six FORCES Stewards working on natural resource management projects this spring. Conservation Stewards Zach Glaspy, David Stillinger, and TJ Clark came to us from Niagara County Community College (NCCC). These guys worked on creating a tick protocol survey and setting up camera traps at Buckhorn Island State Park to assess deer and river otter populations. Zach had been with the FORCES Program for two years in various capacities, from volunteering to internship to paid. This past spring, he accepted a position with the Aquatic Invasive Species Strike Team as one of their members. We are very happy Zach has this opportunity and are going to miss him this coming summer season. Congratulations Zach!



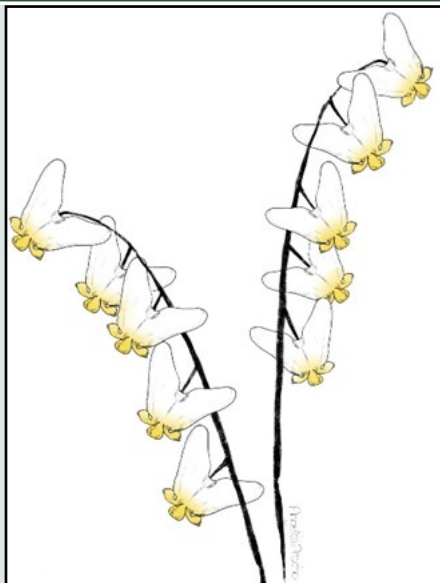
Conservation Stewards, David Stillinger and TJ Clark, setting up camera traps to at Buckhorn Island State Park. Photo credit: OPRHP

"My experience from this internship has made me really take a step back and appreciate nature and nature work. Now every time I go in to the woods I always look for vernal pools. I also gained the knowledge of professionalism from my supervisor. Jillian taught me what professionalism should look like and be like."

Chris Freer, University of Buffalo

Taconic Region Update

Rebecca Policello, Natural Resource Specialist, Taconic Region



A drawing of dutchman's breeches created for the Wildflower Hotspot Map by Angelica Arocho. Photo: OPRHP

This spring, we welcomed our Wildflower Steward, Angelica Arocho. Angelica focused on using historic records of wildflowers to create maps for the public to find spring ephemerals. These hotspot maps focused on some of the key species that Rockefeller State Park Preserve is trying to protect. This map also included a quick identification guide to some of the species that can be found and information on our iNaturalist project. This map was featured at our art gallery opening, "Where Have All the Flowers Gone?" By Corinne Lapin-Cohen and her collective. This art exhibit at the preserve highlighted the impact of urbanization on our natural systems and the increasing absence of our native biodiversity. The map created by Angelica highlighted many of the flower species that were featured in the exhibit.

Once the weather warmed up, Angelica did bi-weekly surveys for spring wildflower emergence and surveyed for new species to add to our flora atlas. The atlas is a collaborative document that is a running list of all plant species documented on the preserve, their status as a native or invasive, and the locations they are found in.

We also prepared for the growing season by cutting back Japanese angelica tree (*Aralia elata*) at waist height in areas that would be later grazed by goats so they could eat any regrowth from the main stems. This was thorny work but it's always so rewarding in the end because of the drastic change to the canopy. This will continue to be a focal project for future stewards and will later be a site for future tree plantings.

To finish off the semester, we worked on collecting data for an ongoing mini deer enclosure study. All herbaceous plants in the fenced plots and control plots were recorded with percent cover and any damages to the fences were repaired. Woody species will be surveyed in the same areas by the fall FORCES Steward.



Angelica looking for Spring Wildflowers in a control plot for our deer enclosure study. Photo: OPRHP

"I was able to gain an extensive amount of knowledge about different species habitats, as well as learn more about grant writing and working with GPS tools. This position has already benefited me for the future by leading me to a seasonal summer job with Parks educating visitors."

D'Arcy Cheyenne Carter, Ithaca College

"After completing my time here at Rockefeller, I have a better outlook on both academic and professional opportunities. I could apply what I had learned in class to the real world and I now have field experience I can apply to my future positions."

Angelica Arocho, Pace University

FORCES Staff Highlights: Carlin Wakefield and Allie Tillman

Carlin Wakefield, FORCES Program Specialist, Finger Lakes Region
Alexandra Tillman FORCES Program Specialist, Niagara Region



Carlin Wakefield

There's no place like FORCES! After a summer of hard work and outdoor fun leading the 2018 FORCES Stewardship Corps, I'm so happy to be back at Finger Lakes State Parks, this time around as a new FORCES Program Specialist. To say I'm thrilled to accept this position is an understatement. The FORCES team already feels like a family. There is a wonderful excitement and opportunity that comes with working for FORCES. So many areas to be involved, so many different projects to create, and many partnerships and friendships to be forged. As John O'Donohue wrote, "I would love to live like a river flows, carried by the surprise of its own unfolding." To me, FORCES is that beautiful flowing river, surprising us with the magic it creates daily, and opening up new opportunities for stewardship, exploration and learning.

How did I get here? I was born and raised in the suburbs outside of Buffalo, NY. As a kid my favorite time of year was our annual camping trip to Allegany State Park. It was one of the rare opportunities I could feel immersed in nature and truly at peace without any distractions from the noise of life. When choosing my career path, I remembered those moments of clarity and peace in the forest and decided to pursue a degree that I know would make me happy. I received my Bachelor of Science in Environmental Studies with a focus in communication from SUNY ESF. Post grad, I began working seasonal jobs relating to invasive species education and management. I spent a summer on the Hudson River working with SUNY ESF

Research Foundation and the NYS DEC. I decided to move to Ithaca, NY in 2017, to a little property near Buttermilk Falls State Park and began working for Parks the following summer. Nowadays, I get to feel that splendid sensation I had as a little girl experiencing nature through New York State Parks every day, and I feel so incredibly lucky for that.

Ever since I was a little girl, I always knew that I wanted to have a career in a field that led me outside more than at a desk. I grew up in nature, living in the farmlands of Niagara County in Appleton, NY, located right on the shore of Lake Ontario. Growing up I was extremely active in Girl Scouts and that gave me the opportunity to always be hands-on with the outdoors, learn how to be a leader, and work with others as a team. Once it was time to choose a career path, I knew I needed to be outside and caring for the environment; continuing to practice all the habits and skills that were instilled in me at a young age.

In 2016, I completed my Bachelor of Science at SUNY Cortland, majoring in Geology with a Concentration in Environmental Science. I was the President of my residence hall, an On-Campus Green Representative, Vice President of the Geology Club for 2 years and President for 2 more. I was on the Women's Rugby team throughout all 4 years also. During that time, I completed an internship with the Niagara County Soil and Water Conservation District and in April of 2018, I started my career with NYS Parks in the Horticulture Department Niagara Falls State Park. I became a Crew Leader and the Volunteer Group Coordinator for the Maintenance Department. In April of 2019, the opportunity to work as the FORCES Program Specialist came about and I was very excited to start this new chapter in my life. I enjoy the nature of the FORCES program and how it allows the Stewards (and myself!) to combine our education, love of the outdoors, and desire to care for the environment in the Parks.



Allie Tillman

Outside of work, I volunteer as a judge for the Niagara/ Orleans County Envirothon and the Western New York Science and Engineering Fair. I am also on the Advisory Committee for the Niagara Career and Technical Center Natural Resource Program. When I do have some spare time I am usually playing rugby, hiking, camping, or rolling around in the grass with my dog, Fae. I look forward to continuing my career with Parks and growing with the FORCES program in the Niagara Region.

Student Conservation Association, NYS Parks AmeriCorps Update

Regina Bulson, FORCES Program Specialist (SCA)

Throughout this busy spring season, I have worked on a variety of projects. During the month of April, I helped assist with some educational programming at Green Lakes State Park and Selkirk Shores State Park. One of my favorites was *Fish Stock* at Green Lakes. 300 children adopted and released a rainbow trout into Green Lake! Another fun program was a night hike held at Selkirk Shores. Although it was raining during the hike, our participants maintained an enthusiastic spirit as we explored the trails using our night vision and other senses.

I kicked off the month of May by participating in *I Love My Park Day* at Selkirk Shores. I taught the public how to build bluebird nesting boxes. These bluebird boxes are very important because they help to provide a safe nesting space for the bluebirds as their habitat can otherwise be threatened by more aggressive birds such as the house sparrow. I then traveled to different areas of the state, such as, Robert H. Treman State Park in the Finger Lakes Region. There, I participated in SCA's week-long Work Skills training. I learned a lot about how to effectively and safely build and maintain trails alongside fellow SCA conservation stewards. This month I also participated in several opportunities where I was able to share my love for NYS Parks and the environmental field. Some of these events were: a special presentation for a local senior community, co-teaching a Leave No Trace Trainer course, and serving as a judge at the NYS Envirothon at Hobart and William Smith Colleges in Geneva.

Although I am sad to announce that I will no longer be with FORCES, I can whole heartedly say that I have enjoyed every second working with all the staff and stewards during my time here. I cannot wait to hear and see all the great things that the FORCES summer stewards will accomplish this field season!

SUNY Cortland...the next FORCES Club?

I have been working with faculty at SUNY Cortland to establish a FORCES club on campus. Being an alumna of the SUNY Cortland's Recreation, Parks, and Leisure Studies (RPLS) Department, made this project was even more special to me. Often our FORCES clubs form rather organically, driven by student or campus faculty initiative and interest. However, since I had a few connections with the college and the RPLS Department, this project started a bit differently.

Attending SUNY Cortland as an undergraduate student allowed me to know how beneficial a FORCES presence on campus could be for the students. To explore this idea, I first reached out to some faculty of the RPLS department, including Dr. Sharron Todd (Department Chair) and Amy Direnzo (Associate Professor). I also reached out to the Assistant Director of SUNY Cortland's Outdoor Pursuits, Connor Cumisky. After some discussion through email, I then organized a meeting with Sharron, Amy, and Connor. At this meeting, Amy Kochem (our FORCES Program Coordinator) and I talked to the representatives from SUNY Cortland about what a FORCES club would look like on campus, and if they thought the college community would be even interested in having a club. From this meeting, we all concluded that there could be a strong partnership between SUNY Cortland and FORCES. We then discussed how to move forward with instituting a club on campus. While Connor committed to be the faculty advisor for the club, we still needed to find substantial student interest, figure out how to spread the word to as much students as possible, and more.

After a few weeks of progress and reaching out to some students and other faculty, I decided to organize a FORCES interest meeting on campus where Amy, Connor, and myself talked to a group of interested students about what FORCES is and what it is like to be a FORCES steward/club member. While we had several students express their interest in having a FORCES Club on campus, it was also nearing the end of the semester. Since it was rather a tough time to keep continuing the development of a club, progress has plateaued for the summer. However, as we near the fall semester, the next step is to create more FORCES interest events for students to participate in while also reimplementing the FORCES mission on campus. FORCES staff members are excited to see the development of FORCES continue at SUNY Cortland!

Steward Spotlight: Dan Klimkowski

Dan Klimkowski, American Hart's-Tongue Fern Conservation Steward, Clark Reservation State Park



I started working as a FORCES steward in the fall of 2018. I had just transferred to SUNY ESF and was eager to start working in my field of study. When I received an email from our career services office about stewardship positions with NYS Parks I immediately emailed Amy Kochem asking for an interview. It wasn't long before I started working as an Invasive Species Management Steward in Clark Reservation State Park, where I would continue working throughout the semester.

During the fall, I worked with park staff to manage infestations of pale swallow-wort and other invasive plants in an effort to protect threatened American hart's-tongue fern populations. Clark Reservation has an incredible amount of biodiversity and my position became more rewarding the longer I worked because I was able to see how my work was benefiting the wildlife in the park. Though most days consisted solely of digging up swallow-wort by hand, I learned a lot from park staff and of the complicated nature of managing invasive and native plants.

After the fall semester ended I was looking for a new position to fulfill my work-study allotment and Tom Hughes mentioned a project involving scientific research permit organization. Data entry wasn't the most glamorous job but it gave me invaluable insight into the research process and the dynamic nature of conducting research in state parks.

During both positions, I was also able to participate in a range of extra projects including rain garden maintenance, invasive species assessment in multiple parks, fish surveying, and assisting with Environmental Field Days at Green Lakes State Park.

As a student studying Environmental Science, these experiences have been invaluable to me and have given me the opportunity to contribute to NYS Parks in many different ways. I'm currently working as a research assistant to the Willow Project at ESF and I doubt that I would be in the position I'm in now without the experience and insight I gained working with FORCES.

"During my role as Club President, the other execs and I really celebrated as one unit and made a lot of the decisions together while including all the members of the club. I loved being able to see all the members of the club happy to get invasive species removed and it brought joy to my eyes seeing how beautiful Fillmore Glen looked after I Love My Park Day."

Shannon Simmons, Wells College

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Finger Lakes Region Update

Carlin Wakefield, FORCES Program Specialist, Finger Lakes Region

Springtime in the Finger Lakes is an exciting time for FORCES Stewards! FORCES Stewards worked on a variety of management, restoration, monitoring, and interpretation projects.

Chayenne Carter, Conservation Steward, conducted raptor surveys at Long Point and Allan H. Treman State Parks, preparing eastern bluebird nest boxes for the breeding season. She also prepped coverboards for eastern red-backed salamander and vernal pool surveys at Taughannock Falls State Park. She assisted in grant writing and researched pollinator garden snake habitat.



Garrett measuring the diameter of an ash tree.
Photo: OPRHP

Mark Hassett, Environmental Education Steward, deployed and reviewed wildlife camera trap surveys at Buttermilk Falls State Park. He also facilitated multiple First Saturday Educational Hikes (FSEH) and worked on interpretive projects such as the cell phone tour along Taughannock Falls State Park's Rim Trail. His final project consisted of completing ArcGIS mapping for various FORCES projects.

Garrett Boleslav, Forest Health Steward, surveyed for emerald ash borer (EAB) and hemlock wooly adelgid (HWA) in the Finger Lakes Region. Meaghan McElroy, Communications Steward, drafted educational signs to be reviewed by park staff at Keuka Lake, Fillmore Glen, Taughannock Falls, and Buttermilk Falls State Parks. She also assisted in a FSEH event along the Black Diamond Trail.

Isabel Schulman, Conservation Steward, assisted the Three Gorges Project with data entry and prepping sites for spring plantings. She conducted HWA surveys, salamander/vernal pool surveys, and co-lead the FSEH along the Black Diamond Trail. Isabel finished her internship by assisting with honeysuckle removals on *I Love My Park Day* at Robert H. Treman State Park.

Stewards also assisted FORCES staff during an annual Ithaca College class visit. Ithaca College students surveyed stands of hemlock in Buttermilk Falls State Park for HWA as well as surveyed along Buttermilk Creek for benthic macroinvertebrates (BMI). We are saddened by the departure of Lindsay Dombroskie, FL FORCES Program Specialist since 2017, but excited to introduce the new FORCES Program Specialist, Carlin Wakefield (please see the Staff Highlight, page 7, to learn more about her).



Ithaca College students surveying Buttermilk Creek.
Photo: OPRHP

"This internship definitely helped me acquire better communication skills with the public, as well as simply how to interact with the public to make them interested in environmental science. My expectations never quavered from what I experienced, and I honestly loved the program immensely."

Delany Kalsman, SUNY ESF

Partner Highlight: Andrea Dávalos

Andrea Dávalos, Biological Sciences Department, SUNY Cortland

FORCES Stewards invest vast amounts of time and effort removing invasive species in order to improve conditions for native organisms and provide recreation opportunities for park patrons. Monitoring and assessing how these efforts translate into benefits is an essential, yet sometimes difficult component to management programs. In 2016, the FORCES program, the New York Invasive Species Research Institute at Cornell University (NYISRI) and my plant conservation program at SUNY Cortland started a collaboration to better assess the impacts and management of invasive species within State Parks. Ultimately, our goal is to establish a strong link between management and research activities.



FORCES Stewards and SUNY Cortland students constructing deer fences at Buttermilk Falls State Park in summer 2018. Photo: Andrea Dávalos

We launched our first project in 2017 focused on assessing the efficacy of control of the invasive vine *Vincetoxicum rossicum* (pale swallow-wort), which is targeted for extensive control at three State Parks (Taughannock Falls, Buttermilk Falls, and Green Lakes). We evaluated the single and combined effects of (1) invasive plant removal, (2) non-native earthworms and (3) deer browse on understory plant diversity. We compared vegetation communities in areas where pale swallow-wort is removed to communities in untreated areas. In addition, we looked at the impact of deer browse between plots where deer have access and fenced plots where deer are excluded. Preliminary results indicate that vegetation is similar between treated and untreated sites, but highly dependent on earthworm abundance.

Over the course of this project, FORCES stewards and SUNY Cortland students participated in constructing deer fences, earthworm sampling, understory vegetation sampling, propagation of native species, and monitoring pale swallow-wort research plots. Interactions between research students and stewards have been valuable, helping them develop collaborative skills and expand their perspectives on careers in conservation.

The success of this first project has led to two new projects that we are initiating this summer. The first project involves documenting spread and population growth of jumping worms at Taughannock State Park. Jumping worms were introduced from Asia and have rapidly spread in NYS, generating concerns in land managers and gardeners. Together with our partners (Laura Eierman, SUNY Cortland and Annise Dobson, Yale University), we will construct detailed maps of worm distribution within the park and use genetic analysis to understand differences and similarities between populations. This effort will help Parks staff ensure that their management and restoration efforts are not moving jumping worms to regions that are currently uninvaded. FORCES stewards will participate in earthworm collection and identification.

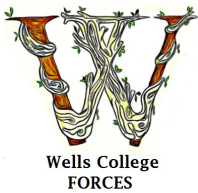
Our third project involves a recently approved biocontrol agent the (leaf-feeding moth, *Hyponomeuta opulenta*) to expand on swallow-wort current management methods. In partnership with FORCES, Carrie Brown-Lima (NYISRI), Dylan Parry (SUNY-ESF) and Jaclyn Schnurr (Wells College), we are initiating a program to release and monitor a biocontrol agents for pale swallow-wort. We have selected and established monitoring sites at Green Lakes and Clark Reservation, expanding the toolkit we currently have to manage pale swallow-wort within Parks. We look forward to contributing to the ongoing management activities on parks and continue to learn from our partners.



Pale swallow-wort monitoring at Taughannock State Park in June 2019. Photo: Andrea Dávalos

Wells College

Shannon Simmons, Club President



Wells FORCES has helped out with invasive species removals at Buttermilk Falls State Park. We also hosted our own Wilderness Fair on campus. We went to Filmore Glen State Park to flag and then remove invasive species on *I Love My Park Day*. We planted black-eyed Susans in Long Point State Park's garden.



Hartwick College

Rebecca Nathan, Club President



Last semester we hosted several trivia nights, with topics such as general fun facts about NYS, Animals of NYS and Food in NYS. These events have been successful and we hope to continue trivia as a tradition on

campus! In addition to this, we were able to attend the *I Love My Park Day* at Gilbert Lake State Park and helped to rake around the visitor center near the beach. Next year we hope to do some more hikes and hopefully get involved in some more events that NYS Parks has.



Le Moyne College

Kylee Wilson, Club President



This spring, Le Moyne FORCES has been focusing on increasing our active member numbers as well as raising awareness for environmental consciousness on our campus. We've had our members find internships within Parks for the summer and we hope to see more take advantage of this opportunity in the future.

One of our favorite events this semester was celebrating Earth Day on Le Moyne's campus. We had succulents available for our students and faculty who look forward to it each year. We attended a Sustaining Earth Seminar given by Curt Meine about Aldo Leopold's "A Sand County Almanac" which was an amazing experience for our club members. Our club volunteered at a wildlife rehabilitation center and learned the day to day prep and care it takes to run a successful center.

We expanded our knowledge about birds and bears as well as what it takes to get them prepared to return into the wild. Finally, we held our elections for next year and I am incredibly proud of the new board members chosen. They are planning more ways to get involved with the parks next year and I can't wait to see them succeed.



"I can use the leadership skill that I have gained from this experience for grad school. This was a wonderful experience that I am very grateful for, it was incredibly rewarding and I know I left the club in good hands for the future."

Kylee Wilson, Le Moyne College

SUNY Geneseo

Miranda Neyerlin, Club President



Geneseo FORCES tackled a few cool (and new) challenges! We held a fundraiser with Finger Lakes Cookie

Company to raise money for the chapter. We raised the most we have ever raised! Of course we had a blast hosting the FORCES summit! Once April came around, we had a service packed second half of the



semester working with the Genesee County Parks and Forest, Genesee Valley Conservancy and of course, Letchworth State Park. We participated in Geneseo's Earth Week and had our

camping trip at the end of April! Once again we took some international students along and it was a great time for everyone, despite some rain! We won a Geneseo presidential club of the year award which came with a \$100 prize that we plan on using to buy more equipment and put into savings! Finally, we had elections for the new e-board for the upcoming school year and I am so excited to see what they have in store!

SUNY ESF

Chris Farewell, Club Vice President



We scheduled several events that have helped meet the club's overall mission, to engage NYS college students to simultaneously improve OPRHP resources and enrich student academic recreational, and career opportunities.

Several events were scheduled to allow students the opportunity to engage with the public. These volunteer stewardship projects in local New York State Parks included improvements to recreational facilities, historic sites, trail rehabilitation, protection, restoration of natural resources, environmental education and outreach. We assisted with Frosty Forest at Green Lakes State Park, a candlelight hike at Selkirk Shores State Park in early February, assembled shelves for the new education center at Green Lakes State Park, Science of Syrup, Heiberg Memorial Forest, assisted the Three Gorges Project by removing honeysuckle and buckthorn in spring planting areas at Buttermilk Falls and Taughannock Falls State Parks, spring clean-up at Chittenango Falls, attended the FORCES Summit at SUNY Geneseo, and participated in a honeysuckle removal service project at Clark Reservation.



Now that another year has passed we'd like to take a moment to welcome the incoming leadership to the club Michael Dolan and Emily Link, as Co-Presidents they will oversee all club officer duties and foster new relationships with both the club members and parks representatives. We wish them well in the coming 2019-2020 academic year.

SUNY Oneonta

Miguel Castillo, Club President



We had fun working in Green Lakes State Park where we did some GPS trail mapping, and at Taughannock Falls State Parks removing buckthorn. We did hands on work at Taughannock which was very rewarding and experienced Ithaca and all the cool things in town.

The Force Behind FORCES Picture Page



ESF FORCES at Buttermilk Falls State Park. Photo: ESF FORCES



Northeast Forest and Fire Management, LLC., laying fire at Ganondagan State Historic Site's prescribed burn. Photo: OPRHP



Le Moyne FORCES at their Earth Day Festival. Photo: Le Moyne FORCES



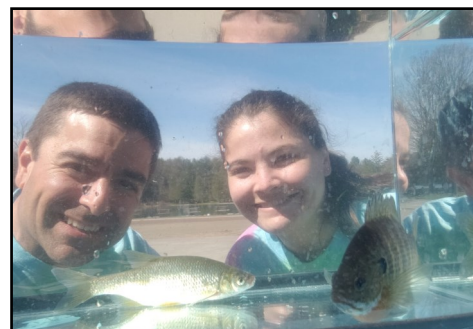
Geneseo FORCES preparing dinner on their camping trip at Letchworth State Park. Photo: Geneseo FORCES



Torey Kouril measuring the diameter of an ash tree at Buckhorn Island State Park. Photo: OPRHP



Lucky Knox and Iriel Edwards at 2019 Women in Nature. Photo: OPRHP



Tom Hughes & Zoe Hutchins at Fishstock 2019, Green Lakes. Photo: OPRHP



Geneseo FORCES, along with FORCES Club Advisor, Jim Kernan, posing with their Club of the Year Award at the FORCES Summit. Photo: OPRHP



Fishes of FORCES :) Photo: OPRHP



Oneonta FORCES at Taughannock Falls State Park. Photo: Oneonta FORCES



Friends of Recreation, Conservation
and Environmental Stewardship

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

FORCES Newsletter
Summer Edition 2019

FORCES Team

Tom Hughes

Natural Resource Stewardship Biologist
FORCES Program Manager, Central Region

Josh Teeter

Environmental Educator
FORCES Program Manager, Finger Lakes Region

Amy Kochem

FORCES Program Coordinator
Central and Finger Lakes Regions

Carlin Wakefield

FORCES Program Specialist, Finger Lakes Region

Chenga Drury

FORCES Program Specialist, Finger Lakes Region

Alexandra Tillman

FORCES Program Specialist, Niagara Region

Andy Damon

Conservation Crew Coordinator, Saratoga/Capital Region

Rebecca Policello

Natural Resource Specialist, Taconic Region

Meg Janis

Natural Resource Stewardship Biologist, Genesee/Niagara
Regions

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.