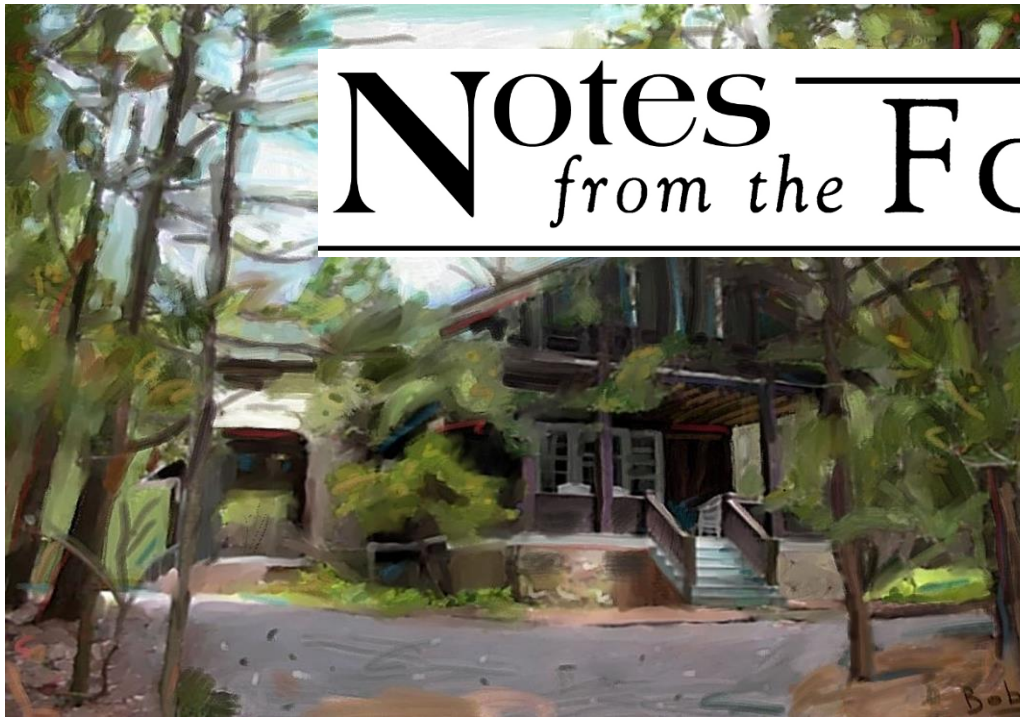


# Notes from the FOREST



Fall 2017  
Newsletter

LACAWAC SANCTUARY FIELD STATION & EE CENTER

## A Year in Review: Environmental Education

### Environmental Education Growing Strong at Lacawac!

The Environmental Education programming continues to grow and flourish. Over 1600 students from 13 different schools visited Lacawac this past spring and fall seasons for field trips designed for each age group. First grade students enjoyed learning about life cycles and observing seasonal changes along the trails. Many second graders spent hours discovering the amazing adaptations that plants and animals have in order to survive. Our very popular Watershed Connections program was enjoyed by hundreds of fourth grade students as they participated in a hands-on science lesson in the classroom, followed by a field trip to Lacawac where they got to see the effects of that lesson first hand. As a field station, Lacawac is fortunate to attract high school classes to participate in authentic research using scientific equipment to collect aquatic samples and record terrestrial data.

Our summer camps have also grown. In 2017 four day camps were offered for different age groups, each exploring and learning about the diverse natural environment at Lacawac. Through play and discovery,

children are exposed to the wonders of nature which fosters an appreciation for the natural world. Conservation Leadership Academy, a week-long resident camp for ages 13-16, is growing in popularity. See article for more information.

Looking forward into 2018 we anticipate improving and increasing our programs and numbers. We expect to add three more camps. We are planning a high school science camp and two additional day camps. That will bring us to 8 weeks of camp.

	2016	2017
<b>Field Trips to Lacawac</b>		
# Schools	8	13
# Students	945	1647
<b>Camps</b>		
# day camps	4	5
# campers	64	76



# Great Things are Happening!

Lacawac Sanctuary is fortunate to have many community partners that help to support the work of our environmental education and community programs. These dollars are critical to our success, but are designated specifically for the delivery of education programs. As a result, every year Lacawac reaches out to our friends to ask for support through our annual appeal. The dollars that are donated to Lacawac through the annual appeal represent the most important funds we receive all year...operating dollars.

For 51 years strong, we have been providing environmental education programs and quality science based learning for all ages. Your support will help us lead the way to shape the next generation of environmental stewards and scientists.

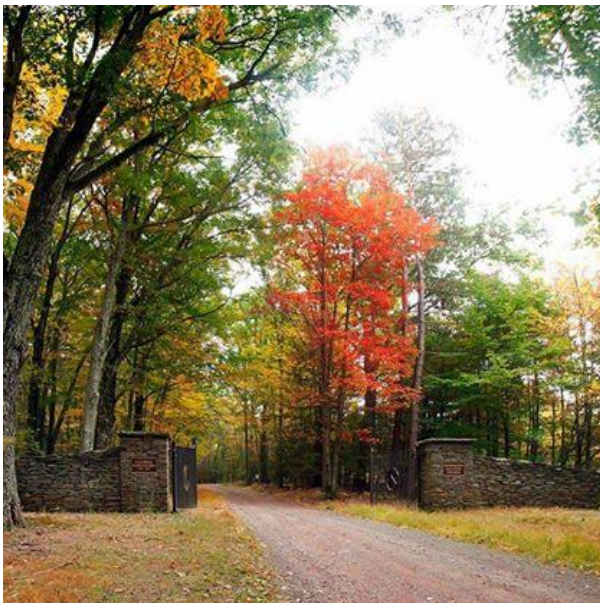
Great things are happening and every donation to our annual fund, no matter how small, will make an impact on our work in the community. This year our goal is to raise \$25,000 to help achieve our goals of conservation and environmental stewardship.

Your annual gifts of time, ideas and financial support turn small acts into great accomplishments. Thank you for making every day at Lacawac Sanctuary an opportunity to help us make an immediate impact on our education programs and conservation projects.

## Annual Fund 2017

Your support helps in many ways:

- \$25 underwrites the cost for a child in need to attend summer day camp
- \$50 provides support for a class of 25 to participate in a field trip at Lacawac
- \$100 supports four public education programs free to the public
- \$250 underwrites the cost for a high school student to attend Conservation Leadership Academy



## Nature Notes:

As nature prepares for the cold winter months ahead we benefit from the beautiful show of sights and sounds. Standing on the dock on a quiet blue sky day the reflection of reds, oranges, and yellows against the still water is magical. The migrating geese and ducks make small ripples across the water as the sun warms the stones on the dock. The smell of wet leaves and hemlock needles bring back distinct memories of autumns past. There are few more beautiful places than Lacawac to observe these seasonal changes. Enjoy a visit to Lacawac any day of the week during daylight hours to take in the wonders of nature for yourself.

# Public Programs & Events 2018

February - April

## February

### Winter Watercolor Workshop Saturday February 10th 2-4PM - \$15/\$10 Members

Winter has its own beauty to enjoy. Beat the winter blues by painting with them. No experience necessary, we'll go over some watercolor basics before painting an original winter scene. Registration required as space is limited.

### Winter Ecology Hike Saturday February 24th 10AM-12PM - Free

How do plants and animals survive the cold? Take a short hike and breathe in the crisp air while finding signs of life in winter. Registration appreciated, wear comfortable shoes and dress appropriately for the weather.

## March

### History of Ice Harvesting Saturday March 10th 10AM-12PM - \$5/ Free Members

Join us for a special presentation by the experts at Ice Works on the history of a once booming trade here in the Poconos. Interact with the tools that were used while observing the process through pictures from the past. Registration recommended, all ages welcome. Indoor/outdoor program please dress appropriately for the weather.

### Spring Babies Egg Hunt & Hike Saturday March 24th 10AM-12PM -Free

Enjoy a family friendly hike while we look for new life here at Lacawac. Use your observational skills to search for informative "eggs" along the way. Wear comfortable shoes, all ages welcome. Registration appreciated.

## April

### Yoga Workshop Saturday April 14th Beginner 1:00-2:30 Intermediate 2:30-4:00 \$15/\$10 Members Per Class

Reconnect with the world around you as you enjoy a unique yoga experience with Maggie from Roots Yoga. Two 90 minute classes available. Please bring your own mats and meet at the carriage house. Weather permitting class will be held outside. A limited number of mats will be made available, reservations recommended.

*For more information on these upcoming programs, contact us at [info@lacawac.org](mailto:info@lacawac.org) or call 570.689.9494.*

# Summer Intern Reflection

by Caleigh Wildenstein

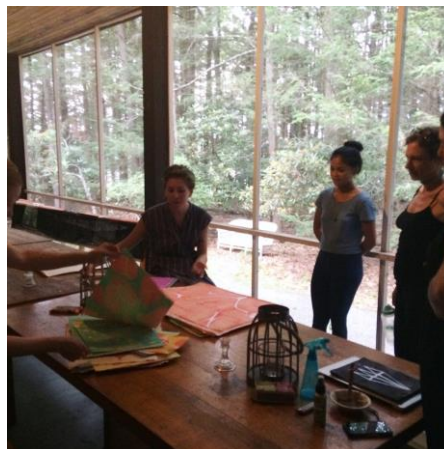
In summer 2017, I interned at Lacawac Sanctuary and Biological Field Station. During this time I had the privilege of working with PLEON, the Pocono Lakes Ecological Observatory Network. PLEON is a citizen science, water quality monitoring program led by Dr. Sarah Princiotta. Over the course of the summer, the PLEON team visited and tested over seven lakes in the Pocono region!. My role as an intern was to assess the water quality using samples of phytoplankton and zooplankton. We would also use advanced sensor technology to gain a better understanding of different lake parameters such as turbidity, chlorophyll, and light profiles. Our monitoring techniques not only assessed lake health, but also provided the necessary information for lake associations to make informed decisions about how to proceed with the management of their valuable resource. As this was the inaugural year of PLEON, I took part in collecting data that will become the baseline for future research, as well as provide an opportunity to study the effect of climate changes on the region. I am grateful that I had the opportunity to learn about limnology and participate in interesting research regarding lake ecosystems.



# Artists' Residencies at Lacawac

by Heidi Van Leuven, Residency Director

Artist Residency Sessions in 2017 have been a great success, bringing in 29 artists of various disciplines who all utilized the themes of nature, ecology, and/or preservation in their work. These sessions are not only rare opportunities for inspiration, collaboration, and networking, but they also add to Lacawac's revenue and visibility. From August 2016 to October 2017, these artists from all across the country and Canada have been talking about Lacawac on their websites, social media, with other artists, and via exhibitions of work they created during their stay. We have an expanded, scheduled next year's date and are excited to see what this wonderful place will inspire next! For more information, contact Heidi at [residency@lacawac.org](mailto:residency@lacawac.org)



# Conservation Leadership Academy 2017

## A Residential Summer Experience for Youth

On Sunday evening June 25th, sixteen quiet, unsure teenagers timidly walked into the lodge at Lacawac. On Friday, June 30th, sixteen excited friends enthusiastically shared their life changing experiences during their week at Conservation Leadership Academy (CLA) with their families during the closing program. The time in between those two days was packed full of new experiences for each camper. One camper concluded, "My week at camp was a lot of fun and I made some precious memories. I did birding, forestry, kayaking, canoeing, microscopic mitigation, campfire, agriculture and a lot of other things. This was the longest I've ever stayed away from home and it was some of the 5 best days of my life."

A few program highlights included water quality monitoring on Lake Lacawac and Lake Wallenpaupack, Bird Banding, Forestry and timbering practices; including measuring, felling, and putting a tree through a saw mill. (Camper quote: "Cutting down trees is more dangerous than I thought.") Our Agriculture day included visiting a sustainable vegetable farm and a dairy farm, and a local shop that sells value added products where they learned how to make herbal soap and salves. (Camper quote: "Farming isn't as easy as it seems.") We spent an entire day kayaking the upper Delaware River and learned about its aquatic resources. In between all the activities of this busy schedule they also participated in leadership activities including high and low ropes courses. (Camper quote: "I loved my week at camp, from making soap to rafting down the Delaware (River), it was an amazing experience. It was awesome.")

Through the generous support of many local agencies and businesses Wayne and Pike County students are able to attend CLA at a significantly discounted rate. (Camper quote: "Thank you so much for this awesome opportunity to explore nature.")

Thank you to the following conservation experts for volunteering their time: (camper quote: "I learned a lot about conservation in different fields and leadership skills that I think will be useful.")

- Nick Spinelli, Director of the Lake Wallenpaupack Watershed Management District
- Darryl and Jackie Speicher, Pocono Avian Research Center
- Sarah Hall, Northern Tier Hardwood Association
- Tim Latz and Garrett Beers, DCNR Bureau of Forestry
- Kelly Stewart, Forest Specialist, Wayne Conservation District
- Brian Fox, Salem Mountain Farm
- Gudrun Feigl, Mount Pleasant Herbarry
- Shane Gross, Gross Dairy

CLA is financially supported through various sponsors. The 2017 Sponsors included: Kate Svitek Memorial Foundation, Northern Tier Hardwood Association, Pike County Conservation District, Wayne Conservation District, Lake Region Long Beards Chapter NWTf, Wagner Millwork LLC, Northeast PA Audubon Society, Lake Wallenpaupack Watershed Management District, Pike-Wayne Trout Unlimited, Pennsylvania Junior Academy of Science Region 2

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*"This week was a great experience. I loved the variety of topics we covered and the amount of places we went. I became friends with many people, including some that I usually wouldn't have pictured myself talking to. I liked living together which created bonds that not many people have. It was a really fun time."*

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# Financial Report 2016

This annual report is published by Lacawac for its members, supporters and collaborating partners. If you have questions regarding the information provided in the report contact Lacawac's President at [craig.lukatch@lacawac.org](mailto:craig.lukatch@lacawac.org)

## Letter from our President

Dear Friends:

Everything we have in life comes from the natural world around us. Learning to protect this gift is the core focus of Lacawac Sanctuary- shaping the next generation of earth stewards and scientists.

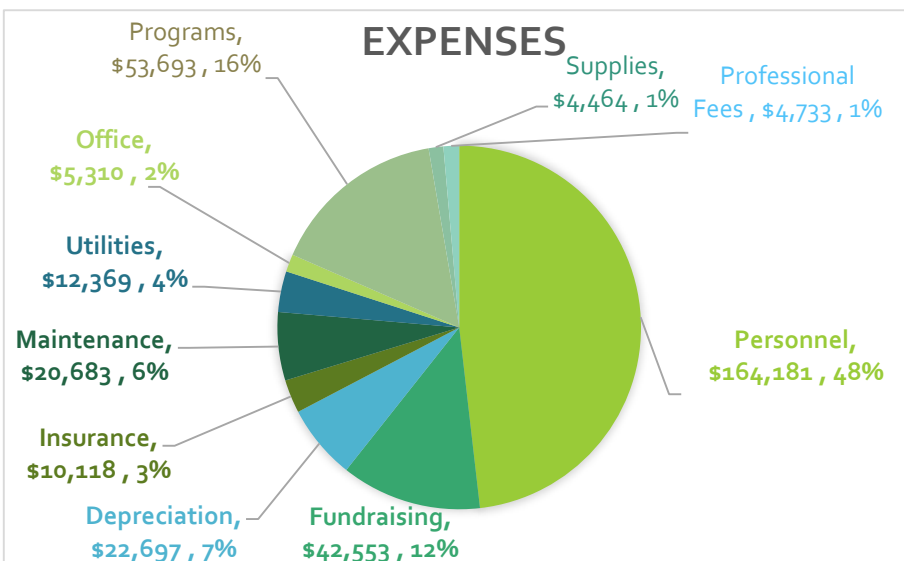
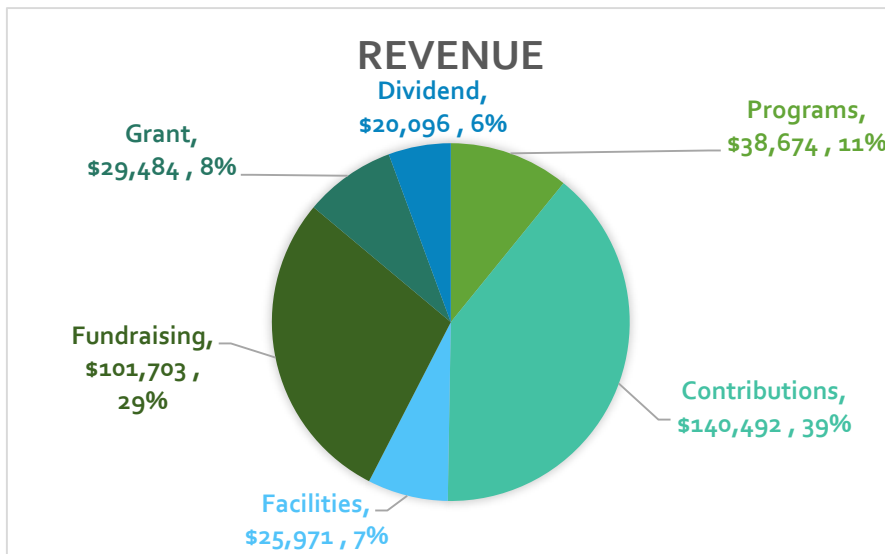
As a community based nonprofit, Lacawac relies on donations from friends to support our work and mission. Whether it is a membership donation, an annual appeal gift, support at one of our signature fundraising events, or a gift through a bequest, all funds support research, education and preservation. All funds stay local.

Looking forward, we are thrilled to report that Lacawac has a number of exciting projects in process and many great ideas in the wings including a new STEM environmental education center. We have recently renovated our Ice House Cottage and put a new septic system in for our Lodge and Great Camp Complex.

All of this comes at a cost and over the next few years, Lacawac will look to increase its financial base of support to keep pace with our growing work. Wayne County is a great place in which to live, work and vacation and if we work together we can preserve and educate all ages about the beauty of the natural world around us.

Thank you for your support!

Craig Lukatch, President



# Thank you to our friends

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# The Impact of Deer Browsing on Seedling Growth and Survival in a Northeastern Pennsylvania Forest

A Summary of a Research Paper by Elizabeth A. Maher

April 1997. Summarized by 2017 Intern Zack Smith

Situated in Wayne County, PA, Lacawac Sanctuary boasts a unique forest and a steady white-tailed deer population. With this taken into consideration, it is important to monitor mortality of undergrowth in the forest.

Beginning in 1996, Elizabeth Maher began a study comparing growth and mortality of red oak and red maple seedlings in and around two deer exclosures next to the current Ledges trail. In this study, she tagged over 1,000 red maple and over 200 red oak seedlings, most of which were less than three years of age, and monitored changes they went through. Maher studied trees inside the two exclosures, as well as trees outside them to allow for a control to be set to see how the



local deer population impacted the young tree population in the area.

What she found over the course of that summer was quite interesting. First, she established that

there was not a large correlation between the age of the trees and their height, leading to the conclusion that other factors influence how high a tree grows. She also found that red oak seedlings tended to grow higher in

their first few years compared to red maples. The study also monitored the mortality rates



of the seedlings, and Maher found that first-year red oak seedlings were more prone to dying than the larger red maple population.

Having a background on the tree heights and ages, Maher was then able to use that data to see which trees outside of the exclosures were more likely to be browsed by white-tailed deer in the forest. Maher found that the smaller trees were not as appealing to the deer. Leaving most of the browsing to be done on the larger seedlings, and according to Maher, the impact from the deer was evident. The initial data found that even in the short period of data collection that summer, the deer population was leaving a

large impact on the new growth in the forests of Lacawac.

The deer exclosures are still set up on the Ledges Trail and you can see how the undergrowth inside the fence is much thicker than the undergrowth of the forest where deer roam. The forests within the exclosures has been growing for over twenty years without any interference from deer. Therefore, the forest inside has a much greater biodiversity than the forest outside. This obvious difference helps researchers study the everlasting impact the deer have to this day. The exclosures are also of importance now because they help show the natural succession of Lacawac's forests. Succession outside of these two areas is impacted when new growth does not have the ability to mature, ultimately delaying the development of the forest at Lacawac.

This study on the impacts the white-tailed deer populations at Lacawac have is still very relevant today, and you can probably see why the next time you walk past any of the exclosures.



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