



# the Swamp Scene

friends of great swamp national wildlife refuge

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MARCH 2016

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## WOOD TURTLE HEAD-START PROJECT UPDATE

By Colin Osborn and Kurt Buhlmann

The completion of 2015 marks yet another successful year for the wood turtle head-start project. In late May 2015, we released all 28 from the 2014 Cohort bringing the total number of all head-starts released to date (2011-2014) into triple digits—102!

Our losses were very minor this year with confirmed deaths from only one 2011 Cohort individual, no 2012 Cohort individuals, one 2013 Cohort individual, and two 2014 Cohort individuals. Of these 4 losses, only one could be positively attributed to predation, as a raccoon snagged one of the 2014 Cohorts at its release site just a few days after it was let go.

At this point we still remain in radio contact with a substantial number of head-starts from each cohort. We currently have radio-transmitters on seven 2011 Cohort individuals (32% of the cohort total), eight 2012 Cohort individuals (33% of the cohort total), three 2013 Cohort individuals (11% of the cohort total), and five 2014 Cohort individuals (18% of the cohort total). Thus, in total, we know that at least 23 of the 102 (22.5%) head-starts released



Adult Wood Turtle

to date are alive. However, based on our frequent recaptures of non-radioed individu-

*Head-starting is  
clearly doing  
what we hoped  
it would...*

als, we are certain that the actual number of survivors out there is a lot higher. Head-starting is clearly doing what we hoped it would by increasing the survivorship of these juvenile turtles which should eventually boost the rate of recruitment (new adults enter-

ing the population) and ultimately increase the population size in the long run.

The 2015 nesting season (late May to early June) was impressive to say the least, as we protected eight wood turtle nests which yielded a record-breaking total of 68 hatchlings! Of these, 18 were directly released on site in early September and the remaining 50 were sent up to Bristol County Agricultural High School in Dighton, Massachusetts to be head-started as the 2015 Cohort. As of the writing of this article (early February), all 50 are alive and well.

*Continued on page 9*

## FRIENDS ANNUAL MEMBER MEETING HELD DECEMBER 5, 2015

The Annual Meeting of Members of Friends of Great Swamp National Wildlife Refuge was held at the Helen C. Fenske Visitor Center on Saturday, December 5, 2015 with 71 members in attendance.

Following a delicious and diverse pot luck dinner, President Elaine Seckler welcomed attendees and called the meeting to order. Secretary Kathy

Woodward read the minutes of the 2014 Annual Meeting which were approved. Treasurer Laurel Gould presented the Financial Report and highlighted major expenditures and sources of income for FY 2015.

The following Directors were re-elected for two year terms: John Berry, Susan Garretson Friedman, Laurel Gould, Larry West, Walter Willwerth, Kathy

Woodward. Two new Directors were elected: Joe Balwierczak was elected to a two-year term; Jane Bell was elected to a one-year term filling a prior vacancy.

Following the business meeting, Refuge Manager Mike Horne presented an update on the state of the Refuge and plans for the future, followed by a very lively Q&A session.



## INTRODUCING NEW BOARD MEMBER JOE BALWIERCZAK



I grew up in Staten Island, NY and after graduating from high school I earned a Bachelor of Science degree in chemistry from the University at Buffalo. While an undergraduate student, I became

interested in pharmacology, which is the study of how drugs work. I entered the graduate department of pharmacology at the university's School of Pharmacy and during the course of my studies I found that I enjoyed doing research. After finishing a fellowship at the University of Cincinnati, I began a research career at Ciba-Geigy Pharmaceuticals in Summit NJ. At Ciba-Geigy I was able to publish my research work and develop collaborations with other scientists. In the 90's the pharmaceutical industry changed and with that change Ciba-Geigy and Sandoz merged. I reluctantly had to leave my position, but I found an interesting job with several Ciba-Geigy expatriots at a small consulting company in Chatham, NJ. In my new position I began a career using my science knowledge and skills as a writer to prepare clinical study reports and FDA regulatory documents. These documents are necessary when a pharmaceutical company applies for marketing approval from the FDA. After a few years at this small company,

I moved to a similar position at Johnson & Johnson. After 10 years at Johnson & Johnson, I retired in 2010.

After retiring, I wanted to do volunteer work that involved the environment and where I could learn more about the natural world. I have always enjoyed nature and in my youth walked frequently through the parks and woods around my childhood home in Staten Island. I believe that this love of the outdoors was inherited from my dad, who spent so much time hunting and picking berries and mushrooms through the fields and forests near his parents' Pennsylvania home that he obtained the sobriquet of "Woodsman". He always spoke reverently about nature and how beautiful it was in "the hills of Pennsylvania". I became more active in financially supporting and volunteering for environmental organizations (e.g., Sierra Club, Great Swamp Watershed Association, Raptor Trust). I learned about the Friends group when John Wilmot gave a talk about the Friends to the Loantaka Chapter of the Sierra Club and decided that I would volunteer at the Great Swamp National Wildlife Refuge as it is near my home in Madison.

While at home, I enjoy music, books, and cooking. At the present time I am working with a contractor to do a renovation of my home. I am single and have a brother (Michael) and a sister (Caroline) who still lives in Staten Island. I also have a number of cousins who live in the area (NJ, NY, and Connecticut). Finally, a little known fact of my past is that I was the captain of the Ultimate Frisbee Team when I was an undergraduate student in college.

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*"Far and away the best prize  
that life has to offer  
is the chance to work hard  
at work worth doing."* ~Theodore Roosevelt

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## GREAT SWAMP NWR WELCOMES LIA MCLAUGHLIN

An interview with the new Deputy Refuge Manager at Great Swamp NWR, *by Laurel Gould*



*What motivated you to join the U.S. Fish and Wildlife Service?*

**M**y childhood was a fantastic formative experience. I grew up in California and Oregon and our family vacations included hiking, camping, backpacking, and spending time in nature. I remember that being outdoors was always part of having a good time. I have always been drawn to the mission of the U.S. Fish and Wildlife Service (FWS) to “conserve, protect, and enhance” wildlife and habitats for the American people. I think that’s because it aligns with these formative experiences from my childhood. When I was in college at the University of California, San Diego, I participated in a study abroad program in the rainforest of Australia. That was the first time I considered a career in natural resource management.

*I understand that you did your graduate work on the American eel. How did that happen?*

**I** actually just stumbled into the study of eels. My professor at the University of Maine had funding to do a graduate research project on eels, so I signed up. I was so fortunate to be able to design the study from scratch—a great learning experience. It also turned out to be very fortuitous as the more I learned, the more I discovered that eels are incredible and amazing. And yes, I would be

delighted to do a Second Sunday program for the Friends later this year.

*What has your career been like before coming to Great Swamp NWR?*

**I** would describe it as somewhat nomadic. I started out working for the State of Maine, then had an opportunity to work for FWS as a temporary biologist in Red Bluff, California doing fisheries work. I then spent a couple of years working for the Nez Perce Tribe in Idaho as a fisheries biologist. Knowing the history of Europeans and North Americans, it seemed like a way to give back. About nine years ago, we moved to Pennsylvania for my husband’s career (he is a History Professor). There I began working for FWS in State College where I was involved in the partnership effort to establish the new Cherry Valley National Wildlife Refuge working with Mike Horne and other FWS staff, Friends of Cherry Valley, The Nature Conservancy, and others. It was one of the best team experiences I’ve ever had. It was an amazing opportunity. Success meant the creation of a new national wildlife refuge. That’s where I first met Mike Horne—and we were successful! For the past six years, I have worked in the FWS Region 5 office in Hadley Massachusetts.

*What attracted you to the Deputy Refuge Manager position at Great Swamp NWR?*

**A**t the Regional Office, I was very involved in helping develop Comprehensive Conservation Plans (CCPs) for refuges including Great Swamp NWR. This experience helped me become familiar with the Refuge system, its policies and laws, as well as long-range plans for refuge management. But there was no opportunity to participate in the implementation of these plans. I was looking for a direct connection with a natural place and a job where I could contribute the most. When this position became available, it was a fantastic opportunity to get involved in hands-on projects on a refuge. Not only had I helped with the Great Swamp CCP, I had also worked closely with Mike Horne and his staff so I already felt connected.

*You started here on January 4, 2016. How is it going so far?*

**S**o far, I am thrilled and it’s just what I hoped and expected. There isn’t a day that goes by that I don’t experience a connection with nature. The other day, we were inside and spotted a weasel crossing the field, so we went out and checked the tracks. This morning Dave Miller called and asked if I could help him put boards in the water control structure (instead of sitting at my desk with a spreadsheet). I am dividing my time between Headquarters and the Visitor Center. Since our staff is located in both places, it allows me to spend time with all of them. When I’ve been at the Visitor Center, I’ve been able to get to know the volunteers. I’ve spent some time at the front desk, so I’ve had a chance to welcome visitors and show them around, although some of the repeat visitors have given me the tour! It has been quite an experience so far and I am so impressed by the warm welcome from Friends, staff, volunteers and visitors. It’s inspiring to be here.

*What will be your major focus this year?*

**T**his year we will be working on writing the Habitat Management Plan, as specified in the CCP. The Plan will contain the details of implementing habitat management for various areas including brushland, grassland, and forest. We will also be expanding our focus on urban outreach and building those connections with residents of nearby urban areas. My primary responsibilities will be here at Great Swamp NWR, but I am looking forward to working in the other units of the Complex, particularly getting back to Cherry Valley.

*It sounds like you’ll be busy! What do you do when you find time to relax?*

**I** read a lot and I love to spend time outdoors with my family—my husband and two daughters, ages 9 and 13. The kids love fishing and we go canoeing, camping, and enjoy travel. My sister and her family live in the Trenton area, so we are looking forward to spending much more time with them.





## WORKING TO SAVE THE MONARCHS CONTINUES IN 2016

By Randi Emmer, Friends Board Member and Volunteer

**S**aving the Monarchs and spreading the word on their plight was the main focus of the Friends of Great Swamp Monarch Team and Outreach Committee during 2015. Early last year, the U. S. Fish and Wildlife Service declared monarch butterflies a "species of concern" and that concern continues in 2016.

To end a rewarding year of educating the public on helping to save the monarchs, several members of the Outreach Committee participated in the Somerset County Environmental Education Center's Festival of Trees for



Monarch Tree at Festival of Trees

the month of December, 2015. The *Monarchs Winter In Mexico* themed tree had over 300 paper monarchs, hand decorated by several scout and senior groups, placed together in hibernation on the tree, just like they do when they reach Mexico in late fall until late February or early March of the following year. The ornaments had educational sayings encouraging people to

*Plant Milkweed, Garden Organically, Be Pesticide & Herbicide Free, Teach Others plus many more.*

Also in November and December, 2015, members of the Outreach Committee presented several programs to various groups of young people and adults on why our beautiful monarchs need our help and what can be done to accomplish it.

The July and November 2015 issues of *Swamp Scene* highlighted more of the Friends' endeavors. Those newsletters can be viewed on the Friends Website.

### *2016 has already taken flight ... and the Monarch Initiative continues.*

In February, the libraries in Bernards Township (Basking Ridge) and Long Hill Township were the first of the year to have monarch displays helping to educate the public on their plight and how to help them. The West Orange library will host the display in March and North Plainfield in May.



Monarch Display at Bernards Township Public Library

From April through the end of June, the bulletin board in the Helen C. Fenske Visitor Center will feature monarchs. This year the focus will be on home gardening—the specific things the general public can do to plant milkweed and nectar plants at home, work, school, libraries—even in a flower pot.

The Monarch Group had its first meeting of the year in February to gather new ideas, programs and activities. If you would like to join the group or just have an idea or two, please email Kathy Woodward at [<CandK@woodwards.us>](mailto:CandK@woodwards.us).

You can help save the monarchs by just telling a friend, your library, your child's school, senior groups, scout groups or just about any person or organization about the Friends of Great Swamp Outreach Committee. Outreach committee members will go almost anywhere to present programs on the monarchs, plus a wide range of other subjects related to Great Swamp National Wildlife Refuge. For more information about joining the Outreach Committee or discussing a program, contact Randi Emmer at [<rsemmer@optimum.net>](mailto:rsemmer@optimum.net).

Both Kathy and Randi may also be reached by calling the Helen C. Fenske Visitor Center at 973-425-9510. Just leave your name and number for them to return your call.

As you finish reading this article, just think—the monarchs have left Mexico and are heading our way. This is the time to take action: plant milkweed and nectar plants in time for their arrival.



## DUCKWEED—A BLESSING ... AND A CURSE

Story and photos by Leo Hollein, Volunteer

In some years, the ponds in the Refuge are covered with a green layer of vegetation. At first glance it appears to be an algae bloom. On closer examination, it is actually a small floating plant called duckweed.

Common duckweed (*Lemna minor*) is the smallest flowering plant. It is a very small, light-green free-floating plant. Duckweed has 1 to 3 leaves, or fronds, of 1/16 to 1/8 inch in length. A single root (or root-hair) protrudes from each frond and absorbs nutrients from water. Duckweeds are found in quiet, nutrient-rich wetlands and ponds. Duckweed is swept away by moving water.

Duckweed is both a blessing and a curse. Amazon offers both duckweed plants for cultivation and duckweed herbicides. Duckweed is raised for duck and fish food. My goldfish quickly devour any duckweed put into their pond. In Asia a variety of duckweed is raised for human food. Duckweed is also an important bioremediation agent because it grows rapidly, absorbing excess nutrients. Some detest the visual appearance of green duckweed covering their ponds and seek ways to control it.



In 2015, as in 2010, the impoundment on the Great Brook called Pool 1 was covered with duckweed as shown above. The most likely cause of the explosion of growth in 2015 was the seven inches of rain that fell in June. This above average rainfall washed nutrients into Great Brook and its tributaries from upstream suburban lawns and a golf course. The photo at right illustrates a year with little duckweed in Pool 1.

From mid-July to the end of September, duck trapping and banding takes place at Pool 1. The trap is located on the side of the impoundment dike. Whole corn kernels are used to bait the trap. Corn has a protein content of 10% and fat content of about 5%. Duckweed can have a protein content as high as 35-40% depending on the nutrient content of the

pond. It has a similar fat content as corn. Mallards are very fond of duckweed but wood ducks less so. The Raptor Trust feeds duckweed to their orphan mallard ducklings.

It is not surprising that ducks shun the corn baited traps when

there is an abundant supply of duckweed floating on the surface in the area of the trap. Ducklings are in a rapid growth phase and prefer the protein rich duckweed. The adults tend to stay with their feeding young. Before trapping starts, corn bait is placed in the shallow water in front of the duck trap. This prevents blackbirds, which are numerous in July and August, from eating most of the bait. Ducks can locate and feed on the corn in the clear water. However, corn is not put into the water when there is heavy duckweed cover as the ducks cannot see it.



Duckweed floating on surface



Those trying to trap ducks in these conditions are frustrated by the lack of interest by ducks in the corn bait. The Refuge duck trapping in 2015 was disappointing as only 15 mallards and 11 wood ducks were banded. This was the second lowest number of ducks banded in the last 12 years. Five ducks banded in earlier years were trapped. This data along with the banded data was sent to the Bird Banding Lab in Maryland. History indicates that duckweed levels vary from year to year. They should be lower in 2016.



## GREAT SWAMP NWR WELCOMES PURPLE MARTINS TO THE NEIGHBORHOOD

*Story and Photos by Jim Mulvey, Friends Board Member and Volunteer*

When Dave Miller, the Engineering Equipment Operator for Great Swamp National Wildlife Refuge, installed an array of 12 purple martin gourds outside of the Headquarters maintenance building in 2014, his efforts may have been met with some skepticism. After all, there were only two known breeding colonies in Morris County while countless martin houses remained untouched for years. As it turned out, it took only one season for the largest species of the swallow family to take up residence in Dave's project, with six of the gourds having productive nests that resulted in 25 fledglings in 2015.



Success! Dave Miller with purple martin chick

Purple martins are very comfortable being around humans, which is understandable since they are totally dependent upon man-made structures to live in. There are no natural structures in the eastern part of North America that they will inhabit. Human participation in the building of gourds goes back to when Native Americans were making them around their villages so that the birds would keep the insect population down. For an array to appeal to martins, they need to



Purple martin gourd array at Headquarters



Dave never misses an opportunity to talk about purple martins

be out in the open and away from any trees or structure that could provide cover for predators. Once a colony is established, purple martins will be abundantly present around their array, melodically chortling as they interact.

Thrilled with Dave's successful venture, the Friends approached him to share some of his expertise in installing a second array, which was put up this past August just beyond the Richard J. Guadagno Pavilion at the Visitor Center. The martins were done breeding at this point and were beginning their migration to South America, so we are eager to see if the Refuge can attract a second breeding colony this spring and summer.

Dave will be our Second Sunday guest speaker on June 12, 2016 when he will go into further detail on the history and behavior of this intriguing bird. After his talk, we will go outside to the array where he will lower the rack and hopefully show us firsthand what purple martin chicks look like!

Keep an eye on the Friends of the Great Swamp NWR Facebook page for updates. If we are fortunate enough to get another colony outside the Visitor Center, there will be additional times when the public will be invited to join us as we survey the nests. For more information, check out the resources on the Purple Martin Conservation Association website at <[purplemartin.org](http://purplemartin.org)>

*Twirl on, you and your satin blue.  
Be water birds, be air birds.  
Be these purple tumblers you are.*

~Carl Sandburg

## THE WOES—AND EXCITEMENTS—OF A WHITE-TAILED DEER BAITED TRAIL CAMERA SURVEY

By Elise Hughes Berheim, Graduate Student, South Dakota State University

Over the past two years (2014 and 2015) I have become well acquainted with the trails, painful vegetation, and beauty of Great Swamp National Wildlife Refuge through the completion of a white-tailed deer baited trail camera survey. In 2011, an outbreak of hemorrhagic disease (a fatal disease in deer caused by a biting midge) swept through the Refuge and significantly reduced the deer herd. Because of this, the bag limit was lowered, and over the next couple of years, deer numbers responded positively. However, before considering further changes to harvest regulations, more information on the population was needed. Thus Dorothy



Here I am with volunteer Allegra Mitchell walking through the Wilderness Area with trapper packs filled with 25lbs of corn. Photo: Jane Bell.

Wells, the Refuge's Wildlife Biologist, started a search for an interested graduate student. Through mutual acquaintances from the distant place of South Dakota State University, I ended up in New Jersey in the fall of 2014 and began my trail camera survey.

In 2014, just before my survey began, the deer herd experienced a second outbreak of hemorrhagic disease, leav-



Set up of each site showing 50 pounds of corn and numbered sign (left). Camera, mounted on tree (right)

ing us all to wonder if we would even find deer to survey!

In 2014 I surveyed the Management Area and in 2015 I surveyed the Management and Wilderness Areas. To begin my survey, each survey area was split into 160 acre plots. I hiked out to the center of each of these plots and, if deemed appropriate (i.e. near a deer trail, *not* in the middle of a wetland, easily accessible), housed a numbered sign, 50 pounds of corn, and a trail camera.

For the first week, corn was replenished as needed to allow deer to become accustomed to the sites. To accomplish this, I recruited some willing volunteers to help me carry 20 to 50 pounds of corn in trapper packs to each site, sometimes up to three miles, in the Management and Wilderness Areas of the refuge. For the next two weeks cameras were set at three minute intervals to capture photos when triggered by wildlife. At the end of these three weeks, cameras were collected and the photos taken were analyzed.

There is nothing quite like the excitement of finding wildlife on your trail camera. Each photo collected from the cameras was identified as a buck, doe, fawn, other wildlife, or unknown and put into folders. Other wildlife captured on the cameras included bears, coyotes, foxes, raccoons, squirrels, birds, and one pheasant. Data from each

folder was tallied and put into a QDMA (Quality Deer Management Association) computation form that produced a density estimate of number of deer per square mile.

In 2014, the Management Area had four deer per square mile. In 2015, the Management Area found seven deer per square mile and the Wilderness area showed eight deer per square mile. This information has been compiled and submitted to Dorothy Wells for use in making management decisions about the deer herd.



Buck sighted this year in the Wilderness Area.

I am very thankful to the volunteers and staff who helped me complete this project. *Farewell to the Swamp!*





## THE HOODED MERGANSER—ANOTHER CAVITY NESTING DUCK

*Story and photos by Leo Hollein, Volunteer*

**T**he Great Swamp National Wildlife Refuge has about 200 wood duck nest boxes that are maintained and monitored annually. Wood ducks are cavity nesting ducks that will use natural tree cavities or manmade boxes. As is the case with all nest boxes built for a specific species, other species will take advantage of these custom built homes that are on metal poles protected with large conical predator guards. These other birds don't know or don't care that the box was made for wood ducks. Eastern screech owls, European starlings, great crested flycatchers and even house wrens are bird species that have been found nesting in wood duck boxes. In addition, flying squirrels, grey squirrels and mice have also nested in the boxes when they were able to find a way around the predator guard.

The hooded merganser is the other cavity nesting duck that breeds in the Refuge. The other nesting ducks use open top nests located on the ground or slightly elevated.



Female hooded merganser on nest box

Hooded mergansers are much less common than wood ducks in the Refuge. On average about four hooded merganser nests per year are found. Wood ducks nest in the majority of the boxes. Adult wood ducks are primarily vegetarian. Hooded mergansers feed on aquatic life. They require a larger area to insure they and their offspring can find sufficient live food.



Male hooded merganser in breeding plumage Photo by Ken Billington

The male hooded merganser in breeding plumage is striking in appearance. He has a crest that can be raised to display its namesake white hood. The female is drab by comparison, but also has a crest that can be raised. She has a dark eye unlike the bright yellow of the male.

Hooded mergansers nest in wooded swamps that are typical of the Refuge. They are rare nesters in Northern New Jersey. According to the [Birds of New Jersey](#), the Refuge is the southernmost location in New Jersey where hooded mergansers are confirmed nesters. Hooded mergansers migrate through the Refuge in the spring and fall when their numbers peak. Some may remain through the winter if the weather is mild and open water is plentiful.

Hooded merganser eggs are larger, rounder and thicker than wood duck eggs. Since the mergansers feed on aquatic life, their diet is much richer in calcium hence the more robust eggs. Along with wood ducks and other cavity-nesting ducks, hooded mergansers often lay their eggs in other females' nests. The photo (above right) shows a hooded merganser nest. In the back, there is a smaller tan egg that was laid by a wood duck. The center egg is a black hooded merganser egg. On sev-

eral occasions I have observed a black egg in a hooded merganser nest. This was the first egg of the clutch. Subsequent eggs are whiter or pure white. The black egg is fertile and is as likely to hatch as the others in the clutch.



Merganser nest with a wood duck egg

The Refuge is fortunate to host nesting hooded mergansers at the southern edge of their breeding territory. They can be seen in open water along Pleasant Plains Road during the winter and early spring.





## WOOD TURTLE HEAD-START PROJECT UPDATE *(continued from page 1)*

If there was a downside to 2015, it was the documented mortality of two of our adult females. One of the females (F32), who was gravid when found in late May, was killed by a raccoon that targeted her for her eggs. The other was an old female (F26) for whom we were unable to determine a cause of death, although she may have simply died from old age. With only a dozen adult females known in our population, the loss of these two is disappointing and concerning. It impacts potential nesting and hatchling production until two young females can come on board and replace them. With the continued success of head-starting, we are confident that we will get there.

On another upside though, in the July 2015 edition of the Swamp Scene, we reported that one of our 2011 direct releases, #457 (from F26's nest), was found in April. We are pleased to say that not only was it found again in June and a transmitter attached to it, but another direct-release was found in July. This individual, #742 from F31's nest in 2009, was also affixed with a transmitter. These turtles, respectfully, represent only the 2nd and 3rd direct-releases, out of the 209 released from 2007 to 2014, to ever be found in a subsequent year.

On top of this, two unmarked juveniles from nests unbeknownst to us were found in 2015 as well. In September, a 3 year-old (born ~August 2012) was found and marked as #572 and in October, a 5 year-old (born ~August 2010) was found and marked as #573. Transmitters were attached to both. These "natural born" turtles, respectfully, represent only the 3rd and

4th wild juveniles ever to be found at the site since we began our study in 2006. It is very encouraging to know that some non-head-started hatchlings are making it at the site and are surviving for successive years. These two direct-releases and two natural born juveniles are an excellent complement to our study as they will allow us to compare and contrast the similarities and differences between them and the head-starts.

We would like to acknowledge the exceptional level of dedication and effort by 2015 biological intern Dan Hannon toward this project and we are incredibly pleased to announce that he will be returning to work with us again this summer.

We would also like to thank the Friends of Great Swamp NWR who continue to generously provide funding for this project year after year. It would not be what it is today without their unfaltering support.

### MARK YOUR CALENDARS!

As in previous years, our plan is to bring the head-start turtles back in late May and officially welcome them home at the annual

Endangered Species Day Program. Join us and see the head-start success story for yourself

**SATURDAY, MAY 28, 2016**  
**10:00 A.M. TO NOON**  
**HELEN C. FENSKE**  
**VISITOR CENTER**



2009 direct release #742 (left) next to 2011 Headstart turtle #465 (right).



The 2015 direct release hatchlings are let go on the Refuge in early September



Dan Hannon with 2010 natural born juvenile #573

### GLOSSARY

**COHORT:** A group of subjects with a common defining characteristic. In this case, a group of head-starts that were all born in the same year.

**DIRECT RELEASE:** Hatchlings from the nests are marked and then released directly back on the Refuge in the fall to hibernate for the winter.

**HEAD-START:** Hatchlings from the nests are marked and then taken to Massachusetts where they are raised in a greenhouse. They do not hibernate; they are fed and cared for all winter long and continue to grow. They are brought back in the spring to be released on the Refuge. Their larger size gives them a "head-start".



## INTRODUCING NEW BOARD MEMBER JANE BELL, *Photo by Steve Bell*



**I** became interested in the Great Swamp National Wildlife Refuge a few years ago when I was searching online for a new place

where my husband and I could go on a hike. At the time, we both worked in Manhattan and needed a respite from our busy work week.

We live in Maplewood, a pleasant and relatively short train ride into Penn Station. While some of our neighbors return to the city on the weekends to while away the hours, we like to head in the opposite direction for a relaxing change of pace. It was surprising to find the Great Swamp and all it has to offer in its natural wetland setting. It is such a spacious, bucolic area just 30 minutes northwest of us where the public can enjoy a pleasant hike (we have learned that rubber

boots are sometimes needed) among acres of protected habitat for wildlife. This close to Manhattan? Wow!

I have always loved the outdoors. Growing up in the South, I had miles of woods to walk through just down the street where my family lived. I would join my sister, brothers and neighborhood friends on hikes in which we would spot reptiles, small animals, insects and interesting plants that would pique our curiosities and give us such great stories to share with others later. It was simply a great outdoor place to explore and learn from.

So I guess you can say I am doing the same thing now

with a renewed purpose, but on a different level. After completely enjoying my initial hike years ago at the Great Swamp and seeing what all the place has to offer, I naturally wanted to get involved with the conservation effort there.

I am enjoying the chance to volunteer at the Great Swamp and to serve as a new board member. I've been spending most of my time on trail maintenance, gardening, and keeping invasive plants at bay. The educational aspect of the Great Swamp also fascinates me. And, of course, there is no end to the number of stories this place has to share.

### DO YOU LIKE WORKING OUTDOORS? DO YOU WANT TO MAKE A DIFFERENCE? JOIN US AND VOLUNTEER

#### VOLUNTEER ORIENTATION

Learn about the many volunteer opportunities.  
March 5, 19, May 1, June 11

#### GREAT SWAMP STRIKE TEAM

Help eradicate emerging invasive plant species.  
1st and 3rd Fridays, April–October

#### THURSDAY INVASIVE PLANT CONTROL TEAM

Help control invasive plant species around the Visitor Center and on Refuge trails.  
2nd & 4th Thursdays, May–September

#### GARDENKEEPERS

Help maintain native plant gardens at the Visitor Center.  
Weed, plant, mulch ... and more!  
Beginning April 13

Come to one, many, or all of the work days.

Reservations are not necessary.

Check the Calendar of Events on the Friends website for location, times, and more details.

*Join us and make a difference!*

### FRIENDS BOARD APPROVES FY2016 BUDGET

Each year the Friends Board and Refuge staff meet to share ideas for new projects for the coming fiscal year. The Board then creates a budget, projecting income and operating expenses before selecting new projects to fund.

Here are some of the projects that are budgeted in 2016.

#### HABITAT AND WILDLIFE

Permitting for water control structure repairs to improve habitat for waterfowl • Waterfowl study (Year 2) • Forest songbird study • Head-start turtle research

#### WILDLIFE OBSERVATION CENTER

Restroom renovations • Interpretive signs on turtles, snakes, and frogs • Reprinting the popular Tree & Shrub Guide • Boardwalk repairs

#### VISITOR CENTER

Bear Habitat Mural • Installation of water pipes to provide water to pavilion and gardens • White Oak Trail

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!*



## 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?**

TOTAL ENCLOSED \$ \_\_\_\_\_

You may also join online at [www.friendsofgreatswamp.org](http://www.friendsofgreatswamp.org)

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State, Zip Code \_\_\_\_\_

Phone Number \_\_\_\_\_

E-Mail Address \_\_\_\_\_

Gift Membership From: \_\_\_\_\_

(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.

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



## **THE SWAMP SCENE MARCH 2016**

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.