



The Swamp Scene

friends of great swamp national wildlife refuge

ISSUE SIXTY EIGHT
MARCH 2022

Highlights

Remembering Lou Picone	2
Friends Tree Tagging Project	3
Wilderness Character	4
What Friends Do—Thanks to All of You!	6-7
Screech Owl Numbers Decline	8-9

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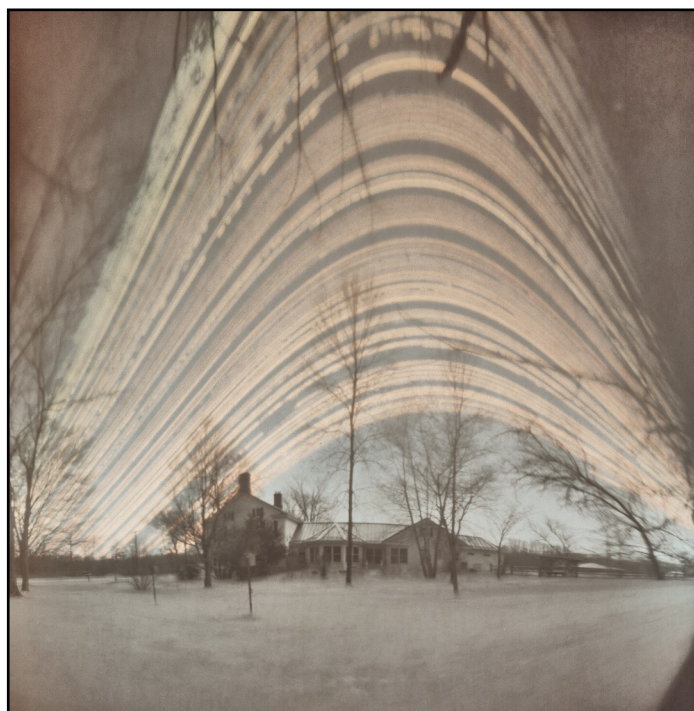
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GREAT SWAMP SOLARGRAPHS ... by Christian Fiedler

"We lose a great deal, I think, when we lose this sense and feeling for the sun. When all has been said, the adventure of the sun is the great natural drama by which we live." - Henry Beston, Outermost House

Last year I had the great pleasure of collaborating with the Great Swamp National Wildlife Refuge for my Morris County Solargraphs project. Conceived and executed with my childhood friend Doug Falcone, the project sought to photograph months of the sun's arc from its low arch in the winter to its high apex in the summer, with forest and foreground elements captured as well. By using pinhole cameras with extreme exposure times, we were able to document our climb from the dark days of 2020 to the brighter times of 2021, in both the literal and figurative sense.

Solargraphs themselves are deceptively simple—no batteries, no electronic components, not even a glass lens! But they produce vivid results that simply aren't possible any other way. Using laser-drilled pinholes, drinks cans and 3D printed shells, and old-fashioned darkroom paper, we placed them *in situ* starting in winter 2020-2021, returning to fetch and scan them after months of continuous exposure. The images we created at the Great Swamp are some of the crown jewels of the project. Working with the staff, we secured a Special Use Permit and placed them in various places on the property.



Helen C. Fenske Visitor Center and Gardens

This solargraph was placed on the large tree behind the visitor center, facing the building and gardens. Made from a tall drink can, it allowed us to use a very large piece of darkroom paper, creating a high-detail final product. The lines above the building are the sun's arc every day from January 18, 2021, to May 22 of the same year, with the lower lines created in the winter and the top of the arch exposed during the high sun in May.

Continued on page 10

THE SPORTSMEN'S BLIND REVISITED

A new look for a memorial plaque dedicated to Lou Picone, "Outstanding Sportsman and Conservationist"

Thousands of visitors to the Wildlife Observation Center use the Sportsmen's Blind to view wildlife. But few are aware that it is dedicated to sportsman Lou Picone. This is not surprising as the Picone plaque was mounted in a concrete base located below the blind and often covered with vines, leaves and dirt, despite volunteer efforts to keep it clear. This past year, volunteers and staff spent many hours removing the plaque from the concrete, without harming the plaque—not an easy job. The plaque has been refurbished (*yes, that is the same plaque!*) and will be mounted on the wall inside the blind for easy viewing.

The story of the Sportsmen's Blind appeared in the 1965 issue of *Swamp Talk*, an annual newsletter issued by now-retired Outdoor Recreation Planner Tom McFadden. It is reprinted below.



On September 23, 1995, National Hunting and Fishing Day, Great Swamp National Wildlife Refuge hosted the rededication of the Lou Picone Memorial Wildlife Observation Blind at the Wildlife Observation Center.

The original blind, a remodeled chicken coop dedicated 22 years ago in memory of the late Lou Picone, who was the president of the Morris County Farmer-Sportsmen's Federation, had deteriorated to the point it should be replaced. Outdoor Recreation Planner McFadden worked with the Morris County Farmer-Sportsmen's Federation who led a fundraising campaign. Approximately \$6,300 in donations were received and used for construction materials.

Refuge volunteer Russ Hamilton of Hamilton Remodeling in Meyersville volunteered to construct the blind with the assistance of refuge volunteers Tom Cutshaw and Herb

Hamilton. Russ has received many compliments for such a superb job. The quality and craftsmanship show the time and expertise that went into this blind. The new blind incorporates designs which provide greater leg room for visitors in wheelchairs, thus enhancing their views. "We are very proud of the new observation blind and thankful for all the generous donations that made it possible. We encourage everyone to visit the refuge and observe its many wonders," stated Refuge Manager William Koch. From: *Swamp Talk*, 1995.



FRIENDS OF GREAT SWAMP HUG (AND TAG!) THE TREES & SHRUBS

By Paul Lauber, Volunteer

Like all environmental organizations, Friends of Great Swamp NWR faced the daunting challenge of COVID-19; not only its impact on our visitors, but also the implications for our large and active group of Friends' volunteers. To meet the challenge, we increased our volunteers' outdoor experiences as well as our visitors' opportunities to explore our unique freshwater swamp.

One of our most visited spots at Great Swamp NWR is our Wildlife Observation Center, with an extensive boardwalk system through swamp, marsh, and mixed hardwood forest. Although many visitors come to the Refuge for the great birding (this *is* New Jersey, after all), many are also interested in learning more about the wide variety of trees and shrubs. To further this interest, a Tree and Shrub Guide was developed back in 2002, and many trees and shrubs were tagged to accompany that Guide. Over the years, however, tags had disappeared, trees had died or fallen, and a new trail to the Chandler S. Robbins Memorial Viewing Platform was added.

So ... we convened a small group of Friends' volunteers to scout out the trails for trees and shrubs typical of a northern New Jersey swamp. The challenge was the same as in 2002—to find and tag examples close enough to the trails so that the leaves, bark and overall species size can be studied and appreciated by our year-round visitors.

By the end of our project, we had tagged 60 trees and shrubs, covering 25 overall species. Importantly, all the examples can be easily studied by visitors without leaving the boardwalk trails. For aesthetic reasons, we affixed



Volunteer, and author, Paul Lauber attaches tree tag 2 to the White Oak

a numbered yellow tag to the tree or shrub. When visitors are greeted by our volunteers or access our display kiosk, they receive a one-page Guide that corresponds to the numbered trees and shrubs and includes quick facts about each species. We have received positive feedback from our visitors.

With a goal of tagging our best field examples, one final challenge presented itself. Our team found a massive White Oak (*Quercus alba*), which was quite a distance from the



Creating 3-D tree tags

boardwalk. We realized that we needed a much larger tag so that visitors could appreciate and learn more about this 200-year-old giant. Fortunately, Friends' volunteer Dave Katz generously used his skill and three-D printer to produce a larger tag in the exact color-coded specifications that were required! Our project was truly a team effort.

The renowned poet (and NJ native) Joyce Kilmer once wrote: "*I think that I shall never see, a poem lovely as a tree*". We Friends agree, and have already found that our tagging project has inspired visitors to a greater appreciation for the trees and shrubs indigenous to our refuge. Although the challenges of the pandemic can seem exhausting, the Friends believe that the opportunities to celebrate the Great Swamp's treasures with both visitors and volunteers are endless.



WILDERNESS CHARACTER AT GREAT SWAMP NWR & IN ELIZABETH NJ

By Anna Harris, Deputy Project Leader, Lenape National Wildlife Refuge Complex (Lenape NWRC)

Taking part in wildlife management on a refuge is for me the highlight of my professional career in the U.S. Fish and Wildlife Service. It is a line of work that comes with strong science to support management actions as well as defined policy, acts, and regulations that guide management decisions. One area of unfamiliarity to me that is key to the management of Great Swamp National Wildlife Refuge (NWR) is the Wilderness Act. New Jersey and Wilderness are not words I would have uttered in the same sentence prior to arriving at the Great Swamp NWR.

Over this past year, I've been eager to learn about the Wilderness Act and how its designation has guided management actions within the Refuge. Starting with the basics, President Lyndon Johnson signed the Wilderness Act of 1964 into law and Great Swamp NWR was the first designated Wilderness Area within the U.S. Department of Interior. It's always great to find out you're working somewhere that was progressive and ahead of the curve on conservation issues.



Refuge staff Jason Vassallo and Justin Battaglia in Great Swamp NWR Wilderness Area

The purpose of the Wilderness Act is to preserve the wilderness character of an area, not to establish any particular use. This is very different than most laws and regulations that guide refuge management actions, and what really piqued my interest in the topic was this term “wilderness character”. What is meant by wilderness character and how it is defined led me to take a short course on Wilderness Character offered free of charge through *proValens Learning*. I came away with a deeper understanding of the definitions and qualities of wilderness character. To start with, wilderness character is defined in terms of five qualities: natural solitude or primitive and unconfined recreation, undeveloped, untrammeled, and other features. These qualities are meant to help improve wilderness stewardship and foster consistency throughout the National Wilderness Preservation System.

So, the question remains, how does wilderness character apply to us, at the local level here in New Jersey? The answer, in my mind, is eloquently summed up in William Cronon's The

Trouble with Wilderness:

“Wilderness gets us into trouble only if we imagine that this experience of wonder and otherness is limited to the remote corners of the planet, or that it somehow depends on pristine landscapes we ourselves do not inhabit. Nothing could be more misleading. The tree in the garden is in reality no less other, no less worthy of our wonder and respect, than the tree in an ancient forest that

has never known an ax or a saw—even though the tree in the forest reflects a more intricate web of ecological relationships.”



Intern George Perez and Lucy Crespo from Groundwork Elizabeth in Phil Rizzuto Park, Elizabeth

Sharing this common world, finding a place for solitude, encouraging a sense of wonder in nature however you define it: this opportunity should belong to and be accessible to everyone. Yet, we know this experience is not equitable for people of all races, genders, abilities, and income levels. Within the Lenape NWRC, we are working to break down barriers and improve social justice issues by partnering with community leaders and organizations like Groundwork Elizabeth—working together to encourage stewardship of public lands and improve natural places near urban centers. We plant trees in Phil Rizzuto Park, along the Trotters Branch Nature Trail, and these trees are no less worthy of respect and awe than the trees one finds in the 3,660 acres of wilderness in Great Swamp NWR.

THE WOOD TURTLE POPULATION AT GREAT SWAMP NATIONAL WILDLIFE REFUGE

By Colin Osborn, Kurt Buhlmann, Jim Angley

The wood turtle population at Great Swamp National Wildlife Refuge continued its march towards recovery, with 2021 marking the 16th year of conservation actions. The project has always been a team effort and continues to be successful in large part due to the persistence, enthusiasm, and experience of those involved. Dr. Kurt Buhlmann (who has been making trips to the refuge since 2003), Colin Osborn (former refuge biologist and refuge lead on the project for its first 13 years), Jim Angley (who has been providing invaluable field assistance for the past 9 years), as well

as logistical and habitat management help from refuge staff, and financial support from the Friends, have all contributed to make this remarkable progress possible.

Head-starting is clearly increasing the numbers of young turtles on the trajectory to adulthood. More non-radio-tracked turtles (predominantly head-starts) were recaptured last year than in any prior year, confirming greater survivorship numbers than previously known. Thirty head-starts from the 2020 cohort were released in June, including two individuals, (shown at left) that were the offspring of 2011 head-start female F490. At 10 months of age, they were released back on-site in June 2021.

Though only a few females nested, and hatchling output was low, eight hatchlings were still produced for the



Seven of the eight hatchlings comprising the 2021 Head-start Cohort on the day they were dropped off at BCAHS in mid-September 2021. (Photo by Colin Osborn)

2021 head-start cohort. Presently, all are alive, well, and growing with our partners at Bristol County Agricultural High School (BCAHS) in Massachusetts. Their release back on-site will be forthcoming this spring, as will a full update on the project, summarizing the results of this 16 year-long effort, 10 of which have been years of head-starting, in the summer issue of Swamp Scene. Stay tuned!



Head-starts of a Head-start!
(Photo by Kurt Buhlmann)

DO YOUR PART FOR REFUGES AND FOR CONSERVATION—BUY A FEDERAL DUCK STAMP

It's not about hunting. It's actually about buying habitat for waterfowl—and for the songbirds and other wildlife that benefit. Stamp sales, which are used to buy land for refuges, have declined over the past 30 years, a loss of more than \$10 million annually.

Less habitat, fewer birds.

Through the required purchase of duck stamps, hunters have long funded one of the most successful conservation programs ever created. But those of us who visit refuges just to enjoy nature, hike, bird, or take photos are not

required to purchase a stamp. Yet we all enjoy the benefits of refuge lands.

It's really simple. If wetlands become housing developments, shopping malls, and agricultural fields, there are fewer birds or wildlife of any kind. We all must do our share to help sustain wetlands and wetland species for the future.


The 2022-23 Federal Duck Stamp will go on sale in late June and will be available at the Helen C. Fenske Visitor Center. Don't wait to do your part—buy your Federal Duck Stamp.



Winner James Hautman's painting of red-headed ducks will appear on the 2022-2023 Federal Duck Stamp.

WHAT FRIENDS DO—THANKS TO YOU—OUR MEMBERS & DONORS

Chandler S. Robbins 1918—2017



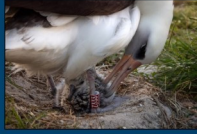
Chandler published over 650 books and scientific articles including his popular "Birds of North America, A Guide to Field Identification".

In the 1960s, he designed and implemented Breeding Bird Survey routes. Volunteers count breeding birds on thousands of these routes throughout North America. The data collected provides a wealth of knowledge about bird distribution, numbers, and population changes. The routes are still surveyed annually.

As a bird bander, he attached leg bands to over 190,000 birds, including the world's oldest known wild bird, a female Laysan Albatross named Wisdom.

As a conservationist, he was vocal about protecting land to preserve habitat for birds, in North America and in tropical countries.

Chandler worked for the U.S. Department of the Interior at the Patuxent Research Refuge in Laurel, Maryland for 60 years. His work took him to many National Wildlife Refuges within the system.



Dr. Chandler S. Robbins was a world-renowned ornithologist (a bird scientist). His love of birds spanned his lifetime, and he shared that love as an author, an educator, and as a long-time proponent of citizen science, by encouraging everyday people—like you—to become involved in studying and protecting our feathered friends.

Photo Credits: Chandler S. Robbins by Barbara Dowell, Research assistant and friend, 1980s. Wisdom by Jon Track / Midway Atoll National Wildlife Refuge, February 2021. Wisdom, at least 70 years old, with her latest chick.

New Signs at Chandler S. Robbins Memorial Viewing Platform: The Friends Construction Crew will be installing three new interpretive signs at the Robbins Viewing Platform this spring. If you wonder about the naming, you can read about the impressive career and legacy of Chandler S. Robbins. The photo of Chandler was taken by Barbara Dowell, a long-time research assistant and friend. The bird in the photo is Wisdom, a Laysan albatross from Midway Atoll National Wildlife Refuge. Chandler first banded Wisdom in 1956 and then again in 2006 making her the oldest know wild bird in the world. The Friends extend a very special thank you to the Robbins Family whose generous donations made this awesome ADA compliant viewing platform possible.

Winter Waterfowl

The water in front of you is an "impoundment", an artificially constructed water body. In the summer, refuge staff lower water levels to encourage plant growth. In the fall season, water levels are raised to encourage migrating and resident waterfowl to rest and feed.



All photos are used by permission of the Macaulay Library at the Cornell Lab of Ornithology. Download Cornell's free "Merlin" app—a great tool for identifying birds by sight and sound.

Winter Sightings



Photos are used by permission of the Macaulay Library at the Cornell Laboratory of Ornithology. Photos also from Friends of Great Swamp NWR annual Photo Contest (FOGS).

The new Robbins Platform has become a very popular destination for visitors to the refuge. The 8-foot high platform offers a expansive view of the wetlands and waterfowl. The entire trail is ADA complaint with an accessible lower platform for great wildlife viewing. To help visitors identify the many bird species, the new signs provide stunning, full-color photos of frequently seen birds and the occasionally viewed mammals seen in the winter months. Many of the bird photos are used with the generous permission of the Cornell Lab of Ornithology. Quite a few are also from the Friends Photo Contest—Thank you photographers!

The Friends Construction Crew will mount the signs in a way which will allow the winter sightings to be easily exchanged for signs featuring spring and summer sightings. One sign will feature the bald eagle, a common sight from the Robbins Platform. A second sign will showcase wildlife that may be sighted.

*Use what talents you possess;
the woods would be very silent
if no birds sang there except those that sang best.*

—Henry van Dyke



WHAT FRIENDS DO—THANKS TO YOU—OUR MEMBERS & DONORS



Wood duck box replacement project: There are about 190 wood duck boxes throughout the refuge, some of which have been in place for over 30 years. As you would imagine, many are in need of repair—or replacement. The Friends purchased Atlantic white cedar and the Construction Crew got busy building boxes to be installed before the 2022 nesting season begins.

White Oak Trail Improvement Project continues. The goal is to make the one-mile trail ADA compliant. Phase I was completed last year and what an improvement. It's been great for strollers, wheelchairs, and for those who don't want to get their feet wet and muddy.

One of the first steps for Phase II is to widen the existing bridges and then to build boardwalk. This is a challenge as you can see from the photo. The lumber has been delivered and volunteers are cutting the boards into the required lengths.

Note that there will be partial trail closures during construction, but well worth it.



Check out this bright red, brand new utility terrain vehicle—a Kawasaki mule—purchased by the Friends for use of volunteers and refuge staff. It will be used by the Construction Crew to transport stone dust, gravel, lumber and other materials to work sites, by the GardenKeepers to cart mulch to the various gardens, by the trail maintainers to carry wood chips and stone dust to the trails, and by the Strike Team as they work at remote sites on the refuge to control invasive plant species.

These, and many other projects at the refuge, are made possible by all of our members—*that's you!* Thank you for your incredibly generous support. Thanks too to our donors—corporate and individual, and to the Foundations which award grants to the Friends to continue our support for Great Swamp National Wildlife Refuge. We couldn't do it without you!

SCREECH OWLS AT GREAT SWAMP NATIONAL WILDLIFE REFUGE

By *Leo Hollein, Volunteer*

The Eastern Screech Owl is New Jersey's most common breeding owl. This small owl is only 7 to 10 inches tall and is a permanent year-round resident. It is more often heard than seen as it is a nocturnal predator. Until recently, the Great Swamp National Wildlife Refuge's Management Area had a robust screech owl population. The graph below shows the last 12 seasons where screech owls were found roosting in wood duck boxes during the winter inspection of the approximately 190 wood duck boxes in the Refuge Management Area. The data clearly indicate a decline in the screech owl population. Nesting screech owls have not been found in the duck boxes since 2014.

Beginning in the 2009–10 winter, owls found in the duck boxes were given a band, unless they were already banded, in which case, the band numbers were recorded. Since the 2010–2011 season, banded owls have been found every year except in the last two seasons. Over 100 owls and owlets have been banded to date. No owl bands have been reported to the Patuxent Bird Banding Laboratory as being recovered outside the Refuge.

Many banded owls have been found in the same duck box where they were originally banded. Almost 50% of the banded owls have been recaptured at least once in subsequent seasons. However, no banded owlets have been found in the refuge. Owlets are driven out of their natal area to find suitable habitat elsewhere.



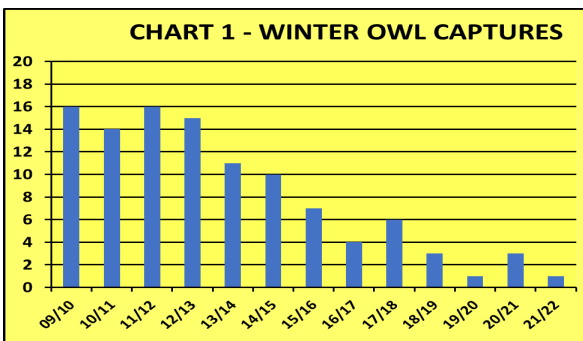
It would appear that refuge habitat is becoming less attractive for screech owls which prefer more open wooded areas adjacent to fields. Screech owls live and nest in city parks, farms and suburbs. They have roosted many winters and nested twice in a nest box in the small open wood lot at the back of my home.

There are a sufficient number of nest boxes and plenty of prey in the refuge to sustain a robust screech owl population. However, the vegetation in the refuge is maturing into a wooded wetland that is attractive habitat for the much larger barred owl, also known as the swamp owl. Barred owls are being seen more frequently than in past years and their owlets have also been photographed in the refuge. Barred owls do prey on the smaller screech owls. Both owl species are active at night.

The combination of less attractive habitat and the apparent increase in the barred owl population are the likely reasons for the decline in the screech owl population. On the other hand, it is encouraging that the barred owl is doing well in the refuge as it is on the New Jersey Threatened species list.

Eastern screech owls are unique among North American owl species in having two color morphs—red and gray. The photo above shows a pair of mixed color morph owls with their four white eggs. These colors are not determined by age, gender or season. The owls are either red or gray just as people have either blue eyes or brown eyes. However, just as some humans have hazel eyes, there is also an unusual intermediate colored owl called a brown screech owl that has traces of both red and grey.

The color morph distribution for the adult owls banded in the refuge is essentially a 50/50 mix of red and grey.



Winter screech owl captures 2009-10 to 2021-22

The ratio of red to gray phase screech owls banded is nearly constant from year to year. A pair of nesting red phase owls has red owlets. A pair of gray owls has gray owlets. A mixed color morph pair of owls as shown on the previous page has both red and gray owlets.

This even distribution of color morphs in the refuge is not representative of other areas. Van Camp and Henny (Ref. 1) found that 80% of the screech owls in Ohio were gray. A probable reason is that gray owls are less conspicuous and less likely to be predated in areas with long and snowy winters.

Eastern screech owls are active, nocturnal hunters. They have the most varied diet of any Northern American owl. Total or partial remains of rodents, birds, frogs, fish and crayfish have been found during the inspection of the wood duck boxes. Screech owls also consume

insects and worms. They have been found with uneaten prey in the boxes for future consumption by owlets or themselves.

Remains of four species of rodents have been found—flying squirrels, shrews, field mice and white footed mice.

Feathers or body parts of blue jays, robins, flickers, downy woodpeckers, indigo buntings, bluebirds and screech owls have been identified in the owl roost boxes.

Reference 1: VanCamp, L. F. and Henny, C. H. 1975. The Screech Owl: Its Life History and Population Ecology in Northern Ohio. U.S Fish and Wildlife Service. North American Fauna, Number 71.



Screech owl hatchling and remains of a crayfish

Pellets are common in the boxes used by owls. Owls regurgitate the undigested parts of the prey such as hair, bones, claws and teeth as pellets.

ANNOUNCING THE 2022 REFUGE PHOTO CONTEST

Sponsored by Friends of Great Swamp National Wildlife Refuge

Enter the 2022 Refuge Photo Contest and share your special moments captured at the Great Swamp National Wildlife Refuge!

All amateur photographers are invited to submit up to a total of five digital photos spanning the categories below. All photos must be taken within the Great Swamp National Wildlife Refuge boundaries.

Categories include:

- Raptors
- Birds Other than Raptors
- Pollinators, Other Insects and Spiders
- Any Other Wildlife
- Scenics & Natural Design
- Plants & Fungi
- Youth—any subject, age 16 or younger

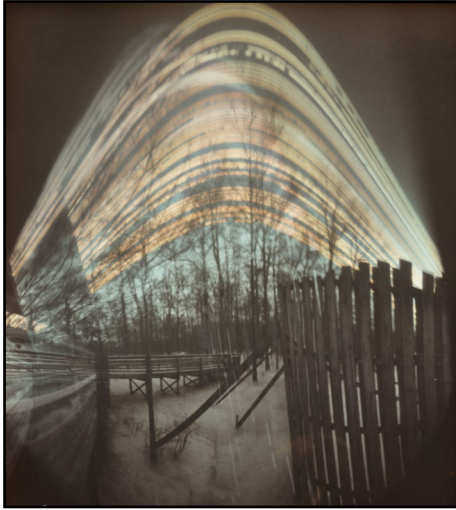
Putting the well-being of wildlife first must be every photographer's aim. The Friends strongly support the North American Nature Photography Association (NANPA) Principles of Ethical Field Practice. This means always putting the welfare of the subject before yourself or the photograph.

Deadline for submissions is July 4, 2022. Contest rules may be found under the Photo Contest menu on the Friends website. Winning entries will be announced at a special presentation event to be held in the fall of 2022. What are you waiting for? *Start Snapping!*



Photo by Susan Neufeld, 2021 Refuge Photo Contest

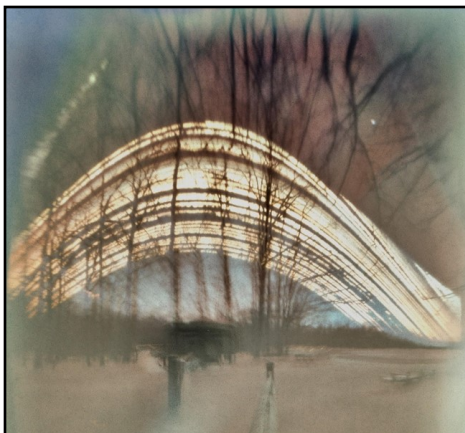
SOLARGRAPHS (continued from page 1)



Garden Club Blind (top left): One of our favorite images came from the Garden Club Blind where we discreetly placed a solargraph along the wooden walkway's railing for five months; the detail on the walkway and fence is striking and juxtaposes against the smooth arcs of the sun's transit.

Bockoven Trail (middle left): We placed this solargraph facing the large White Oak tree on the Passaic River on the Bockoven Trail. My favorite element of this image is the reflection of the sun's arc in the river, which can be seen in the bottom right of the image.

Wildlife Observation Center (bottom left): This solargraph was placed along the fence near the information kiosk at the Wildlife Observation Center; the kiosk is visible in the bottom center. Thousands of people walked through this image as the solargraph was patiently and silently exposing the sun and forest around them!



**Wilderness Area
Orange Trail (left)**

Far from any man-made buildings, this solargraph captured the beauty of the natural wetlands.

The blurry portion of the photograph on the bottom isn't a defect; it's the result of months of weeds and plant growth emerging from the forest floor in the spring, swaying in the wind and creating the blurred effect seen near the base of the trees.

The entire project is visible at <<https://primitivepines.com/morris-county-solargraphs/>>, and I can be reached at <christian@primitivepines.com> with any questions. *Many thanks to the staff and volunteers at the Great Swamp National Wildlife Refuge for giving us the opportunity to capture such a magical place!*

Note: Christian's solargraphs, along with photos of the equipment he used, are on display at the Helen C. Fenske Visitor Center. Stop by Friday to Sunday, 10:00 a.m. to 2:00 p.m. and see Great Swamp in a whole new light.

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE

MEMBERSHIP APPLICATION

The Friends of Great Swamp is an independent, non-profit organization organized in 1999. Our operations and activities are managed by an all-volunteer Board of Directors. As our mission statement indicates, our focus is Refuge-centric — we support the goals, projects, and mission of the Great Swamp National Wildlife Refuge.

To become a member of the Friends of Great Swamp, fill out the information on this form, and mail with your check to:
 Friends of Great Swamp National Wildlife Refuge
 32 Pleasant Plains Road, Basking Ridge, New Jersey 07920

ANNUAL MEMBERSHIP APPLICATION

- | | | |
|---|--|---|
| <input type="checkbox"/> EASTERN BLUEBIRD—\$15-\$49 | <input type="checkbox"/> PAINTED TURTLE—\$50-\$99 | <input type="checkbox"/> RIVER OTTER—\$100-\$249 |
| <input type="checkbox"/> MONARCH BUTTERFLY—\$250-\$499 | <input type="checkbox"/> WOOD DUCK—\$500 + | <input type="checkbox"/> New Member? |

TOTAL ENCLOSED \$ _____

You may also join online at www.friendsofgreatswamp.org

Name _____

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City _____

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(If this is a gift, please include your full name on the line above so we may notify the recipient)

We need more Friends ...
Become a Friend Today—or,
Give a gift membership to a friend.

Thank you



Memberships help support the projects and programs at Great Swamp National Wildlife Refuge.

Membership Benefits

- The Swamp Scene Newsletter.
- A 10% discount in Friends Nature Shop .
- Notifications of upcoming events.
- Satisfaction in knowing you are helping protect wildlife and wild places while safeguarding a national treasure for future generations.

Gift Memberships will include a coupon redeemable at the Friends Nature Shop for a free Great Swamp pin or Great Swamp patch.

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THE SWAMP SCENE MARCH 2022

Friends of Great Swamp National Wildlife Refuge
Is an independent, volunteer, non-profit organization
dedicated to

Promoting stewardship of the natural resources of the Refuge,

Inspiring an appreciation of nature through education and outreach,

Engaging in partnership activities that support and enhance the Great Swamp National
Wildlife Refuge and the National Wildlife Refuge System.