



the Swamp Scene

friends of great swamp national wildlife refuge

ISSUE FIFTY TWO
DECEMBER 2016

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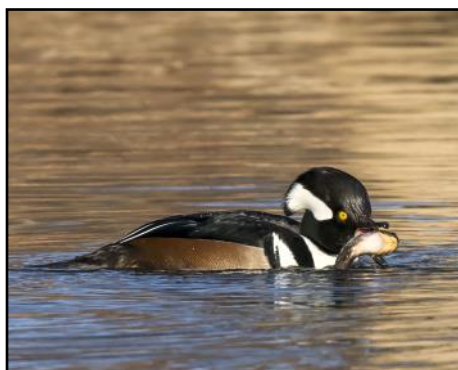
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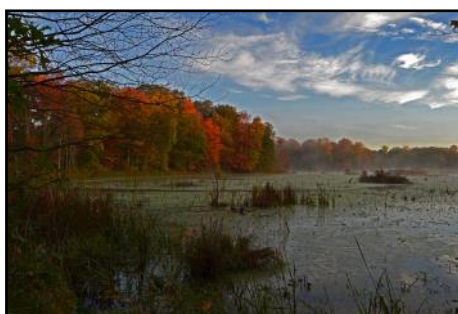
FRIENDS 2016 PHOTO CONTEST WINNERS ANNOUNCED AT FALL FESTIVAL



Breakfast 1st Place Birds—Jim Duffy



River Otter 1st Place Wildlife—Robert Lin



Misty Morning
1st Place Landscape—Richard Harris

2017 CONTEST HAS BEGUN!

Entry forms are available on the Friends website and at the Visitor Center. Deadline: June 30, 2017. Our library of Refuge photos now exceeds 1,200—truly a remarkable resource.

Thank you all!

It was standing room only on September 10 as photographers, family, friends and visitors gathered to hear the results of the 2016 Friends Photo Contest. Awards were presented by our judges Jim Gilbert, professional wildlife photographer, and Bill Koch, retired Refuge Manager. This year 112 entries were submitted by 23 photographers.

Winning photographs are posted on the Friends website and a slide show, created by volunteer Larry West, featuring all of the 2016 entries is shown on a continuous basis at the Visitor Center. Stop by and watch the show. Thank you to everyone who entered the contest.

2016 PHOTO CONTEST WINNERS

BIRDS: 1st Place: Jim Duffy; 2nd Place: Chuck Hantis; Honorable Mention—Stephanie Smith

WILDLIFE: 1st Place—Robert Lin; 2nd Place—Jim Duffy; 3rd Place—Dorota Jansiewicz

LANDSCAPE: 1st Place: Richard Harris; 2nd Place: Jim Duffy; Honorable Mention—Brian Fruehling

PLANTS: 1st Place—Maureen Duffy; 2nd Place—Robert Stapperfenne; Honorable Mention—Carol Duffy

POLLINATORS: 1st Place—Jim Duffy; 2nd Place—Mike Duffy; Honorable Mention—T.C. Chiang

YOUTH: 1st Place—Justine Wang; Honorable Mentions: Caitlin Moy, Samantha Moy, Johnny van Sadlers



What Do I Do With My Feet
1st Place Youth—Justine Wang

FRIENDS ANNUAL MEMBER MEETING HELD DECEMBER 3, 2016

The Annual Meeting of Members of Friends of Great Swamp NWR was held at the Helen C. Fenske Visitor Center on December 3, 2016 with 85 members in attendance. Following a scrumptious pot luck dinner, President Elaine Seckler welcomed attendees and called the meeting to order. Secretary Kathy Woodward read the minutes of the 2015 Annual Meeting which were approved. Laurel Gould, Treasurer, presented the Financial Report.

Retiring board members Rich Dufort, Elaine Seckler, and Larry West were thanked for their many contributions to the Friends during their tenures. Directors Jane Bell, Randi Emmer, and Jim Mulvey were re-elected and three new Directors were elected: George Solovay, Janet Stadelmeier, and Stephen Herdman. The meeting was adjourned at 7:00 pm. There was no program this year in order to give members time to travel to Morristown for the premiere of the documentary, *Saving the Great Swamp*.



Annual Meeting 2016
(Photo by Dave Katz)

WELCOME NEW FRIENDS BOARD MEMBERS



GEORGE SOLOVAY

Originally from Brooklyn, I have lived in New Jersey for 54 years. Initially, I trained as a graphic artist and worked in the advertising field for 18 years, the last 10 as a partner in an advertising design studio. I decided that I needed a change and looked into the medical profession for a new career. I had been a medic in the army, and served as an EMT in Florham Park's First Aid Squad. So my interest was already piqued. After graduating from Respiratory Therapy School, I worked for a few months as a therapist and then I was then hired as Clinical Instructor in Respiratory Therapy at Union County Technical Institute, my alma mater.

After teaching the clinical aspects of acute respiratory care in the ICU at Overlook Hospital for a year, I became the director of the Respiratory Therapy Department at Overlook. I retired in January, 1996, after 19 years.

I've always had an interest in the outdoors. I've been hiking for over 30 years, hiking the White Mountains in New Hampshire, the Adirondacks, the Catskills, and nearby state parks. As part of my hiking experience, I have maintained a 4 ½ mile trail in Harriman State Park for many years. Since my retirement I have volunteered at the Great Swamp Refuge and for Habitat for Humanity. I have utilized my creative skills in the design and construction of many projects in my home, Habitat, and for the Refuge, and look forward to working with the Friends to continue to make the Great Swamp Refuge a wonderful resource for all.

JANET STADELMEIER

As a child, I was fortunate to grow up with a deep appreciation of nature. My love of nature evolved into a love of birds and one of my favorite places to find birds is in Great Swamp. In my job as a speech therapist, I spend my weekdays indoors, so on the weekends I look forward to being outside as much as possible. I have found many surprises in the Refuge including beautiful birds, butterflies, and other wildlife that call it home. One of the best surprises at the Great Swamp has been the people who are part of the Friends of Great



Swamp NWR. I was introduced to the Friends by Pat Giaimo. Pat, who has since passed away, was a friendly, dedicated volunteer and a Friends Board member. I have watched this welcoming and enthusiastic group of people accomplish an incredible amount of work at the Refuge, which enriches the environment for the wildlife and allows visitors to enjoy the Great Swamp that much more. As a member of the Friends of Great Swamp, I have volunteered on walks, identified birds during The Big Sit and worked during the Fall Festival. I look forward to volunteering in a new capacity as I serve as a member of the Board and I look forward to a long and mutually gratifying relationship with the Friends of Great Swamp National Wildlife Refuge. *(continued on page 3)*

WELCOME NEW FRIENDS BOARD MEMBERS *(continued from page 2)*



STEPHEN HERDMAN

My first awareness of Great Swamp came when I was in my teens. I have always enjoyed nature and science. I was also fortunate to attend a school that had a truly inspiring biology

teacher willing to spend a lot of extra-curricular time with students. The teacher held birding activities after school and on weekends. He also proselytized about the importance of Great Swamp and involved many students in letter writing and other activities to save it. I can't thank him enough for introducing us to the wonders of the swamp or his enthusiasm. Later, I was fortunate enough to take his biology class. His course was good but also intense. I still remember one of our final exam topics, "Does ontogeny recapitulate phylogeny?" Forgive and forget?

During this time I went birding with a friend and his father and we often went to Great Swamp. I continued visiting the swamp as years went by. My son and I shared many rambles through the swamp. We participated in several Boy Scout projects at the swamp. Preparing for the long sought after day when I would have more time, I explored meaningful and enlightening organizations to become involved with while still em-

ployed and tentatively joined the Friends of Great Swamp National Wildlife Refuge. Years later, upon the first day of retirement, I immediately drove to the Helen C. Fenske Visitor Center to see what activities were available and how I could become involved. I began doing trail maintenance, invasive plant eradication, participated in the deer survey, and a host of other activities. I appreciate the camaraderie and expertise of the Friends as we work toward shared goals. I believe this is a good fit and I look forward to a long and mutually gratifying relationship with the Friends of Great Swamp National Wildlife Refuge.

I live in Randolph and am retired from a large telecommunications company. I have a Master's degree in geology. I am married to Julie McGovern, who pitches in when she can, and we have one son, Matthew who lives in New Hampshire.



Welcome new board members!

FRIENDS BOARD APPROVES FY2017 BUDGET

Each year the Friends Board and Refuge staff meet to share ideas for new projects for the coming fiscal year (October 1 to September 30). The Board then creates a budget, projecting income and operating expenses before selecting new projects to fund. Here are some of the projects that have been budgeted for 2017.

GARDENKEEPERS PROJECT

- Expansion of the butterfly garden for educational purposes

GROUNDWORK ELIZABETH

- Volunteer hours (Contribution valued at \$1,000)

HABITAT AND WILDLIFE PROJECTS

- Permitting for water control structure repairs to improve habitat for waterfowl (and waterfowl viewing for visitors)
- Head-start wood turtle research
- Summer interns
- Great Swamp Strike Team and Invasive plant control

VISITOR CENTER PROJECTS

- Purple martin nestcam
- Interpretive reader rails at Pavilion
- Renovation of Visitor Center front desk

WILDLIFE OBSERVATION CENTER PROJECTS

- Materials for ongoing boardwalk / observation blind repairs
- Interpretive signs on turtles, snakes, and frogs
- Reprinting of popular Junior Refuge Manager Activity Guide

INCOME SOURCES

The Friends receive income from sales in the Nature Shop. Donations are received from individuals, corporations, and from generous Foundation grants.

However, the largest source of income for the Friends is *you*—our members.

Thank you for your incredible support!



GREAT SWAMP NWR AND GROUNDWORK ELIZABETH—A NEW PARTNERSHIP

By Laurel Gould, Friends Board Member and Volunteer

Partnerships are nothing new to the U.S. Fish and Wildlife Service (FWS). In fact, “working with others” is part of their mission statement. But now, with 80% of Americans living in urban communities, there is a new focus on formal partnerships with America’s cities through the Urban Wildlife Conservation Program. According to FWS, “these partnerships are collaborative efforts to provide residents of demographically diverse cities with fresh opportunities to get outdoors and experience nature within the urban environment. The partnerships encourage and nurture an appreciation of wildlife conservation among new audiences.” In 2016, FWS announced four new Urban Wildlife Refuge Partnerships including one in Elizabeth, NJ where Great Swamp National Wildlife Refuge and Groundwork Elizabeth will partner on two river restoration projects in Elizabeth.



Refuge visit to Elizabeth, November 2016

Groundwork Elizabeth is an outgrowth of an international program which first began in England in 1980. In 1996, the program was introduced to the United States with the formation of Groundwork USA, a national organization that engages urban youth in developing community-based partnerships that promote environmental, economic, and social well-being in urban communities. Groundwork Elizabeth is one of the many local Groundwork trusts across the country.

One of the two river restoration projects is at the Travers Branch Nature Preserve. In November, Refuge staff and Friends toured the Preserve. The stream

bank is badly eroded, litter abounds and invasive plants have taken hold, but, as the only remaining stand of eastern deciduous forest in all of Elizabeth, it has so much potential to become an accessible, inviting park to be enjoyed by the City’s residents. Refuge staff will be providing expertise in streambank stabilization, invasive plant removal and suggestions for planting native species, as well as interpretive and educational training. The partnership also includes restoration and citizen education along the Elizabeth River as well as working with Groundwork Elizabeth Green Team youth to provide opportunities to expand their knowledge, experiences, and skills. The Friends have also pledged \$1,000 in volunteer hours to assist with volunteer management and wildlife programming.

Earlier this year, the Friends awarded a \$5,000 grant to Groundwork Elizabeth to bring one of their Green Team youth members to the Refuge. Since his arrival in July, Dionis Ramirez has become a familiar face to volunteers and Great Swamp visitors. He has helped with invasive species control, native plant restoration, group walks, and has spent his weekends greeting visitors at the Visitor Center and Wildlife Observation Center. Over the past few months, he has learned about Great Swamp and its habitat and wildlife and has become proficient at welcoming and orienting visitors to the Refuge. He has translated our popular Boardwalk Bingo into Spanish and helped improve our outreach to the Spanish-speaking community. Dionis is a junior attending Kean University and is majoring in Sustainability Science. He also is one of the Youth Leaders for Groundwork Elizabeth. It has been excit-



Travers Branch Nature Preserve

ing and rewarding having Dionis at the Refuge. He exemplifies the enthusiasm and passion of the Groundwork Elizabeth Green Team youth for the environment and for their stewardship role for the future.



Dionis Ramirez

This is just the beginning of a productive and mutually-beneficial partnership between Groundwork Elizabeth and Great Swamp NWR. The Friends are excited to be part of this exciting initiative.



HOUSE WREN NESTING BOOMS IN REFUGE

Story and Photos by Leo Hollein, Volunteer

House wrens are predominately brown, energetic, tiny birds that have the habit of cocking their barred tails. They have a loud bubbling song that is sung frequently during breeding season. House wrens are migratory and are only present in the Refuge during the warmer months. House wrens build their stick nests in natural or artificial cavities and are the third most common occupant of the bluebird nest boxes.

The number of house wrens nesting in the Refuge varies significantly over time—for no apparent reason. The chart below presents the history of house wren eggs laid and fledglings in the Refuge since 2001. House wrens attempted only one nesting in both 2010 and 2013. In 2016 house wrens made 23 nesting attempts. This was more than three times the average of 7.9 nestings for the last 10 years. House wrens laid 127 eggs and fledged 103 young in 2016. Both are Refuge records. House wrens will attempt multiple nestings in a season. Four pairs of house wrens fledged two clutches this season from the same pair of nest boxes.

The bluebird box trail adopted paired boxes (nest boxes on separate supports about 20 feet apart) in the previous decade. This was very successful in increasing the number of nesting bluebirds as it provided housing for both tree swallows and bluebirds in a given area. It eliminated competition between these spe-



cies for a single nest box. Bluebirds and tree swallows are territorial nesters, defending their territory against others of the same species. However, they tolerate each other nesting in the adjacent box.

WRENS AND BLUEBIRDS DO NOT USE BOX PAIRS AT SAME TIME

In the last two years, house wrens have nested in record numbers and have become more common nesters. Data is now available to assess how house wrens interact with tree swallows and bluebirds regarding use of the nest box pairs. In the last two seasons, house wrens and tree swallows have nested in the box pairs at the same time. On fifteen occasions tree swallows and house wrens have both successfully fledged clutches while simultaneously nesting in both paired boxes.

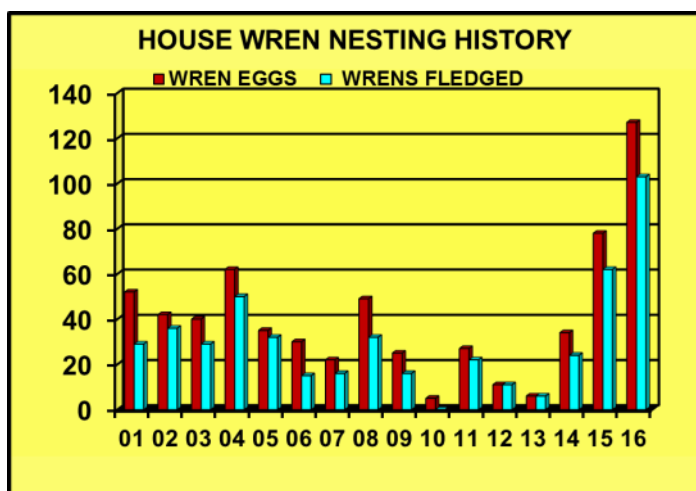
out of the entrance hole. The wrens subsequently nested and fledged young in two of these boxes. I did once observe a bluebird catch a wren in the act of destroying its eggs. It drove off the wren before the predation was complete. There were three eggs remaining in the clutch. The bluebirds did successfully fledge the remaining clutch.

On several occasions bluebirds fledged young and house wrens subsequently nested in the box. Apparently house wrens do not attack bluebird hatchlings.

Tree swallows capture prey while flying. Both house wrens and bluebirds hunt on the ground or in vegetation. They compete for the same food resources and want to limit competition for food in their territory. If the house wren nesting population remains at current levels or increases, it will reduce nest box pairs available for bluebirds.



House wren nest and eggs

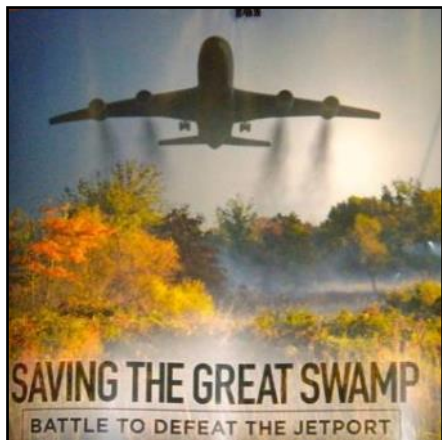


In the same period bluebirds and house wrens have never nested at the same time in a box pair. House wrens have the antisocial habit of destroying the eggs of other birds. At least four times this past season house wrens pecked open bluebird eggs and dropped the eggs

The established guideline for minimizing house wren nesting in bluebird boxes is to place the boxes in open fields a few hundred feet from shrubs or trees. However, in the past two seasons, house wrens have nested in boxes further from trees and brush. In 2016 wrens nested in 10 boxes that they have never used in past years. Refuge fields can become attractive to wrens due to brush growth especially when cutting is not done annually. Where it is practical, boxes used multiple times by wrens will be relocated to more open locations. Hopefully, this will reduce future wren nests and minimize wren predations of bluebird nests.

NEW DOCUMENTARY “SAVING THE GREAT SWAMP” PREMIERES DECEMBER 3, 2016

By Kathy Woodward, Friends Board Member and Volunteer



Those of us who volunteer at Great Swamp NWR know the story about the efforts that saved the area from being developed as a jetport in the 1960s. The Visitor Center is named after Helen C. Fenske, a citizen advocate, and our History Hallway gives an overview of the struggle to thwart the plans of misguided regional

planning. Most of us have read Cam Cavanaugh's book *Saving the Great Swamp* that chronicled those events.

The premiere of an hour long documentary, *Saving the Great Swamp*, on December 3, 2016 at the Mayo performing Center, Morristown, revisited this story, revealed new details about the people involved and put the creation of the Refuge and the Wilderness Area designation into historical perspective.

A work of incredible skill and passion, award-winning film maker, Scott Morris and co-producer, Larry West, intertwined interviews, including our former Refuge Manager and Deputy Manager, Bill Koch and Steve Henry, and beautiful scenery of the Refuge to explore the 10 year battle between Port Authority of New York and those opposed to the jetport. The home town crowd cheered the heroes and heroines and frowned at Port Authority chief Austin Tobin and NJ

Governor Robert Meyner, when he refused to sign a bill to prevent construction of the airport. The suspense built as the parties tried different strategies to win the battle. As one audience member noted, "Even though I knew what happened, I was worried that Port Authority would prevail."

Congressman Rodney Frelinghuysen introduced the film and highlighted how his father, then a Congressman, used his congressional and personal connections to support the transfer of land to the U.S. Fish and Wildlife Service. Dillard Kirby served as MC for the event.

The documentary is a celebration of the collaboration of people and organizations that worked to save habitat and create wilderness in New Jersey. The extensive credits at the end of the film, including Friends of Great Swamp NWR, highlight the continued support after 50 years for our gem of a Refuge.

FRIENDS 2016 COMMITTEE REPORTS—OPPORTUNITIES FOR NEW VOLUNTEERS

The Friends Board develops annual project plans and approves a budget, but the Friends Committees are where the real work is done and accomplishments are achieved. Here are some of the highlights for 2016. We are always looking for more volunteers. If you are interested, join us at the next Volunteer Orientation Program scheduled for January 28, 2017, 1:30–3:00 pm at the Helen C Fenske Visitor Center. Or complete the online Volunteer Interest Profile on the Friends website. Volunteers are how we get things done and, as we say all the time, we couldn't do it without you!

GARDENKEEPERS

Walter Willwerth, chair of the Garden-Keepers reports. This year we scheduled 10 workdays, an increase from 2015, which provided better coverage during the growing season and helped us keep up with the weeds. Our major achievement this year involved water. The Friends funded a water pipeline to the

pavilion. This allowed for easy watering of the shrubs on the pavilion perimeter as well as the Monarch garden. New flexible hoses allowed us to easily water all our gardens as well as keep our bird baths filled. We also restored a water line to the riding arena that now allows us to clean our tools easily. In 2017 we plan to expand our butterfly garden and include information for visitors to use for their own gardens. Volunteers are always welcome. No experience is necessary; we learn from each other as we go.

HABITAT AND WILDLIFE

Joe Balwierzczak and Steve Herdman, co-chairs of the Habitat and Wildlife Committee, report. Four volunteers monitored 140 nest boxes during the spring nesting season, recording 71 nestings of tree swallows and 56 nestings of blue-

birds. In July volunteers participated in the 4th of July Butterfly Count reporting 237 individual butterflies representing 22 species. In August, 22 volunteers assisted researchers from Frostburg State University (Maryland) with a survey of aquatic species that inhabit the Refuge streams. Among the fish observed during the survey was the mud sunfish, which is not found in many areas of the northeast. Because of its scarcity, researchers from Frostburg will likely conduct further studies of this species at Great Swamp. A major effort this year was building and installation of 11 new wood duck boxes to replace those lost due to the ravages of time and Hurricane Sandy. Volunteers banded 41 ducks during the summer in order to provide current data on the migratory paths of waterfowl visiting the Refuge.



Putting away (clean) tools for the season

FRIENDS COMMITTEES NEED YOUR HELP *(continued from page 6)*

Invasive Plant Species Control

There are two separate but coordinated initiatives to tackle invasive plant species on the Refuge. One group targets "pervasive" invasives while the other aims for eradication of emerging invasive species.



Invasive species volunteers take a break to release a Monarch—which is what it's all about!

Pervasive Invasive Work Days

Kathy Woodward, co-leader with Anne Hebenstreit, reports. We had 10 work days during the season from May to September with volunteers donating a total of 463 hours. Plants removed include multiflora rose, barberry, autumn olive, euonymus, phragmites, bittersweet and stilt grass. With a new trail maintenance plan this year, most work was focused along the trails. Three work days were along the newly created White Oak Trail, removing large areas of multiflora rose and autumn olive. Three days were used to continue work on the Bockoven Trail. The improvement in this area is dramatic, with regrowth of many native wildflowers and saplings and restoration plantings by corporate groups. Removing invasives along the Blue Trail was both satisfying and discouraging, because of the abundance of multiflora rose and barberry. This program continues to provide significant benefit for the Refuge in addition to habitat improvement. New volunteers join the group each year as no experience is required and there is a quick sense of accomplishment and benefit for the Refuge.

GREAT SWAMP STRIKE TEAM

John Berry, volunteer leader of the Strike Team reports. The Strike Team as an "institution" continues to advance. We have a dedicated set of volunteers whose ongoing training and experience

make them an important resource to keep emerging invasives from establishing a permanent foothold in the Great Swamp. With funds provided by the Friends, we were able to buy better quality sprayers this year which made it possible for Strike Team members to learn and use basal-bark herbicide application, crucial in the campaign against glossy buckthorn, our primary focus this year. In addition to glossy buckthorn, volunteers tackled mile-a-minute, Callery pear, chocolate vine, Japanese aralia and newly identified species Linden viburnum and Oriental photinia. Team members also assisted with the removal of water chestnut. Volunteers, interns, and staff members worked 12 days from April through October for a total of 426 hours. The Strike Team will continue work in 2017 and new volunteers are always welcome.

OUTREACH

Randi Emmer, chair of the Outreach Committee has been expanding Outreach programs and welcomes any interested volunteers. The committee began the year with the continuation of the Monarch Initiative which began in 2014. Monarch displays were set up in local libraries as well as a special library story time program for young children assisted by two therapy dogs, complete



with monarch wings. Monarch eggs were displayed in the Visitor Center so visitors could watch the stages

from caterpillar to butterfly. Volunteers got to release more than a dozen monarchs during the summer and fall.

A truly rewarding program began this year. We were able to partner with the Veterans Administration (VA) located in Basking Ridge. Our ongoing collaboration is a bi-monthly program at the VA center with a visit by veterans to the Refuge on alternating months. Volunteers talk about the Refuge and what they do. The veterans are in the 45-day PTSD program at the VA, so the volunteers meet a different group each time.

The Outreach Committee has also been busy presenting programs to school classes, senior centers, assisted living communities, scouts and other groups. Volunteers also staff tables at partner events. In 2017, the Committee will continue to bring programs and displays to the surrounding communities promoting the Refuge and Friends Group.

TRAIL BLAZERS: *Jim Mulvey and Jane Bell, co-chairs of the Trail Blazers Committee report.*

This is a new committee and in the course of our first year, we have enlisted and trained volunteers to maintain about 10 miles of trails. Volunteers walk these trails four to six times a year handling general trail maintenance. We introduced an online form for reporting maintenance work and to identify major issues to be handled by the Refuge. Backpacks, for carrying tools, were presented to committee members. The Trail Blazers are also "on call" after any major weather event to assure that the trails are safe for the many visitors.



Jane Bell models new backpack

VISITOR SERVICES

Laurel Gould and John Breault report.

The Visitor Center is open seven days a week, with volunteers covering the front desk 64% of the time and staff the remainder. In FY 2016, 12,791 visitors were welcomed. The Nature Shop provides shopping opportunities for visitors and income for the Friends; however it is only open when volunteers are on duty. The White Oak Trail officially opened in October 2015 significantly expanding the recreational opportunities at the Visitor Center. Volunteers hosted monthly Second Sunday programs and other events for the public. The **Wildlife Observation Center** continues to be the most popular Refuge destination. Volunteers welcome visitors and engage children in the Junior Refuge Manager Program during the spring and fall migration seasons. Volunteers lead scheduled group tours for school, scout and adult groups. It's a fun and easy place to volunteer.

BOTANIZING THE WHITE OAK TRAIL

Story by Laurel Gould, Volunteer; Photos by Lyn Snyder, Volunteer

Q What do you get when you team the Native Plant Society of New Jersey with the Friends of Great Swamp National Wildlife Refuge?

A A comprehensive list of plant species found on the new White Oak Trail.

On five occasions, from early spring through late fall, members of the Native Plant Society of New Jersey (NPSNJ) and the Friends of Great Swamp NWR (Friends) walked the mile-long White Oak Trail with a variety of field guides in hand—wildflowers, trees, shrubs, vines, grasses and sedges—to put names to as many plant species as possible.

NPSNJ Vice President and Northern Chapter Leader Eileen Ferrer led the group on the late afternoon forays with great enthusiasm and expertise, aided by fellow NPSNJ members and volunteers from the Friends. It was a learning experience for all.

APRIL 26: The plan got off to a rough start when thunderstorms were predicted for the evening of the first scheduled walk. Undeterred, the group reconvened on May 3. This is the season for woodlands and wood edges to shine. Blackhaw, chokecherry, and dogwoods were



Crabapple

in full bloom. Crabapple trees, a reminder that this was once a farm, were splendid in pink. Trout lily, spring beauty, Jack in the pulpit, and starflower brightened the woods while wild geranium and golden

ragwort brought lavender and yellow colors to the wood edges. On that first walk, 56 species of grasses, ferns, trees, shrubs, vines, and wildflowers were identified.

JUNE 7: By now the late spring flowers were in bloom including foxglove beardtongue, purple loosestrife, two-flowered Cynthia as well as several varieties of vetches and clovers which took some time to sort through. Everyone was reminded to look up a little more and thus added several new trees to the list.

JULY 26: Despite liberal applications of bug spray, the group was overcome by swarms of mosquitoes making it impossible to stop and determine the diagnostic features of mountain mints and early goldenrods. The mosquitoes won, but not before a number of new species were added to the growing list including steeplebush, fringed loosestrife, pale spike lobelia, and swamp rose.

AUGUST 30: Time to spend some time with the asters and goldenrods. Late



Steeplebush

summer is the season for the meadows to rule, and they did, from purple New York Ironweed, mauve Joe-Pye-weed, yellow goldenrod, white asters and pink steeplebush.

SEPTEMBER 13: The last walk. Asters were the challenge – was it calico, small white, or panicked. However, in contrast to spring, the dogwoods were now easy to identify thanks to different colored berries for gray, silky, and red-osier species.

After the last foray, Eileen Ferrer noted: “The NPSNJ gladly accepted this challenge to botanize the White Oak Trail with the Friends of Great Swamp. Examining plants in the field is truly the best



The group hard at work!

way to learn them. And visiting the same area multiple times over the course of a season gives one a much fuller appreciation of the depth and complexity of an environment. The Great Swamp is an amazingly diverse environment and we are privileged to live so close to it.”

The final tally consists of 141 species, 100 of them native. The breakdown:

- 78 wildflowers
- 4 ferns,
- 10 graminoids (grasses, sedges, rushes)
- 31 shrubs and vines
- 17 trees
- 1 mushroom (due to lack of expertise, not lack of mushrooms).

The entire list will be available on the Friends website. We may continue this adventure next year and add even more species to the list.



Aster



A NEW NATIONAL WILDLIFE REFUGE BRINGS THE TOTAL TO 566—AND THIS ONE'S PERSONAL

By Laurel Gould, Friends Board Member and Volunteer

In October 2016, the U.S. Fish and Wildlife Service (FWS) officially approved a new national wildlife refuge in the Northeast—named Great Thicket National Wildlife Refuge. But this one's a little different and it won't actually be officially established until the first parcel of land is acquired.

Great Thicket NWR exemplifies a new landscape approach to establishing a refuge. Instead of being a large contiguous area protected as a single refuge, Great Thicket actually has 10 separate units spread over New York and five New England states. The total acreage in these 10 focus areas adds up to 257, 639 acres; however FWS has authority to acquire a maximum of 15,000 acres total within these 10 units. This could take decades as FWS will work strictly with willing sellers and donors, and land acquisition will depend on available funding. And it's not just any land. Each parcel will be evaluated using criteria such as the number of threatened species protected, the quality of the shrubland habitat, and parcels that connect with, or are close to, thicket habitat managed by other conservation groups, to maximize the benefits.

SO WHY GREAT THICKET?

The answer is simple: the New England cottontail rabbit. This species depends on shrubland habitat, also called early successional habitat ... or thicket. The



New England cottontail rabbit (USFWS)

habitat is made up of dense, brushy vegetation that grows quickly after landscape disturbances. Over the past two centuries, the natural succession to mature forests and clearing of the land for development, have caused this shrubland habitat to decline significantly across the Northeast ... as well as the numbers of New England cottontail rabbits which depend on the thick, tangled understories for food and shelter from predators (unlike its introduced cousin, the eastern cottontail that can be found around our gardens and on our lawns). And, as is usually the case, this same habitat is also beneficial for many other shrubland species, including ruffed grouse, American woodcock, golden-winged and blue-winged warblers, bog and box turtles and the northern red-bellied cooter, Monarchs, and Hessels' hairstreak.

SO WHY IS IT PERSONAL? Each focus area will be managed by existing refuge managers with existing funds. The eastern New York/western Connecticut unit will be managed by Mike Horne, currently manager of Wallkill River NWR, Cherry Valley NWR, Shawangunk Meadows NWR – and our own Great Swamp NWR.

According to Mike Horne: "Great Thicket NWR is an innovative proposal that shows how good conservation partners with limited resources can work together to achieve meaningful land protection across the landscape."

Stay tuned for news of the initial acquisition of land which will establish the Great Thicket National Wildlife Refuge.



Monarch (Tom Koener/USFWS)



For more information:

<http://www.fws.gov/northeast/refuges/planning/lpp/greatthicketLPP.html>



*The mission of the U.S. Fish and Wildlife Service
is working with others
to conserve, protect, and enhance fish, wildlife, plants, and their habitats
for the continuing benefit of the American people.*

ANTLERS!

Story from U.S. Fish and Wildlife Service, Friends Newswire

Majestic moose. Elegant elk. Regal deer. What makes them so memorable? Antlers! National wildlife refuges are home to thousands of antlered animals. Here are some fascinating facts about antlers.

Fact #1: Adult male elk, caribou, moose, white-tailed deer and mule deer—all native to North America—have antlers. Most female caribou have antlers, too. They all belong to the Cervidae family of mammals.

Fact #2: North America has four subspecies of elk: Roosevelt, Rocky Mountain, Tule and Manitoban. Roosevelt elk, the largest subspecies, are found in the Northwest, including at: Willapa and Julia Butler Hansen Refuges in Washington and Nestucca Bay, William L. Finley and Bandon Marsh Refuges in Oregon. Tule elk live in California, including at San Luis and Bitter Creek Refuges. Caribou (also known as reindeer) are found at many of Alaska's 16 national wildlife refuges.

Fact #3: Antlers can grow up to an inch per day, among the fastest-growing animal tissue on the planet.

Fact #4: Antlers are made of bone. All antlered animals have a velvet phase, which helps antler growth by providing a blood supply to the growing bone. Before breeding season, the velvet dries up and the animal rubs the velvet off on vegetation.

Fact #5: Antlers serve various purposes. They facilitate competition among males for females. They are also used for defense against predators. They can also be used to assert dominance—usually for food and against others in the same species.

Fact #6: Size matters. Antler size is an indication of male health because antlers take a lot of resources to produce and carry. Only healthy males can produce the largest antlers. Elk antlers can grow to seven or eight points each, can have a length and spread of four feet and can weigh 20 pounds each.

Fact #7: During the annual rut (breeding season), males use antlers to display dominance. Females tend to mate with males that have the largest antlers. Sometimes a male will carry vegetation on his antlers. Biologists believe the male is trying to enhance his size. For elk, moose and caribou, the rut generally occurs in late summer/early fall. For deer, it's generally November/December.

Fact #8: After the rut, elk, moose, caribou and deer shed their antlers. The pedicles—the bony protrusions from which the antlers grow—often are injured. Once they are healed, a new set of antlers typically begin to grow.



White-Tailed Deer at Great Swamp NWR. (Photo by William Bell)

Fact #9: Although a new set of antlers grow each year, an animal doesn't necessarily grow antlers of similar form each year.

Fact #10: Antlers are not horns. The deer (Cervidae) family has antlers. Bison, antelopes, sheep, goats and domestic cattle—all in the bovine family—have horns. Antlers are composed of bone. Horns are composed of keratin (same material as hair and fingernails) on the outer portion and live bone on the inner core.



Bighorn sheep have horns, not antlers. This photo is from the National Bison Range in Montana.
(Photo: Dave Fitzpatrick/USFWS volunteer)



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
241 Pleasant Plains Road, Basking Ridge, New Jersey 07920

ANNUAL MEMBERSHIP APPLICATION

☐ **EASTERN BLUEBIRD—\$15-\$49**

☐ **PAINTED TURTLE—\$50-\$99**

☐ **RIVER OTTER—\$100-\$249**

☐ **MONARCH BUTTERFLY—\$250-\$499**

☐ **WOOD DUCK—\$500 +**

☐ **New Member?**

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You may also join online at www.friendsofgreatswamp.org

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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.



Juvenile Eastern Bluebird (Photo by Steve Byland)

Friends of Great Swamp NWR
241 Pleasant Plains Road
Basking Ridge NJ 07920



Friends of Great Swamp
National Wildlife Refuge

THE SWAMP SCENE DECEMBER 2016

NOTE: Back issues of Swamp Scene are now available on the Friends website thanks to long-time member Ken Bliss who scanned all of the issues for us. Thank you Ken!

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.