



the Swamp Scene

friends of great swamp national wildlife refuge

ISSUE THIRTY SIX

MAY 2011

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IT'S OFFICIAL—BLUEBIRD PARKING LOT

By Laurel Gould

Long-time visitors still call it the “old bookstore & gift shop”, as in “where the old Friends bookstore used to be”. Refuge staff refer to it as “Q99” (Q for Quarters). But the building has been gone for a year now and the area looks entirely different with an outdoor restroom and a new kiosk. As it is still a designated meeting place for refuge activities and various events, a new name was needed. What could be more fitting than Bluebird Parking Lot.



WHY BLUEBIRD YOU ASK? This parking lot is the first stop on the Wildlife Tour Route highlighting the nearby nest boxes for the Eastern bluebird and the field habitat which supports this species and others. Periodic mowing by refuge staff interrupts natural succession by preventing the growth of shrubs and trees. The grasslands maintained here provide good habitat for rodents, snakes, frogs, and insects. These fields are used by hawks and owls for hunting, by American woodcock for courtship, and for nesting songbirds—like the Eastern bluebird.

Bluebirds are one of the great success stories at Great Swamp. The Wildlife Tour Route brochure notes that “in 1976 only three nesting pairs of bluebirds were reported on the Refuge. Today, with 150 nest boxes, the Refuge supports one of the largest breeding populations in New Jersey.” What a great way to recognize and publicize this refuge success story.

Before the refuge acquired this property in the 1960s, it was a private residence and horse farm. The building was renovated and served as Refuge Headquarters for many years until the new headquarters building was constructed. It then served as refuge housing, dorm rooms for seasonal staff, and refuge office space. From 2000, until our move to the Helen C. Fenske Visitor Center in 2009, the Friends used the building for our Friends Bookstore & Gift Shop, welcoming thousands of weekend refuge visitors.

The Bluebird Parking Lot boasts a new kiosk purchased by the Friends. One kiosk panel displays the Refuge map for visitor orientation. A new interpretive panel is being developed which will highlight habitat management practices, the wildlife which thrive here, and of course the Eastern bluebird. The kiosk includes a central bulletin board where event flyers and notices can be posted. A memorial bench has been donated to the Friends and provides a place to sit and look out over the fields. There is an outdoor restroom (temporarily closed for repair). The fencing will be replaced and the Friends' GardenKeepers committee will be doing some landscaping with native plants. In its new life, the Bluebird Parking Lot will become a great place for visitors to park—and bird along Pleasant Plains Road, ride a bicycle, jog, or just enjoy a leisurely walk.



FRIENDS NEWS & UPDATES

INTRODUCING... NEW BOARD MEMBER RICH DUFORT

Rich Dufort grew up in Minneapolis, Minnesota, graduated from the University of Minnesota with a BA in Mathematics and an MS in Operations Research. Between the two degrees, Rich served three years as a Peace Corps volunteer in the Philippines teaching high school mathematics and working in economic development.

Rich came east to work for then Esso International in New York as a Marketing Analyst. He eventually found his way to New Jersey, still with what became Exxon, working with computer systems, where he spent most of his career. Rich was fortunate to be assigned to Rome, Italy, for three years, where among other things, he learned to speak what he says is still pretty good Italian. Rich retired from an Exxon/Shell joint venture in 2003.

Since retirement, Rich has been an active volunteer at Great Swamp NWR. His volunteer activities include greeting visitors at the Wildlife Observation Center and at the visitor center, assisting with the annual refuge deer hunt and with Indiana bat surveys, and helping with roadside and homestead clean-ups. For the last two years, he has co-lead an invasive plant eradication program in the refuge. During the winter off-season, Rich volunteers in the VITA/TCE low income tax preparation program. Rich is also a graduate of Rutgers Cooperative Extension Environmental Steward and Master Gardener programs. Rich has two sons and two grandchildren, residing in New Jersey and Minnesota.



Rich Dufort (center) working with volunteers

MEMBERSHIP DOLLARS & DONATIONS AT WORK THANK YOU!

- I**t's been a busy year so far, with several Friends' sponsored projects completed and even more in the works!
- Three new Refuge map panels were purchased and have been placed in the kiosks at the Wildlife Observation Center, Overlook, and Bluebird Parking Lot.
 - The new kiosk has been installed by refuge staff at the Bluebird Parking Lot (see cover story).
 - Cameras have been mounted inside two nest boxes just outside the visitor center; we purchased a monitor which is set up in the Exhibit Room so visitors can view nesting activity of bluebirds or tree swallows.
 - Funding has been approved for two summer interns.
 - DonorSnap software has been selected to manage and integrate membership, volunteer, and donor records.
 - Signage for the new Nature Detective Trail is being developed and fabricated for fall placement.
 - The Wildlife Tour Route brochure was updated and re-printed.
 - The butterfly garden at the visitor center is in progress and native plants are being purchased and planted.

We couldn't do it without your support! Thank you!

VOLUNTEERS NEEDED! CAN YOU HELP?

As you know, the Friends is an all-volunteer organization and as we continue to expand our projects and programs, we find we need more and more volunteer help!

Volunteering is fun—it's easy—and it's incredibly rewarding. You can help support this special place; share your enthusiasm and appreciation for the refuge; spread the message about the value of natural places; expand your knowledge and enrich your life.

- Variety—there are many kinds of volunteer opportunities.
- Flexibility—volunteer a few hours a month—or more!
- Experience—none needed! You'll learn "on-the-job"—from staff, fellow volunteers, and visitors.

It's easy to get started.

- Pick up a form at the visitor center or drop by the Wildlife Observation Center and talk to volunteers there.
- Check out our web site.
- Just show up at one of the scheduled events.
- Come to Volunteer Orientation, August 27, 2011.

Volunteers are so important—won't you help?

AROUND THE REFUGE... WITH DEPUTY REFUGE MANAGER STEVE HENRY

PERSONNEL – MORE COMINGS AND GOINGS FOR THE REFUGE

Craig Bitler, the refuge's long-time Wildlife Biologist, will retire in June. Craig started at the refuge in 1991 and has played a leading role in running the deer hunt and in invasive species control. He is probably best known to most of the volunteers for the semi-annual homestead cleanups. Tony Cullen, Maintenance Worker, will be leaving in July for graduate school in Texas. Tony started with the refuge in 1993 as a Youth Conservation Corps student and has held various positions at the refuge since then. Both employees contributed tremendously to the refuge and will be greatly missed. We plan to have both positions filled by the end of the summer.

We will have three interns at the refuge this summer; two will focus on biology and the third will split her time between biology and visitor services. The Friends will fund two of the interns and the third will be funded by a donation from the Mushett Foundation. The refuge may have a fourth intern to focus on establishing a monitoring program to improve stewardship of the Wilderness Area.

COMPREHENSIVE CONSERVATION PLAN (CCP)

CCP experts meetings focusing on biological and public use alternatives were held in March. Both meetings were well attended and the discussion was very productive. We are currently reviewing the results and developing draft management alternatives from the feedback we've received so far from the public and from these meetings. The second issue of the CCP newsletter was published in March with a summary of the public comments received and a timetable for upcoming tasks, including: Wilderness Review, where lands are assessed for their potential to be added to the refuge's Wilderness Area, and a review of refuge appropriateness and compatibility determinations for refuge uses. The draft CCP and additional public meetings are tentatively scheduled for early 2012 with completion of the Plan targeted for the spring of 2012. If you are interested in staying informed on the CCP, contact Refuge Headquarters and ask to be added to the mailing list (973-425-1222). Current information may also be found under the CCP link on the refuge's website.

ROADS AND INFRASTRUCTURE: Plans are being developed to spend \$124,000 in remaining transportation funds including repaving the road from South Gate to Headquarters driveway, cleaning ditches, and regravelling part of Pleasant Plains Road. We're also looking into a drainage problem at the mouth of the driveway at the Wildlife Observation Center. The pipe running under the road is clogged and needs replacement. This will require careful planning to minimize impacts on visitors and traffic along Long Hill Road. Refuge headquarters is scheduled to undergo energy efficiency upgrades to the heating and lighting systems. A solar system is also being designed for the roof but will be held pending funding.

PUBLIC USE: The second and final round of sampling for the national Visitor Service Survey was conducted from April 23 – May 7. The initial survey, held last fall, was very successful and results should be received shortly. Both surveys will pro-

vide valuable input in formulating CCP alternatives. This national survey provides a better understanding of visitors' recreational, educational, and informational experiences and will measure satisfaction with current services, access, and facilities. The refuge staff are looking at all of the informational road signs around the refuge and already, this spring, the "Entering" and "Leaving" signs on Long Hill Road were replaced. A new sign indicating that the refuge is open from sunrise to sunset was installed on the visitor center access road. On May 7, the staff gave a tour to Congressman Frelinghuysen's Youth Advisory Council. This is the second year we have been asked to provide a tour for these high school seniors.

HABITAT MANAGEMENT: Despite having the specialized brush-land mower, a hydro-ax, for only a week this year, staff were able to treat 43 acres, nearly 75% above our goal for the year. Some of the acreage, including the field across from the visitor center, was cut with a smaller piece of equipment borrowed from the Long Island NWR Complex.

Another Busy Year for Invasive Plant Control: Refuge staff and Friends will become more actively involved in Early Detection/Rapid Response (EDRR) this season. EDRR is a strategy to stop new invaders before they become established. Great Swamp was selected as one of six refuges in the northeast region to participate in an EDRR pilot program. Specialists will provide training to staff, volunteers, and partners in early May. We'll continue to work closely with the NJ Invasive Species Strike Team as well. The Friends invasives group will continue to work twice a month through September to control invasive plants on lands surrounding the visitor center and along trails in the Wilderness Area. The Great Swamp Watershed Association recently sponsored two corporate work groups who spent a day each cutting invasives along the Orange Trail. We also plan to release additional biocontrol insects for purple loosestrife and mile-a-minute.

POPULATION MANAGEMENT: Turtle research will continue this summer thanks to generous support from the Friends. Intensive monitoring of the artificial nest mound will be done during nesting and hatching periods. Radio-tracking of wood turtles continues to provide valuable insights in habitat use and movement patterns. Bog turtle populations are also monitored and the refuge will continue to collaborate with PSE&G on bog turtle habitat restoration and monitoring. Due to lack of funding, for the first summer since 2005, no Indiana bat research will be conducted. This is a shame given the steep decline in bat numbers likely caused by White-Nose Syndrome. Volunteers continue to do an excellent job overseeing the refuge's wood duck and bluebird nest box programs. Screech owls found in wood duck boxes during annual maintenance continue to be banded. The refuge received an award this year in recognition of banding more mourning doves than any other refuge in the northeast region. This work supports the National Mourning Dove Banding Program. Thanks to volunteers Lou Pisane and Leo Hollein for their hard work in running this banding program for the refuge.

THE EASTERN BOX TURTLE

By Leo Hollein, Volunteer & Colin Osborn, Biological Technician, GSNWR



The only totally terrestrial turtle in the Great Swamp National Wildlife Refuge is the eastern box turtle (*Terrapene carolina carolina*). While it can swim, it basically spends its life on land. It seems that box turtles were once quite common. This recollection is confirmed in the literature as box turtle populations have been reduced in half since the 1940s in several study areas.¹

Box turtles are slow to reach sexual maturity taking 7 to 10 years on average,² they lay few eggs (3 to 8 per clutch), and they are long-lived (40 to 50+ years). Once they grow to about five inches and are able to encase themselves in their shell, they are essentially safe from natural predators. Their greatest threat comes from being run over by road traffic. It takes an extended period to replace an adult that has been crushed by a car. If you see a turtle on a road, please take a moment and move it off the road to safety. **Always move the turtle to the side of the road to which it was headed.**

All the other turtles in the refuge hibernate in or near water. Box turtles usually hibernate underground in natural dens or by excavating holes in soft soil. Box turtles, like other turtles, are known to sometimes hibernate in groups. Box turtles have a range of a few hundred meters where they spend the bulk of their lives. Within this range they have a hibernaculum (winter shelter). They may need to leave their territory, however, to find a suitable nesting site. It is important never to remove a box turtle from their territory or eventually to return it

where it was found. If the box turtle cannot find its hibernaculum or a suitable alternative, it could freeze to death in the winter.

BOX TURTLES DISPLAY A VARIETY OF PATTERNS

Adult box turtles have a variety of patterns on their highly domed carapaces (top shell). These bright and varied patterns of radiating lines, spots, bars or irregular blotches are usually either all orange or yellow but also can be red on an individual turtle. A box turtle plastron (lower shell)



is shown above. The plastron is tan to dark brown/black or any mixture in between. It has a single hinge which enables the box turtle to completely enclose itself in a defensive posture that protects it against predation. The plastron fits snugly inside the larger carapace. This special feature gives the box turtle its name.

In most male box turtles the iris of the eye is red. In females the iris is usually yellowish brown. As in most turtles the posterior of the plastron is slightly concave in the male and slightly convex or flat in the female. The claws on the male's hind feet are fairly long and quite curved. Those of the female are shorter and straighter.

In the photo of the plastron above, you can see the growth lines called annuli on a plastron scute (the segments that compose the shell). Like their name implies, one new line is produced on a

scute each year. Just as with trees, it is possible, up to a point, to age a turtle by counting their annuli.² Once they reach maturity, however, most box turtles stop producing annuli. Therefore, a box turtle with 20 annuli could be 50+ years old. On very old turtles the plastron can be worn smooth and the growth lines may not be visible at all.

HATCHLINGS DO NOT RESEMBLE ADULTS

The photo below is a hatchling box turtle that was recovered from a protected nest. The nest was covered with wire mesh and staked down to prevent predators (raccoons, skunks, foxes, etc.) from raiding the nest and eating the eggs. Unlike most other turtles the hatchling does not resemble a mature adult. Hatchling box turtles have a dull brown carapace with a pale yellow spot on each large scute. The plastron cannot close up like an adult. The dull carapace provides some camouflage. Even if the hatchling could enclose itself in its shell like an adult this would not provide any protection because of its diminutive size. A predator would likely swallow an entire box turtle hatchling.

Hatchling and juvenile box turtles are seldom found. The young immediately take shelter and hide in vegetation or beneath debris. The box turtle is omnivorous. When young, it is chiefly carnivorous feeding on snails, slugs, centipedes, caterpillars, beetles, spiders and worms. Adults become more herbivorous and supplement their diets with fruits, seeds and fungi even those that are poisonous to humans. (continued on next page)



EASTERN BOX TURTLE *(continued from page 4)*

BOX TURTLE POPULATION IS BEING MONITORED

Colin Osborn, refuge Biological Technician, has been gathering data on box turtles throughout the refuge since 2008. When a box turtle is found, it is photographed, weighed, measured, sexed, and aged. The location where it was found is recorded via GPS. The turtle is then marked to identify it if it is found again. This is done by filing a unique pair of grooves on the scutes on outer edge of the carapace. Making these grooves is painless for the turtle.

Eighty box turtles have been found to date: 27 adult males, 34 adult females, 8 juveniles, and 11 hatchlings. Approximately 10 box turtles have been recaptured. All recaptured turtles were found in the vicinity where they were originally located. A radio-transmitter was placed on a female box turtle in October of 2009 and she has been tracked ever since. She has always been found within the same several hundred meter square area. She has also used the same hibernaculum each of the past two winters. These behaviors are consistent with those described in the literature.

The survey data will give a good indication of the density of box turtles in the refuge. In time it will provide information on box turtle population dynamics, growth rates, survival rates and longevity. This type of information is especially valuable because box turtles continue to decline throughout their range due to habitat loss and fragmentation, road mortality, and illegal collection. Eastern box turtles are currently listed as a species of special concern in New Jersey.



Notes:

- 1 - C. H. Ernst, J. E. Lovich & R. W. Barbour, *Turtles of the United States and Canada*, Smithsonian Institution Press.
- 2 - K. Buhlmann, T. Tuberville & W. Gibbons, *Turtles of the Southeast*, Wormsloe Foundation Nature Book.

FRIENDS BOARD MEMBERS TRAVEL TO CAPE MAY NWR

By Kathy Woodward; photos by Joe Alvarez

On April 1, 2 and 3, 2011, Terry Carruthers, Karen English, Kathy Woodward and Laura Nally joined Friends representatives from the four other New Jersey National Wildlife Refuges (Cape May, Forsythe, Supawna Meadows, and Wallkill River), as well as John Heinz NWR and the newly established Cherry Valley NWR from Pennsylvania for a weekend of sharing.



Organized by the Friends of Cape May NWR and held at the Wetlands Institute, Stone Harbor, the activities included morning bird walks and a pot luck dinner. On Saturday, each Friends group discussed their current "best activities" and volunteer projects.

These get-togethers, held every year or two, are another way for your Friends' Board members to learn and to continue to bring new and interesting ideas to Great Swamp NWR.



CHECK OUT THE NEW! FRIENDS WEBSITE

The Friends have a new website! Same web address—totally new and different look. There are lots more photos—including many from past photo contests, descriptions of things to do while visiting the refuge, and news about the Friends and the refuge. Current bird sightings on the refuge are downloaded automatically from the eBird Trail Tracker kiosk and are highlighted on the front page of the web site, with continuous updates.

We've added online payment options for new and renewal memberships and for commemorative brick orders. The six-month Calendar of Events is available as well as our volunteer sign-up links. Volunteers at the Wildlife Observation Center, the Visitor Center, and at Outreach events can use these links to sign up for volunteer opportunities online.

Check it out—and let us know what you think!

NEW VISITOR SERVICES STAFF ARRIVE AT GREAT SWAMP

By Laura Nally

There are two new Visitor Services staff at Great Swamp National Wildlife Refuge.

Jonathan (Jon) Rosenberg and David (Dave) Sagan joined the refuge in January and part of their responsibilities will be working with the Friends.

Jon has an extensive background in visitor services and conservation activities in New Jersey, from Department of Defense, US Navy at Lakehurst Naval Station to Morris County Park Commission as Director of Visitor Service. Dave comes to NJ from Massachusetts where he had a number of assignments, most recently working as a Park Ranger at Silvio O. Conte National Wildlife Refuge.

Jon and Dave have been on board for a few months so I took the opportunity to sit down with them to get some of their impressions of the Friends and Great Swamp and to find out a little more about each of them.

LAURA: What is it that motivated you to join U.S. Fish and Wildlife Service and the National Wildlife Refuge System?

JON: I've always had an interest in wildlife and the out-of-doors. I grew up in West Orange and at that time had access to four acres of woods and streams where I searched out the snakes, turtles, and frogs. There were other open areas close by to explore and I often visited Turtle Back Zoo. I received a Masters in environmental management—the refuge system provides a great opportunity to do things I enjoy.

DAVE: Ever since I can remember I wanted to work for a conservation agency in some aspect or another. I have always had a passion for wildlife and the outdoors so the refuge system is a perfect fit. I enjoy working with U.S. Fish and Wildlife Service because I am working with people who have a real passion for the environment.

LAURA: What opportunities do you envision to enrich or impact the experience of visitors and for wildlife and habitat?

JON: Continue the programs now in place and add more special events and programs. I would like to see some demonstrations like fly-fishing and expand environmental education programs to schools. Habitat and wildlife initiatives will be



Jon Rosenberg (left) & Dave Sagan (right)

driven by the Comprehensive Conservation Plan.

DAVE: I want every visitor to walk away with the message that we are a small part of a much larger system—whether we are one refuge out of a system of 553 or one person who can make a difference by doing their part to help the environment. If everyone does something, even if it seems insignificant, it can have a large impact.

LAURA: What challenges do you see facing the system and especially Great Swamp NWR?

JON: The Federal budget, the economy, visitation, and staffing levels. Pollution and development in the surrounding areas could impact the watershed and could threaten the refuge.

DAVE: With the downturn in the economy and less funding, the challenge is to make sure that the U.S. Fish and Wildlife Service keeps moving ahead and continues to be a leader in conservation efforts.

LAURA: Is there anything you would like to see the Friends become involved in?

JON: The Friends should be vigilant to identify threats of development, or master plans and local ordinances in the area that could negatively impact the refuge.

DAVE: I am impressed at the number of things that the Friends do and are involved with on the refuge. I love calling other refuges and bragging how involved our friends are here at the swamp!

LAURA: Do you have any hobbies or interests that you like to do in your "free" time?

JON: I like reading, hunting, fishing and hiking—anything that gets me out of doors with nature.

DAVE: All of my hobbies involve enjoying the out-of-doors—backpacking, rock climbing, fishing and hunting.

The Friends are pleased to have the opportunity to work with Jon and Dave. If you have not yet met them, stop by the visitor center—one of them is almost always there!

"The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired in value."
 — Theodore Roosevelt

A NEW COLLABORATIVE PARTNERSHIP

By Laurel Gould and Steve Henry, Deputy Refuge Manager

When Great Swamp Greenhouses first began their business on New Vernon Road, Gillette, the trees on Great Swamp National Wildlife Refuge, which borders their property, were just saplings. In the ensuing 30 years, they have grown into large trees which now partially shade the greenhouses leading to reduced growth rates and disease problems for the plants growing inside. Julie Siciliano, Greenhouse Manager, approached the refuge about removing nearby trees on refuge land in order to increase the amount of sunlight reaching their greenhouses.

Deputy Refuge Manager Steve Henry's first reaction to the proposal was negative, not seeing any benefit to the refuge in the removal of trees. After further thought and discussion however, a plan was developed to replace the trees with a diverse garden of native shrubs. Such a garden would eliminate the shading problem, improve wildlife habitat, especially for birds, and provide an opportunity to educate the public about the value of native plants. A partnership was born and the native shrub garden is now starting its second growing season.

With assistance from biological staff with the U.S. Fish and Wildlife Service's

New Jersey Field Office, a dozen native deer-resistant shrub species with high wildlife value were selected. The shrubs were planted last year and interpretive



signs were installed to educate the public about the value of landscaping with native species and potentially expand the local market for such plants. To further encourage birds and wildlife, brush piles were left, intermixed among the shrubs, and selected trees, such as pin oak, were left standing for food and structure. Bird houses will be installed this spring.

Visitors will be able to see the various native shrubs in a naturalized habitat, look at photos of the species in each of three seasons, read about the species' value to wildlife, and then, should they choose, shop for these or other native plants that are being stocked at Great Swamp Greenhouses.

Julie Siciliano notes that their objective is to provide more native plants and to provide alternatives for commonly planted non-native, frequently invasive, landscaping plants. It's important, she says, to educate people on the value and benefits of planting native species.

On Saturday, May 21, Great Swamp Greenhouses and Great Swamp National Wildlife Refuge will hold a "Celebration of Collaboration" at the greenhouses. The program will include remarks by Deputy Refuge Manager Steve Henry and Justen Beneduce representing Great Swamp Greenhouses. Also on hand for the program will be Barbara Nadolny from New Jersey Audubon Society, native plant expert Jim Shepard, and Jim's wife, professional storyteller Doreen Shepard who will present a program for children.

"What seemed like a crazy idea at first has developed into a winning project through a little creativity and teamwork. The greenhouse benefits from improved growing conditions and potentially greater sales through an expanded market for native plants. The refuge benefits from improved wildlife habitat and an educational opportunity that may prevent the ecological damage caused by tomorrow's Japanese barberry or purple loosestrife" said Steve Henry.



The Dozen

1. Serviceberry (*Amelancier canadensis*)
2. Red chokeberry (*Aronia arbutifolia*)
3. Black chokeberry (*Aronia melanocarpa*)
4. Sweet pepperbush (*Clethra alnifolia*)
5. Red osier dogwood (*Cornus sericea (stolonifera)*)
6. Witchhazel (*Hamamelis virginiana*)
7. Winterberry (*Ilex verticillata*)
8. Spicebush (*Lindera benzoin*)
9. Bayberry (*Myrica pensylvanica*)
10. Arrowwood (*Viburnum dentatum*)
11. Nannyberry (*Viburnum lentago*)
12. American cranberrybush (*Viburnum trilobum*)

THE YELLOW WARBLER—A SUMMER RESIDENT AT GREAT SWAMP

Story and photos by Leo Hollein

The yellow warbler (*Dendroica petechia*) is the most widespread of all the nesting warblers in North America. It is also the most common nesting warbler in the Great Swamp National Wildlife Refuge. This neotropical migrant arrives in the refuge like clockwork every spring in the third week of April. The bright yellow male, marked with distinctive vertical red streaks on its breast, sings its "swee swee ti ti sweet" song loudly and often to claim his territory. The female is also primarily yellow. She is duller than the male and lacks the red breast striping.

The yellow warbler nests in brushy or shrubby areas adjacent to water. This type of wet, brushy habitat is abundant in the refuge. The nest is built in the central crook of a small tree or the branches of a bush. It often nests in multiflora rose bushes, not far off the ground. As shown there are four pale aqua eggs with large brown splotches. The nest is a fine weave of thin strands of vegetation. Only the female broods the eggs. The male feeds her while she is on the nest. The eggs hatch in about 12 days. The hatchlings fledge in about another 12 days. This timing minimizes the opportunities for predators to raid the nest. In contrast Eastern bluebirds nest in the relative safety of nest boxes on the refuge. Bluebirds brood their eggs for 14 days before they hatch. The young bluebirds are fed in their nest for about 19 days before they fledge.

Both yellow warbler parents feed insects to their young. Yellow warblers raise only one clutch per breeding season. Cowbirds commonly lay their eggs in yellow warbler nests, how-

ever, yellow warblers recognize the foreign eggs and take appropriate measures to prevent them from hatching. They will enlarge their nest to cover the cowbird egg and lay another clutch of their own eggs.

Yellow warblers depart for their winter homes in the Caribbean, Central and South America in late July to early August.



2011-2012 FEDERAL DUCK STAMP GOES ON SALE JUNE 24



We have a unique treasure here in the United States of America. It's called the National Wildlife Refuge System, more than 150 million acres of public lands set aside for wildlife. There are 553 national wildlife refuges, at least one in every state. Refuges not only provide critical habitat for wildlife, they also offer unparalleled wildlife oriented recreational opportunities for visitors. Great Swamp National Wildlife Refuge is one of five national wildlife refuges in New Jersey.

You can help support this national treasure by buying a Federal Duck Stamp. Proceeds from the sale of stamps are used to purchase land for the National Wildlife Refuge System. A current duck stamp may also be used for free admission to refuges.

*Duck stamps are sold at Refuge Headquarters and at the Friends Nature Shop.
Support your national wildlife refuges—buy your duck stamp this year!*



The 2011-2012 Federal Duck Stamp will feature a pair of white-fronted geese by artist James Hautman

WILD FACTS ABOUT GREAT SWAMP NATIONAL WILDLIFE REFUGE WILDERNESS AREA

Story by Kathy Woodward; photos by Laurel Gould

Fact #1: In 1964, the United States Congress passed the Wilderness Act, in response to rapid development of land across the country. It took almost 4 years to write regulations and design the criteria and process for applications and approval of Wilderness status.

Fact #2: Parts of the Wilderness Act read more like prose than legalese. Phrases from the Act:

That lands "shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness."

"A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."

An approved Wilderness area "has outstanding opportunities for solitude or a primitive and unconfined type of recreation."

Fact #3: Supporters of the newly created Great Swamp National Wildlife Refuge, who had successfully fought the Port Authority of New York and New Jersey, wanted the additional legal protection that Wilderness status for the eastern portion of the Refuge would offer to the Refuge.

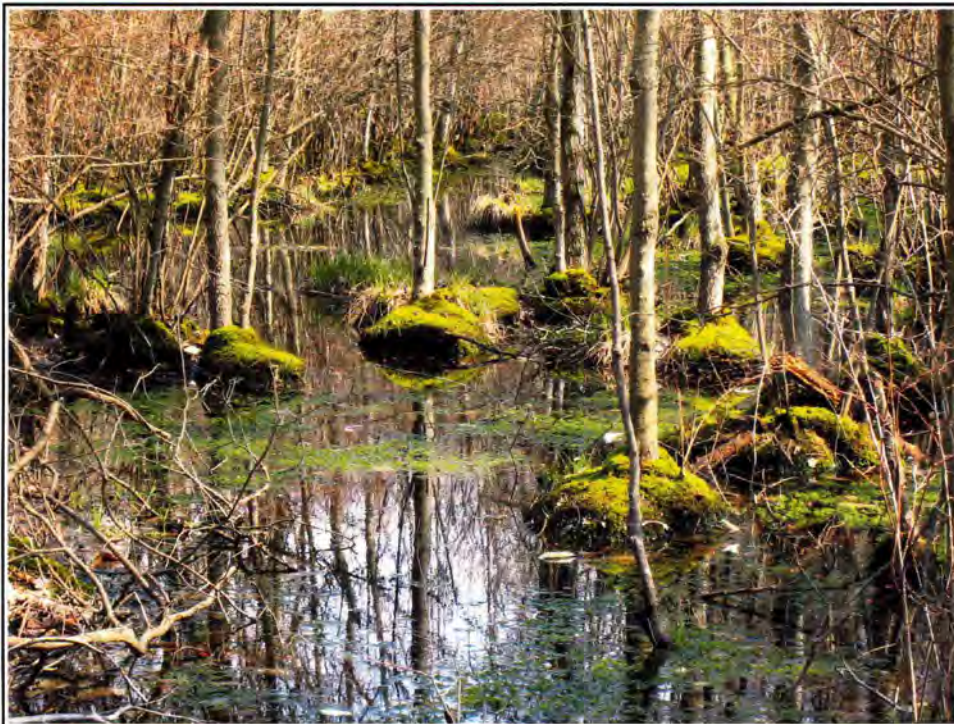
Fact #4: Local communities and Refuge staff cooperated to eliminate barriers to attain Wilderness eligibility from Congress. In 1967, over 1,000 people attended the public hear-

ings and over 6,000 letters were written supporting Wilderness designation. Towns agreed to remove existing roads and homesteads were demolished.

Fact # 5: In 1968, GSNWR's 3,000 acres became the first approved Wilderness Area in the Refuge System and the first area east of the Mississippi River under the Wilderness Act.

Fact # 6: Surrounded by suburban communities and the actively managed half of the Refuge, the Wilderness Area is a true contrast to its surroundings, as envisioned by the Wilderness Act.

Fact #7: There are many different rules in the Wilderness Area. Except as provided for in the Act, no permanent or temporary roads, motorized equipment or vehicles, or structures are permitted. There are 8.5 miles of marked trails in the Wilderness Area, but the entire area is open for off-trail hiking from sunrise to sunset.



Fact #8: In the Wilderness Area, "nature takes its course" although staff and volunteers help control invasive species using appropriate tools and techniques.

Fact #9: Parking lots at the four trailheads for the Wilderness Area are intentionally small, to help preserve the wilderness character of the natural landscape.

Fact #10: A group of volunteers maintain the trails in the Wilderness Area by walking their assigned route several times a year. Using the guidelines for wilderness experiences, they keep the paths safe for walkers by hand trimming bushes and trees. Fallen trees are removed only if they create a hazard and then hand tools are used. Recently, several of the bridges in the Wilderness Area were reconstructed by staff and volunteers, using hand tools and materials carried in on foot.

FRIENDS COMMEMORATIVE BRICK CAMPAIGN - JULY 15 DEADLINE FOR FALL PLACEMENT!

Now that the snow has melted, visitors are once again enjoying the commemorative bricks that have been placed on the patio at the Helen C. Fenske Visitor Center. Inscriptions for new brick orders received since last June are being displayed on the banner inside the visitor center. Although the Friends' buy-a-brick campaign will continue, the cutoff date for the next brick order has been set at July 15, 2011. Orders received by that date will be placed on the patio during the summer.

Don't miss this opportunity to order your custom-engraved brick. Costs per brick range from \$150 to \$350 depending on size and design. An updated brick order form is available at the visitor center and on the Friends website, where you can now order your brick online. Thank you for your support.



THANK YOU WELTMAN HOME SERVICES



In February, the Friends of Great Swamp National Wildlife Refuge received a donation of \$1,000 from Weltman Home Services of Berkeley Heights.

The Weltman company has a give-back-to-the-community program entitled "Hearts and Heroes" where they donate \$1,000 each month to a local charity selected at random from nominations received from their customers. Karen English, a member of the Friends board, nominated the Friends for the award.

Dan Weltman (left), president of Weltman Home Services, presents a check for \$1,000 to Laura Nally (center), President of Friends of Great Swamp, and Karen English (right).

This money will be used to support the refuge through a variety of education and outreach programs, provide resources for projects, and deliver visitor services.

THANK YOU FOR YOUR DONATIONS

Donations made to Friends of Great Swamp National Wildlife Refuge make up a significant portion of our annual income and provide funding for a variety of projects and programs which benefit the Great Swamp National Wildlife Refuge, its wildlife, and its visitors. Thank you.

FOUNDATIONS

- ExxonMobil Foundation: *In recognition of 224 volunteer hours contributed by Leo Hollein*

IN HONOR OF

Ruth Morgan, a volunteer at Great Swamp. Keep up the environmental projects at the Swamp.

- Emalene & William Gingrich

CORPORATE

- Weltman Home Services

INDIVIDUAL DONATIONS

- Michael & Renate Deckman

IN MEMORY OF

Anthony Thomas Wonsala

- Rita-Ann & Anthony Wonsala Jr.

MATCHING GIFT

- Mr & Mrs William O. Watts
Johnson & Johnson

MEMBERSHIP DONATIONS

To all our members who added an additional donation to your membership renewals—Thank you.

- Christine Knezevich
- Ursula Sommer
- Mrs R.E. Furstner
- Dorothy Reutlinger
- Caryl Leong & Donna Paino
- Michael & Yennga Perkons
- Marisa Wohl
- James Emert
- Robert Schwaneberg
- Anonymous
- Bob & Linda Loveland
- Michael & Carol Newlon

- Ken & Kathy Kopec
- Steve Henry
- Jean Sebesta
- Dorothy Smullen
- Paul Ford
- Mary Beth Hansbury
- Mr & Mrs John H. Raab
- John Matis
- Joanne Foster
- Susan Woelzl
- David Jacangelo
- Faith Robinson
- Janet & Gene Bolla
- David M. Kristol &
Marjorie C. Brandriss
- Emily Marcello
- John C. Kozimbo
- Joann & George Apgar
- Pat Balko
- Hilary Koloff
- Jim Wood
- Bill Boyle & Karen Thompson
- Judy Lynn Jordan
- Edward C. Sullivan

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

Membership ☐ Eastern Bluebird—\$15 ☐ Painted Turtle—\$50 ☐ River Otter—\$100
 ☐ Monarch Butterfly—\$250 ☐ Wood Duck—\$500

New Member? ☐ Yes

Donation—Thank You! \$ _____ Total Amount Enclosed \$ _____

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 . . .



**Members are important!
Give a gift of membership
to a friend.**

Memberships help support the mission and projects at Great Swamp.

Members also receive the following benefits:

- Swamp Scene Newsletter
- 10% discount in Friends Nature Shop
- Notification of coming events
- Feeling of accomplishment in supporting the Great Swamp National Wildlife Refuge.

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 MAY 2011

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.