



the Swamp Scene

friends of great swamp national wildlife refuge

ISSUE FORTY FOUR
MARCH 2014

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Editor

241 Pleasant Plains Road
Basking Ridge, N.J. 07920
973.425.9510

www.friendsofgreatswamp.org



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GREAT SWAMP INVASIVES STRIKE TEAM PREPARES FOR THIRD YEAR

Story and Photos by John Berry, Volunteer and Friends Board Member

The Great Swamp Early Detection and Rapid Response Strike Team—a collaborative effort to find and eradicate invasive plant species before they become widespread in the Great Swamp—will host a training session at the Helen C. Fenske Visitor Center on Friday, April 4, from 9 a.m. to noon. Volunteers who are interested in joining the team should attend the session, which will focus on the identification of invasive plants deemed most threatening to the swamp's ecosystem. Melissa Almendinger, the education director of the NJ Invasive Species Strike Team, will lead the training session.

Not every plant introduced to New Jersey is invasive. Some introduced plants survive only in gardens; others may escape gardens and reproduce in natural areas but are kept in check by local conditions. Invasive plants are different. These non-native species are able to thrive in the local environment, out-competing native species and taking over important habitat. But invasives damage more than just native plant communities. They also hurt the array of animals that depend on native plants. Think of the myriad insects that rely on the pollen of wildflowers such as goldenrod and milkweed. Now think of the birds, amphibians, reptiles, and mammals that dine on those insects.

Invasive species began to spread across New Jersey centuries ago, and many of them are now so widespread in the Great Swamp that removing them is impractical. Japanese stiltgrass and multiflora rose, for example, can be found in many areas of the refuge, often in dense patches.

Widespread But Not Forgotten

Eliminating widespread invasives from the Refuge may be impossible, but they can still be targeted for exclusion from priority areas, such as the Overlook, the Bockoven Trail, and fields around the visitor center. A second



Strike Team members finish up the 2013 season (l to r) Kathy Woodward, Susan Nanny, Dorothy Smullen, Steve Henry, Laurel Gould, Laura Nally, John Berry (behind the camera)

team of volunteers takes on this challenge, restoring the health of key habitats while improving the experience of refuge visitors. People who would like to join this team can show up for its first work day, Thursday, May 8, 9:00 a.m. at the visitor center. The team works from 9:00 a.m. to noon on the second and fourth Thursdays, May to September.

The goal of the Strike Team is to prevent the next Japanese stiltgrass or multiflora rose from gaining a secure foothold in the Great Swamp. Glossy buckthorn (shown below) poses just such a threat. Introduced from Europe, this highly invasive bush has already become widespread throughout the Northeast.



Unfortunately, it has also made its way onto the Refuge, but here it is confined to a few relatively small areas, and thus can still be eradicated. The strike team has dedicated several work days to this pernicious invader, halting its expansion and dramatically reducing its numbers. (continued on page 4)

FRIENDS ANNUAL MEMBER MEETING HELD DECEMBER 7, 2013



The Annual Member Meeting of Friends of Great Swamp National Wildlife Refuge was held at the Helen C. Fenske Visitor Center on Saturday, December 7, 2013 with 68 members in attendance. Following a fabulous pot luck dinner, with an interesting and varied assortment of excellent food, President Susan Garretson Friedman welcomed attendees and called the meeting to order.

Susan highlighted significant accomplishments for 2013 and Rich Dufort reviewed the Friends' budget for 2014 (see page 10). Laurel Gould presented the Treasurer's Report.

The following Directors were re-elected for two-year terms: Karen English, Susan Garretson Friedman, Laurel Gould, Kathy Woodward. The following new Directors were elected for two-year terms: John Berry, Larry West, Walter Willwerth. [Note: In January, board member Joyce Payeur resigned; the board appointed Randi Emmer to complete her term.]

Outgoing board member Dorothy Smullen was recognized for her many contributions, especially as co-chair of the Education Committee. Dorothy will continue as a member of the Visitor Services Committee as well as remaining an active volunteer and program speaker.

Outgoing board member Judy Schmidt was recognized for her many contributions and awarded a life membership. Judy was one of the founding members of the Friends and has had her hand, and heart, in virtually every Friends' project and program over the years—school group tours, the Nature Detective Trail, the Discovery Den, the Junior Refuge Manager Program... and so much more. Judy will also remain on the Visitor Services Committee and as an active volunteer. And she will continue creating her signature pottery for the Nature Shop.

Following the Business Meeting, Deputy Refuge Manager Steve Henry kicked off our 50-50-15 celebration with a fascinating and informative program on the History of the Wilderness Act and Great Swamp's Wilderness Area.

Regular board meetings are held on the second Wednesday of each month at 7:00 pm in the Visitor Center. Members are always welcome to attend.

MEET NEW DIRECTOR... JOHN BERRY

A transplanted Californian, I moved from New York City to New Jersey about ten years ago. When my employer, an educational publisher, downsized its editorial department, I suddenly found myself in the ranks of freelancers. Although I would not recommend freelancing as a career, I will admit that it offers certain extracurricular advantages, like more freedom to bird. The Great Swamp soon became a regular birding location.

One fine spring day in 2012, after a hike along the Orange Trail had turned up, among other things, a flock of rusty blackbirds in full-throated glory, I stopped at the Overlook. Not much there in terms of birds, but I did run into a couple of people intent on removing Callery pears from the landscape. Kathy Woodward and Rich Dufort wasted no time recruiting me for invasives work. As I had spent a few years extirpating Spanish broom from a stretch of the Upper

Sacramento River (in California), I understood the harm caused by invasives—and the odd pleasure in eradicating them. So I joined the Strike Team in its inaugural year, and quickly came to appreciate the work of the Friends, an effort I gladly join.

MEET NEW DIRECTOR... LARRY WEST

I am a lifelong resident of New Jersey but only discovered Great Swamp recently. I work for the N.J. Department of Revenue as a Database Analyst. My first visit to the Great Swamp was in early 2011, looking for subjects for my new camera. In 2012, I began volunteering—at the Wildlife Observation Center, at Fall Festival and recently at the Visitor Center, greeting visitors and assisting with computer-related tasks. I am happy to have been asked to serve on the Board. I hope that I can help promote the Great Swamp NWR to the public, as well as recruit new volunteers.

MEET NEW DIRECTOR...

WALTER WILLWERTH

My wife, Kathie, and I are both natives of Massachusetts. We moved to New Jersey in 1969. I have spent my entire working career in the food industry, first as a store manager and then as a regional sales manager for a biscuit company and as an account manager in the specialty food business. Kathie and I have three sons and daughters-in-law and seven grandchildren. While my sons were growing up, we visited the Great Swamp and other nature reserves and always got great pleasure from our time spent in the outdoors. In June of 2012, I retired from my last company and decided to become a Friends member and to volunteer my time. I have enjoyed working at the Visitor Center and the Wildlife Observation Center. My intention is to become more involved with the Friends and to address the needs of our organization in the coming years.

SAVE VANISHING SPECIES SEMIPOSTAL STAMP RETIRED



For the past two years, your membership renewals and other Friends' correspondence has been delivered with the Save Vanishing Species semipostal stamp. Unfortunately, this stamp is no longer available. The stamp cost 10 cents more than the regular first-class rate, with the net proceeds going to the U.S. Fish and Wildlife Service Multinational Species Conservation Funds. It was a convenient way to contribute to the protection of threatened and vanishing species. Nearly 24 million stamps were sold and over 2.5 million dollars raised for the Funds. A worthwhile cause that we will miss.

REFUGE UPDATE—BY DEPUTY REFUGE MANAGER STEVE HENRY

ADMINISTRATION/PERSONNEL

Appropriations to fund the federal government ran out at the end of the fiscal year resulting in a 16 day shutdown in October. During the shutdown, the Refuge was closed to the public and all staff except law enforcement were furloughed. Refuge operations ceased, which severely impacted all programs and forced the cancellation of public events including most of National Wildlife Refuge Week. Staff were very happy to return to work and are still busy trying to catch up!

A recent Fish and Wildlife Service analysis of the economic contributions of refuges to the nation's economy showed that for every dollar appropriated to operate Great Swamp NWR, \$3.51 was returned, mostly in the form of retail sales, taxes, and job income. Overall, in Fiscal Year 2011 National Wildlife Refuges pumped \$2.4 billion into the economy and supported more than 35,000 jobs. Additional information can be found in the 2013 "Banking on Nature" report available online at www.fws.gov/refuges/about/RefugeReports/

Applications are being received for four summer internships. Last year's graduate students, Megan Spindler and Casey Wagnon, will be returning for a second summer to complete their research into wildlife use of refuge impoundments. Their work is being generously funded by the Friends of Great Swamp NWR.

PLANNING

The Comprehensive Conservation Plan (CCP) is currently undergoing final internal review. A public review draft should be available by spring when public meetings will be held. The CCP should be completed by the end of the summer. As always, anyone interested in staying informed should contact Refuge Headquarters (973-425-1222) and ask to be added to the mailing list. Current information can also be found from the CCP link on the Refuge's website.

BUDGET

In mid-January, an "omnibus" bill was signed which funds the federal government for the remainder of the fiscal year thereby averting another shutdown.

The bill eased some sequester-related reductions although the Service is planning for another 3-4% cut in 2014 on top of the 7% cut in 2013.

INFRASTRUCTURE

After months of detailed planning, work will soon be underway to repair damage caused by Hurricane Sandy and build "resilience" to better weather future storms. Such work includes new roofs for the Visitor Center, riding arena, and Headquarters, conversion of the Visitor Center to natural gas heat, installation of solar panels at Headquarters and the riding arena, and the installation of additional backup generators.

During the spring and summer, Pleasant Plains Road will be resurfaced from Great Brook bridge to the cul-de-sac. The sharp bend in the gravel section of the road ("Marsden's Corner") will be reduced to improve safety and better accommodate larger vehicles (school busses, emergency vehicles, etc.).

Staff and volunteers have begun a series of wilderness trail work days. Debris and blowdowns are cleared from the trails using "traditional" tools like axes and crosscut saws. Contact Dave Sagan, Visitor Services Specialist, if you would like to get involved (973-425-1222 x116).

The Refuge and Friends are collaborating on a new trail that will wind through the fields across the road from the Visitor Center. A final route is being determined and trail clearing will begin shortly. Also this year the Refuge and Friends will be installing a handicapped-accessible trail from the pavilion to the Bockoven Loop. The new trail will parallel the existing route and be made from the same materials as the Visitor Center overflow parking area.

PUBLIC USE

2014 is a special year for Great Swamp NWR. This year marks the 50-50-15 celebration of the Refuge's official dedication in 1964, the 50th anniversary of the Wilderness Act (Great Swamp has the first wilderness area in the Department of the Interior), and the 15th anniversary of the founding of the Friends of

Great Swamp NWR. Visit the Refuge and Friends websites for the latest information and a schedule of events.

The annual deer hunt was held in early November. A total of 37 deer were harvested by 107 hunters. See Dorothy Fecske's article on page 9 for more information.

HABITAT MANAGEMENT

The Refuge's Invasive Species Strike Team completed its second successful season at the end of October. See volunteer John Berry's article on page 1.

Despite being delayed by the government shutdown, a strong team effort allowed the Refuge to meet its target of mowing 230 acres of grasslands this fall. Special thanks to volunteer Dave Mracek for his many hours behind the wheel of a tractor. An additional 20 acres of grassland, best mowed when the ground is frozen, are scheduled to be cut this winter.

Winter brushland management is also underway. A recently acquired Regional piece of heavy equipment—a Fecon mower—has been stationed at Great Swamp. The Fecon allows great flexibility in treating brushlands with less ground impact. The refuge continues to experiment with a more targeted treatment method that leaves some shrubs and small trees standing in brushland units to increase habitat diversity.

POPULATION MANAGEMENT

Volunteers have been busy cleaning and repairing wood duck boxes in preparation for nesting season.

Grad student Megan Spindler will be fitting wood duck hens with radio-transmitters this spring to track their movements as part of her research into habitat use and nesting success on the Refuge.

Grad student Casey Wagnon has been monitoring remote cameras throughout the winter for signs of "meso-carnivores" (medium-sized predators) as part of his research into the Refuge's predator populations and the impacts of predation on prey populations.

WOOD TURTLE HEAD-START UPDATE

Story and Photos by Alyssa Frediani, 2013 Friends Biology Intern and currently Refuge Volunteer

Our young wood turtles have all moved into the stream where they will spend the next few months waiting out the cold weather until they emerge again in the early spring. The group of 2011 head-starts (released May 2012) all successfully returned to the stream, and in most cases found new places to hibernate, ranging from 0 to 147 meters from their previous hibernacula. The 2012 group (released May 2013) managed to find suitable areas to hibernate as well, close to other adults and head-starts.

settling into a small tributary of the main stream. When we last tracked them, all three were still alive and had found suitable areas in the tributary to spend the winter.

The hatchlings that were sent to Massachusetts are doing very well. They've put on a considerable amount of weight, with the growth to date averaging a 491% increase (since September). All of the turtles at BCAHS are alive and flourishing at this point and we are looking forward to their return this May. Thanks to yet another generous donation from the Friends of Great Swamp NWR, this project as well as the bog turtle study will be able to continue full force in 2014.



2012 head-start (on the bottom) compared to one of the 2013 hatchlings (on top). This phenomenal growth provides young turtles with a significant "head start" on survival.

This past fall we had 34 hatchlings emerge from protected nests, and 28 were sent to Bristol County Agricultural High School (BCAHS) in Massachusetts to be head-started.

Three of the six hatchlings that

were directly released were radio-tracked. They were fitted with micro-transmitters (about 0.3g) and tracked every other day for twelve days. They made pretty large movements until



One of the 2012 head-start wood turtles in the stream where it is hibernating.

Join the Friends and the Refuge to celebrate Endangered Species Day, Saturday, May 24, 10:00 at the Visitor Center. Visitors will have an opportunity to welcome the 2013 head-start turtles home from Massachusetts.

STRIKE TEAM *(continued from page 1)*

Statistics of Success

Last year, more than 20 volunteers worked on the strike team logging more than 250 hours. This total does not include the hours worked by Refuge staff members and interns, who regularly join the strike team. The team worked on 10 sites, totaling about 25 acres.

Nine priority species were treated: Callery pear, wisteria, mile-a-minute, Ailanthus, Chinese silvergrass, Japanese knotweed, winged burning bush, Chinese bush clover, and, of course, glossy buckthorn.

"When you start a project like this," says Steve Henry, Deputy Refuge Manager and leader of the strike team, "you never know how far it's going to go. Well, after

two years, I can say that it's been a real success. We have a good team of volunteers, and we've done what we set out to do—find emerging invasives and attack them before they become entrenched. The strike team has helped protect important refuge habitat."



Strike Team volunteer Kathy Woodward attacks winged burning bush

What attracts people to this often hot, sweaty, and muddy line of work? "I like the challenge," says Laura Nally, "of identifying new invasive species." Another strike team member, Laurel Gould, sums up the experience this way, "The idea is to nip the problem in the bud, which makes a lot of sense. It's rewarding work for those of us who love the Great Swamp."

The team works from 9 a.m. to noon on the first and third Fridays of each month, April to October.

THE BLACK-CAPPED CHICKADEE

Story and Photos by Leo Hollein, Volunteer

The black-capped chickadee (*Poecile atricapillus*) is a small active songbird that is a common year-round resident of northern New Jersey including Great Swamp National Wildlife Refuge. Its cousin the Carolina chickadee (*Poecile carolinensis*) is a resident of the southern half of New Jersey. The ranges of these two chickadee species have little overlap. However, they have been known to interbreed in these areas. The black-capped chickadee, shown at right, is a little larger than the Carolina chickadee and has white edgings on its wings. Its song consists of two whistled notes sounding like “fee-bee”. Its call is the familiar chickadee-dee-dee. The Carolina chickadee song is typically four whistled notes sounding like “fee-bee-fee-bay”. Both these chickadee species are cavity nesters that will nest in tree holes as well as bluebird or other nest boxes. They prefer nest boxes that are in partially open or shaded areas. They are not likely to nest in a box in the middle of a field.

Chickadees are familiar visitors to bird feeders in the Refuge and in back yards. They are approachable. They will often encourage humans to refill their bird feeders. With some patience, chickadees can be coaxed to feed out of one’s hand. They will also come very close to



those approaching their nests. They will persistently call and jump from spot to spot trying to distract the intruder.

Black-capped chickadees raise one brood per season. Like most birds they will attempt a second nesting if their first clutch fails. Chickadees lay seven to eight eggs that are white with pink splotches, as shown below. Notice that the nest material supporting the eggs is

a mixture of soft material including hair and moss. This enables the chickadee to cover their eggs with this nest material when they leave the nest box. House wrens like the same type of nesting habitat. Covering the eggs provides some protection from house wrens taking over the box by entering and destroying the eggs. Since chickadees are year round residents, they usually start nesting before the migratory house wrens arrive in the spring.

A chickadee brooding eggs is shown below (center). The eggs typically hatch in 12 days. Chickadee hatchlings about ready to fledge are shown below (right). They already have adult plumage. The adult chickadees and their fledglings will remain together for some time.

HINT – Bluebird nest boxes typically have 1 ½ inch circular entrance holes. These allow bluebirds, but also house sparrows, to enter. Unless you can attract bluebirds to your property, use a nest box with 1 ¼ inch entrance hole. This will deter the larger house sparrows from nesting in the box. You will likely get nesting house wrens and chickadees as well as possibly tufted titmice and white-breasted nuthatches.



CELEBRATING 50-50-15



This year, the Refuge and the Friends are celebrating 50-50-15! The first “50” celebrates the 50th anniversary of the signing of the Wilderness Act—and Great Swamp’s Wilderness Area was the first in the U.S. Department of the Interior! The second “50” commemorates the Dedication of Great Swamp National Wildlife Refuge in May 1964. And... the Friends, established in 1999, are 15!

To help celebrate, a new pin with the Wilderness 50 logo and Hiking Stick Medallions are available in the Friends Nature Shop, located at the Helen C. Fenske Visitor Center. We will soon have a commemorative fine art poster available as well. Stop by and help celebrate this special year.

CAREFUL WHEN CHOOSING GARDEN PLANTS

By John Berry, Volunteer and Friends Board Member

Spring migrants are flying in, and homeowners are getting out in their gardens, planning for the new growing season. Following a tradition that dates to the colonial era, many New Jerseyans will head to the nursery to buy flowers, bushes, and trees from around the globe: tulips from the Mediterranean, hydrangeas from Asia, and maples from Japan. When it comes to our gardens, we seem to prefer the exotic, eschewing plants that grow naturally around us.



Orange-eye Butterfly bush (*Buddleja davidii*)

Many of these exotics have obvious esthetic appeal and will stay benignly where they're planted. Some, however, are invasive, and there are good reasons to consider *not* buying or planting them. Aided by wind or animals, invasive plants can escape a garden and make their way to parks and refuges such as the Great Swamp.

There they may establish themselves and out-compete native plants. In a matter of years, an invasive species can overrun a landscape, eliminating the native plant community that is the foundation of the local ecosystem.

Deputy Refuge Manager Steve Henry has compiled a list of "priority invasive plants," species that have recently appeared on the Refuge or are found nearby. If these invasives were to gain a permanent foothold in the Great Swamp, they would damage the habitat of countless native plants and animals. Unfortunately, nurseries still sell these invasives, so it's up to informed consumers to choose *not* to buy them. Note that some of these plants come in various forms ("cultivars"), and are sold under a variety of commercial names. For more information and pictures, please visit the website of the N.J. Invasive Species Strike Team [www.njisst.org].

Maybe it's time to reconsider our preference for exotic plants. As visitors to the Great Swamp can attest, native flowers, bushes, and trees are as striking as anything found at a nursery. Moreover, native plants are adapted for New Jersey soils and climate, so once they are established, they require less water and care. Finally, a garden filled with native plants will soon attract a wonderful array of butterflies, bees, birds, and other wildlife.

A garden can be more than a pretty arrangement of plants; it can be habitat—a bolt of nature's tapestry in our own yards.

PRIORITY INVASIVE PLANTS FOR GREAT SWAMP STRIKE TEAM 2014

AILANTHUS/TREE OF HEAVEN

(*Ailanthus altissima*) Tall, fast-growing tree from China and the title character in Betty Smith's novel, *A Tree Grows in Brooklyn*

PORCELAIN BERRY

(*Ampelopsis brevipedunculata*) Grapelike vine from Asia with glasslike fruit

JAPANESE ARALIA/ANGELICA

(*Aralia elata*) Short tree from Asia with spiny stem and huge bi-pinnately-compound leaves

ORANGE-EYE BUTTERFLY BUSH

(*Buddleja davidii*) Shrub from Asia with clusters of showy flowers that come in many colors

WINGED BURNING BUSH

(*Euonymus alatus*) Large deciduous shrub from Asia whose leaves turn bright red in the fall

GLOSSY BUCKTHORN

(*Frangula alnus*) Fast-growing shrub from Europe with dark green, shiny leaves

ENGLISH IVY

(*Hedera helix*) Evergreen vine from Europe and Asia that climbs trees and covers ground

CHINESE SILVERGRASS

(*Miscanthus sinensis*) Tall grass from Asia that grows in large clumps and has long, feathery flowers

CALLERY PEAR

(*Pyrus calleryana*) Medium tree from Asia that blooms in early spring and whose branches tend to split from its trunk

LINDEN VIBURNUM (*Viburnum dilatatum*)

SIEBOLD'S VIBURNUM (*Viburnum sieboldii*)
Medium to large shrubs from Asia with many clusters of white flowers in late spring

CHINESE WISTERIA (*Wisteria sinensis*)

JAPANESE WISTERIA (*Wisteria floribunda*)
Large, woody vines with clusters of showy purple or white flowers

NATIVE PLANT OPTIONS FOR THE HOME LANDSCAPE

By Eileen Ferrer and Garry Annibal, Native Plant Society of New Jersey

Each year homeowners flock to local garden centers in spring looking to add or replace plants in their yards. With so many beautiful plants to choose from we are often enticed by a certain look or even the way a plant is marketed. But if you want to make your yard a living, breathing and healthy environment for a host of species, take a few minutes before purchasing a plant to think about the impact of your choices. Here are a few ideas on avoiding plants that negatively affect our environment and a few options that have a positive impact.

BUTTERFLY BUSH (*Buddleja davidii*)

Butterfly bush is a staple plant for gardeners looking for deer-resistant, long-lasting color. And in recent years, with an increased focus on butterflies, and monarchs in particular, this non-native plant is very popular. The problem is that butterfly bush is demonstrating invasive tendencies. The N.J. Invasive Species Strike Team has identified this plant as a newly emerging threat in the State. This plant easily reseeds in sandy, drier soil and has the potential to displace other native plants that provide more benefits to the environment.

Try Instead BUTTONBUSH (*Cephalanthus occidentalis*)



Buttonbush is often associated with wet areas and indeed it grows robustly in the Great Swamp and other wet places. But it is equally at home in a traditional garden. This plant blooms in New Jersey from June into July. It is extremely attractive to

butterflies as well as our native bees. The 1" round, white flowers become alive with pollinators to the point where the entire shrub seems to be moving. Buttonbush has a rounded form and can grow from 6 to 12' tall but also responds very well to pruning if you want to keep it smaller. In addition to providing nectar for pollinators, buttonbush is also a host plant for 19 species of native Lepidoptera according to Douglas Tallamy, author of Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens.

JAPANESE ANDROMEDA (*Pieris japonica*)

BOXWOOD (*Buxus sempervirens*)

Virtually every landscape in New Jersey will make use of one or both of these plants. Andromeda is used in shady locations and boxwood in sunnier ones. Their main attributes are they are evergreen, easy to prune, and extremely deer resistant. Neither have shown invasive tendencies (yet) but neither contribute much to our native insects or mammals. Additionally, both are subject to many insect issues and require insecticides to maintain their health and appearance.

Try Instead INKBERRY HOLLY (*Ilex glabra*) or these two LEUCOTHOES (*Leucothoe fontanesiana*) and (*Leucothoe axillaris*)



Inkberry holly is often initially mistaken for non-native boxwood, particularly the cultivated variety "Compacta." *Ilex glabra* "Compacta" tolerates both wet and dry soils, sunny and shadier locations, is very deer-resistant and provides dark blue, almost black berries

for birds. "Compacta" is an excellent foundation plant, growing 3 to 4' wide. For a larger plant, look for the straight species which will grow to 8'. *Ilex glabra* is a host plant for 34 species of native Lepidoptera.

Leucothoe fontanesiana, also known as drooping leucothoe or highland doghobble, and *Leucothoe axillaris*, known as coastal doghobble, are graceful, arching plants with large evergreen leaves. Drooping leucothoe can reach as high as 5' but is more often seen growing to 3'. Coastal doghobble looks very similar. Both tolerate a great deal of shade. *Leucothoe* is a host plant for three native species of Lepidoptera.



FORSYTHIA (*Forsythia x intermedia*)

This plant is so ubiquitous in New Jersey it could easily be mistaken for a native. Its bright yellow flowers are a well-known harbinger of spring. But after its early season show of color, forsythia has little to offer for either beauty or wildlife.

Try Instead SPICEBUSH (*Lindera benzoin*)



Spicebush is surely one of the most graceful inhabitants of our woodlands. It blooms in early spring, a small yellow flower important to early season pollinators. Rather than the garish yellow blast of forsythia, spicebush offers us a softer yellow, more fitting for its

native shady environment. Though spicebush is most often seen in the woods, it is also happy in a sunny spot and will actually bloom more profusely in sun. Spicebush is a great host plant for the captivating spicebush swallowtail caterpillar as well as nine other native Lepidoptera. *Lindera benzoin* is dioecious, meaning that some plants are female and others male. The female plants sport bright red berries in the fall, attractive to both us and the birds. Spicebush can grow to 10' with an almost equal spread.

More information about the Native Plant Society of New Jersey can be found at [www.npsnj.org]

GREAT SWAMP COMPLETES FIVE YEARS OF DOVE BANDING

Story and photos by Leo Hollein, Volunteer

Mourning dove (*Zenaidura macroura*) banding in New Jersey was initiated in 2009 at the behest of the U.S. Fish and Wildlife Service. The objective was to obtain data on doves in states like New Jersey that do not currently have a dove hunting season. Since mourning doves are somewhat migratory, birds banded in New Jersey could be recovered in other states. The banding would also provide baseline population data that would be desirable in the event a dove hunting season were introduced.

Doves are hunted in 41 states and are the most popular U.S. game bird, with 15 to 20 million birds harvested annually. Most are shot in the southern states. Mourning doves are abundant throughout their range, which encompasses most of North America. In New Jersey, mourning doves raise multiple clutches. Banding doves and the subsequent recovery of bands aid in assessing the health of the dove population and in setting bag limits.

Mourning doves are ground feeders that eat seeds. They are very common at bird feeders. Their population has benefited from the increase in open areas from agriculture and residential development. Mourning doves are named for their mournful call. Their wings make whistling sounds as they fly off. Mourning doves are about 12 inches long. They are basically tan with pointed tails that have white edges. They have spotted backs, blue eye rings and reddish legs.

Mourning Dove Trapping

Mourning dove traps are wire mesh cages, two feet by two feet square, about eight inches high. They have two one-way tunnel-like entrances that are easy for birds to enter but difficult to exit. The trapping sites are baited daily with white millet that doves and other birds relish. Trapping takes place three or four times a week. Trapping and banding only take place in July and August. In September dove hunting season begins in adjacent states.



As with most trapping operations, there is collateral capture with the dove traps. Red-winged blackbirds, grackles and cowbirds are frequently trapped. All captured birds that are not doves are relocated over a mile from the traps in the hope they will not return. Sparrows, finches, and chipmunks feed on the millet but are small enough to enter and leave through the sides of the wire mesh traps. Both rabbits and squirrels have also been trapped. On rare occasions a Cooper's hawk or other raptor will try to prey on trapped birds. Traps are checked frequently to minimize raptor predation.

Most Doves Trapped Are Juveniles

The Refuge has on average banded over 150 doves per year. There is an increase in doves banded over time as banding sites and techniques were improved. In each of these years the Refuge banded more doves than any other location in New Jersey. About 70% of the doves that were trapped and banded are hatch year or juvenile birds. Hatch year birds are still learning to feed themselves. They are less wary and are probably hungry. This makes them more susceptible to being trapped. Some hatch year doves are trapped four or five times. These doves are either very dumb for repeatedly being trapped or very smart because they enjoyed a lot of free meals and knew that someone would free them in less than an hour.

Adult males were trapped more frequently than adult females. Adult females are difficult to trap as they are tending to their nests during the band-

ing season. On average only about 10% of the trapped doves were adult females while about 20% of the trapped doves were adult males.

A Small Number Are Recovered

The Refuge has banded a total of 540 doves in the 2009 to 2012 period. Eleven of the doves (2.0%) have been recaptured or recovered in subsequent years. Most were recaptured at the site where they were originally banded and released. One dove was recovered by a hunter in South Carolina. Pennsylvania bands 2,500 doves across the state annually. They always get recoveries from the southern states. It appears that doves in New Jersey have fewer tendencies to migrate based on the recapture and recovery data of doves banded at the Great Swamp. Interest in a dove hunting season seems to have waned in New Jersey and the future of this program is uncertain at this time.



Federal Law Enforcement Officer Mike McMennamin (shown above with volunteer bander) deserves many thanks for his participation in this program. Mike trapped and banded most of the doves in the last two seasons during his off-duty hours. Thanks also to Lou Pisane for the many contributions he made to the dove banding program over the last five years.

WHITE-TAILED DEER MANAGEMENT AT GREAT SWAMP NATIONAL WILDLIFE REFUGE

By Dorothy Fecske, Wildlife Biologist, Great Swamp National Wildlife Refuge

Managing the white-tailed deer herd continues to be a priority for the staff at Great Swamp National Wildlife Refuge. Deer are an integral part of the wildlife resources found at the Refuge and serve important ecological functions but, like all things in nature, need to be in balance with their environment. At high densities, deer can reduce the quality of the forest for many species that depend on healthy native understory vegetation.

Deer prefer woodlands interspersed with early successional or edge-type habitats. Staff maintain about 1,300 acres of open or brushland habitat in the Refuge's Management Area. Activities that create or maintain forest openings not only benefit deer, but also many other species like the blue-winged warbler, American woodcock, northern harrier, and Indiana bat, to name a few.

When deer are in balance with their environment, habitats for these species as well as other forest dwelling species, like

wood thrush, barred owls, scarlet tanagers, and wood turtles, are much healthier. When deer numbers are too high, over-browsing can eliminate the woody and herbaceous understory layer in forests, including seedlings and saplings of canopy trees. Rare plants may disappear and the understory vegetation may either be lost entirely or become dominated by less palatable, invasive plants.

The main goals of the Refuge Deer Hunt Program are to:

1. maintain the deer herd at a density that allows for a diverse and healthy forest,
2. manage for all age classes of deer to preserve a natural social structure,
3. provide a safe and high-quality outdoor experience for Refuge deer hunters. The Refuge strives to maintain a moderate density of about 20 deer per square mile. Hunters provide an important service by keeping deer numbers in check.



A healthy, mature male deer at Great Swamp National Wildlife Refuge. This photograph was an entry in an annual Refuge Friends Group Photo Contest. Photo courtesy of W. Bell.

The deer herd is monitored annually through a pre-hunt spotlight survey and from biological information collected on harvested deer at the Refuge deer check station. Deer numbers are down since the August 2011 epizootic hemorrhagic disease (EHD) outbreak in New Jersey. EHD is a fatal viral disease spread by a biting midge that thrives in wet conditions. Most cases occur during late summer and early Fall coinciding

with peak midge populations. Herds impacted by the disease usually take a few years to recover to pre-outbreak levels.

Despite low numbers, there are some indications of a population turnaround. More adult does were observed during the 2013 spotlight surveys and hunter success was greater (indicating more deer on the landscape) this past season. Anecdotal information also supports increasing numbers. Many hunters in 2013 actually reported seeing deer and were passing up does to get a buck; the previous two years most hunters reported seeing very few or no deer while hunting.

In response to the low deer numbers, in 2012 Refuge staff adjusted the harvest strategy and bag limit. For the past two years, the Earn-a-Buck Program for shotgun hunters has been done away with, and the bag limit was reduced to one deer of either sex per hunter. The purpose was to reduce pressure on the adult does in order to increase the number of fawns born the following spring. Plans are to continue with this conservative approach in 2014 and closely monitor the population for further signs of recovery.

Staff and Friends group volunteers also are taking advantage of the low deer numbers to carry out habitat restoration activities on the Refuge, as new plantings typically are highly susceptible to herbivory by deer. Last spring, more than 150 native trees and shrubs were planted in areas where invasive barberry had been removed and at old homestead sites reclaimed by the Refuge. With careful management, white-tailed deer, along with many other native species, will continue to thrive on the Refuge in a balanced way that sustains these populations long-term.

"To those devoid of imagination a blank place on the map is a useless waste; to others, the most valuable part."

—Aldo Leopold

MEMBERSHIP DOLLARS & DONATIONS AT WORK—HIGHLIGHTS FOR FISCAL YEAR 2014

In September, Friends Board members met with Refuge staff to discuss potential projects and programs for Fiscal Year 2014. These annual meetings are an opportunity to review Refuge-identified funding needs and volunteer opportunities. Following this Joint Planning Meeting, the Board reviewed these projects and subsequently approved a budget for the coming year. Here are some of the highlights.

GARDENKEEPERS

Native Plant Gardens (\$2,000): In order to provide educational opportunities and to reduce mowing, this group will continue to maintain, enhance, and expand native plant gardens, adding improved labeling and interpretive materials. Volunteers are always welcome.

HABITAT AND WILDLIFE

Habitat Restoration Project (\$8,000): This project, now in its second year, provides funding for two habitat interns, tools, and the purchase of native plants for habitat restoration. Following a great deal of invasive plant removal work, last year's interns prepared a restoration plan for the Overlook area. Volunteers will implement that plan this spring. The 2014 interns will monitor the new plantings during the summer and prepare an area and a plan for 2015. The Friends are working closely with Refuge Biologist Dorothy Fecske to identify areas for restoration efforts. These projects always call for significant amounts of volunteer help!

Turtle Research Project (\$12,000): For the fourth year, the Friends will fund the exciting, ground-breaking turtle research project with Dr. Kurt Buhmann and the "head-start" wood turtles. Join us on May 24 to welcome the turtles home!

Biology Intern (\$4,700): In addition to the two habitat interns mentioned above, the Friends will fund one biology intern for the 11th year in a row. Instead of the usual 12 weeks, this intern is being funded for 20 weeks to provide continuity and for monitoring of the wood turtles hatchlings and head-starts released as part of the Turtle Research Project.

Waterfowl Research Study (\$20,000): Although the entire cost of this study was included in last year's budget, the second year of the two-year project will continue in 2014. The two graduate students conducting the research will present a program on June 8 with research data, progress, and findings. Join us to learn more about these fascinating studies.

VISITOR SERVICES

Bockoven Trail (\$20,000): With Refuge budgets tight, the Friends have agreed to fully fund the construction of an ADA compliant section of the Bockoven Trail. This will include an interpretive sign, platform, and bench overlooking the vernal pool as well as two interpretive signs for the trailhead kiosk.

New Trail at Visitor Center (\$2,000): A new trail is being planned on the east side of Pleasant Plains Road opposite the Visitor Center. Due to decreases in government budgets, Friends will provide funding and volunteer assistance.

Wildlife Observation Center (\$5,000): After many years of use, the interpretive panels in the kiosk need updating and a fresh look. The Friends will fund three new panels.

50-50-15 Celebrations (\$3,500): The Friends will be providing funding for some of the special celebrations and events around the significant milestones of 2014.

SPRING IS A GREAT TIME TO VISIT GREAT SWAMP NATIONAL WILDLIFE REFUGE

MID-MARCH Listen for the "peent" call of the American woodcock, especially along Pleasant Plains Road, and for the "quacking" sound of the



wood frog, especially at the Wildlife Observation Center. Look for Northern

water snakes basking on tussock sedge hummocks and painted turtles lined up along logs in pools and ponds.

EARLY APRIL The migrating birds are starting to arrive. Look for the Eastern phoebe with its "wagging" tail as it calls its name. Mourning

cloak butterflies overwinter as adults, so they start flying



early. That bright yellow flower in the woodland is the trout lily—one of the first of the early spring wildflowers.

MID-APRIL The songbird migration is picking up. The Eastern kingbird arrives with the distinctive terminal white band on its tail. Early warblers can be seen—a black-and-white or the tail-wagging palm warbler. Spring beauties carpet the ground with their delicate pink-striped flowers.

EARLY MAY It's the peak of spring songbird migration. The woods are full of colorful warblers and the sound of the veery and wood thrushes. Some will stay and nest—others are just passing through. Spring ephemeral flowers are giving way to more showy summer flowers—golden ragwort, the spectacular pinxter azalea, the blue flag iris, the floating yellow spatterdock.



The Visitor Center is a great place to start. Check out

eBird Trail Tracker to find out what birds are being reported on the Refuge. Walk the Bockoven Trail—listen to the spring peepers and wood frogs in full chorus. Tour the Nature Detective Trail—not just for kids.

Beginning in mid-March, volunteers will be at the Wildlife Observation Center to help answer questions. If you have children between the ages of 5 and 12, it's a great time to get started on the Junior Refuge Manager Program and earn an official badge.

Don't wait—spring is full of wonder—but so fleeting.

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

BECOME A FRIEND—OR GIVE THIS WONDERFUL GIFT TO FAMILY OR FRIENDS

- | | | |
|--|---|--|
| <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 _____
 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



Friends of Great Swamp
National Wildlife Refuge

THE SWAMP SCENE MARCH 2014

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.