

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE

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WILDLIFE ARTIST RON ORLANDO DONATES 2005 FALL FESTIVAL DESIGN

By Laurel Gould

It started five years ago when Ron Orlando and Friends member Judy Schmidt were passing some time between customers at the Somerset County Wildlife Carving & Art Show. Ron happened to comment on how much he has enjoyed the Great Swamp National Wildlife Refuge over the years and how he would be delighted to contribute something to the Friends. To say we were thrilled would be an understatement!

I'm not sure Ron knew what he was getting himself into but for the past five years he has created and donated an original design which we have had screen-printed on Friends t-shirts and sweat-shirts—some of our best-selling bookstore items.

Ron's first design was a stunning pair of hooded mergansers which is still one of the most popular shirts. It was followed the next year by an American kestrel perched on Virginia creeper, then a magnificent barred owl in 2003 and last year's stately great blue heron. And just take a look at this year's design—a mallard drake exploding from the water! When asked about the new design, Ron said, "I've had the idea of painting a mallard rising up out of the water for a few years" — we might call this "prelude to a painting."

T-shirts with the new design will be available at the Fall Festival on September 10 and thereafter at the Bookstore & Gift Shop, open weekends. You can meet Ron at the Fall Festival where he will autograph your shirt. He will also have some of his artwork on display and for sale. The Friends are so fortunate that Ron felt he wanted to give back something to the Refuge—and picked the Friends as the way to do it! Thank you Ron.

What Friends Do

SWAMP IN A BOX PROGRAM BRINGS THE REFUGE INTO THE CLASSROOM

Grants help the Friends launch projects that otherwise would not be possible—like the start-up of the Bookstore & Gift Shop six years ago—and the Tree & Shrub Guide to the Boardwalk Trails—and the viewing scopes at the Overlook—and the information shed at WOC. Last year we received a \$5,000 grant from the National Fish and Wildlife Foundation called *Discover Great Swamp National Wildlife Refuge*. Visitors to the Discovery Den in the Bookstore & Gift Shop have already enjoyed the new furniture and displays which were purchased with this grant money. The second part of the grant was earmarked for the creation of an educational outreach program which we dubbed Swamp in a Box. *Continued on page 7*

FRIENDS NEWS AND UPDATE

Joint Planning Meeting

On July 19, the Friends Board participated in a joint planning meeting with Refuge Manager Bill Koch, Deputy Manager Sharon Marino, and Outdoor Recreation Planner Tom McFadden. During the two-hour meeting, discussions covered new opportunities for volunteers, upcoming priorities for the Refuge, grant opportunities, the new visitor facility, and ways to improve communications. It was a highly productive and enjoyable meeting. In the upcoming year, the new Visitor Facility will be a primary focus for all of us, as well as invasive species control. We heard a recurring message: budgets are tight and will be getting tighter, placing a strain on Refuge resources and staff. One tangible and immediate result of the meeting is the scheduling of a regular Refuge Work Day when volunteers will gather for a variety of projects; the first one will be September 24. This is an opportunity to tackle projects which are backlogged as a result of lack of funds and tight resources.

The Friends received enthusiastic praise for the number and quality of the education programs given to school and other groups; the staff expressed their appreciation at our success in expanding the number of days of volunteer coverage at WOC—with guidance to increase the number of days being covered or extend the season through the summer if we have the volunteers to do it; and they enthusiastically endorsed the public events hosted by the Friends with the caution to be sure to balance the impact of visitation in the closed areas of the Refuge. The Refuge staff extend their workday to make this evening meeting possible for the Friends, but what a valuable source of input and feedback for future Board planning.

Membership Milestone Reached

We did it! Nancy Schenck, Membership Chair, reported that our membership has reached 300! Thank you to all new and renewing members. Your membership dollars are an important source of income—and provide funds for the many Refuge projects that the Friends support. Don't forget that a Friends' membership makes a great gift for a friend or relative—see the gift form on page 11.

New Board Member Appointed

At the June 2005 Board meeting, Dennis Branden was appointed as a Director. Being no stranger to the Great Swamp, Dennis, according to historical records, has been spotted on the trails for the past 31 years. Before joining the Friends, he volunteered at the Somerset County Environmental Education Center where he patrolled the 8.5 miles of hiking trails. No longer working in muddy boots, he is now a familiar face behind the sales desk at the Bookstore & Gift Shop and the WOC; you may also see him on the mower keeping the Friends lawn looking neat! Dennis coordinated the spring AT&T Cares Day project (see story on page 3). When he's not at the Swamp, Dennis works at AT&T, Morristown, where he supports the Consumer Credit and Collections Organization. Rumor has it that he maintains 23 fish tanks in his home where he raises tropical fish as a hobby. We are looking forward to our first Friends' sponsored native fish display!

Volunteers With Ideas and Initiative

Pat Giaimo: After fielding numerous questions from visitors about places to eat near the Refuge, Bookstore volunteer Pat Giaimo took the initiative and researched and wrote up a brief guide to places to eat in the Meyersville area. It includes the address, a brief description of the types of food, and the price range. Now, with a suggestion that the Basking Ridge direction might be useful too, Pat is expanding the guide. Thank you Pat!

When George Helmke and his wife Evelyn visited Merritt Island National Wildlife Refuge, George was impressed with the volunteers who stationed themselves along the wildlife loop with their scopes, pointing out sightings and providing visitor information. George brought this idea back to Great Swamp and volunteered to staff the Wildlife Observation Center on Fridays to provide similar services for our visitors. He promptly recruited an unsuspecting WOC visitor, Frank Shyers, and together the two of them greeted hundreds of visitors on Fridays during the Spring Migration Season. Thank you George!

Blue goose weathervane installed at WOC

Bill Judge, owner of Colonial Camera Shop in New Providence, passed away March 16, 2005. Bill was an enthusiastic and generous supporter of the Friends of Great Swamp. With great foresight, he got us started on our photo contest, which continues to this day; the contest has generated a library of photographs which are used for education, displays and brochures. Huge enlargements of the winning photos, stunningly framed, were presented to the contest winners and a second set was donated to the Friends where they hang in the Bookstore & Gift Shop. In Bill's memory, the Friends have purchased a blue goose weathervane; the blue goose is the official symbol of the National Wildlife Refuge System. This weathervane has been placed on top of the information shed at the Wildlife Observation Center (WOC) where it flies high welcoming the thousands of visitors who come to enjoy the Great Swamp National Wildlife Refuge—as Bill himself enjoyed it for so many years.



AT&T CARES—VOLUNTEERS WORKING FOR THE ENVIRONMENT

By Dennis Branden and Laurel Gould

On a normal business day, employees in AT&T's Consumer Credit & Collections Organization would be hard at work watching over the corporate revenue. But on Friday, April 22, they showed up in old clothes, (snake resistant) sturdy shoes, and work gloves to do staining, sanding, painting, clipping, raking, and hammering—plus some good-natured joking, razing, kidding—and of course, eating!

It was Earth Day, 2005 and 16 AT&T employees descended on the Wildlife Observation Center (WOC) to spend the day helping the Friends of Great Swamp and the Great Swamp NWR. And help they did! They...

- Stained the information shed, with two coats of natural stain;
- Painted the Sportmen's Blind with a coat of Briarwood solid stain;
- Sanded and then put a clear sealer on the kiosk panels;
- Pounded stakes marking the trail to the new Friends Blind;
- Clipped brush to make room for a path from the information shed;
- Raked out the gravel mounds created by snowplowing over winter;
- Did a major "litter" patrol, carrying out wood that had been sitting along the trail for more than 20 years according to Tom McFadden, as well as picked up several bags of debris, bottles, paper and stuff that was strewn around WOC.



AT&T volunteers stain Sportsmen's Blind

The rain held off, and at the end of the day—it was a satisfied group from AT&T, and a delighted group of Refuge staff and Friends—who looked around at all that had been accomplished. As Tom McFadden said in amazement: *"The Wildlife Observation Center has never looked so good."* Thank you to AT&T and their employees, who once again proved that AT&T Cares.

TIRES, DRUMS, AND DEBRIS REMOVED DURING SPRING HOMESTEAD CLEANUP

By Judy Schmidt

The weather forecast on April 25, 2005 was... *rain, heavy at times, starting in the morning and lasting until 1:00.* It was Homestead Cleanup Day! Would anyone show up? Yes! Fourteen volunteers were not dissuaded by the forecast. It never really did rain and clean up we did. By the end of the day we moved at least 45 50-gallon drums, some 85 tires, one shopping cart, one chain link fence, and an assortment of old metal. Two more places on the Refuge were cleaner than when we started. We saw a kingfisher and a large hawk (or maybe an immature eagle?, some vultures—and visited places on the Refuge that most people never see. As usual, we ended the morning's work with a welcome lunch and good conversation. The golden glove award was not awarded this time—it was hard to figure out who was the dirtiest. Instead everyone received an "American as" t-shirt thanks to an unsolicited donation from Access Self Storage in Bernardsville, who also donated four cases of bottled water for the workers. Manager Nancy Geiser said it was a way of saying thank you to volunteers for helping make the Refuge a better place. Thank you Access Self Storage—and Refuge volunteers. By the way, Refuge biologist Craig Bitler reports that there are still places on his clean-up list—so join us for the next one.



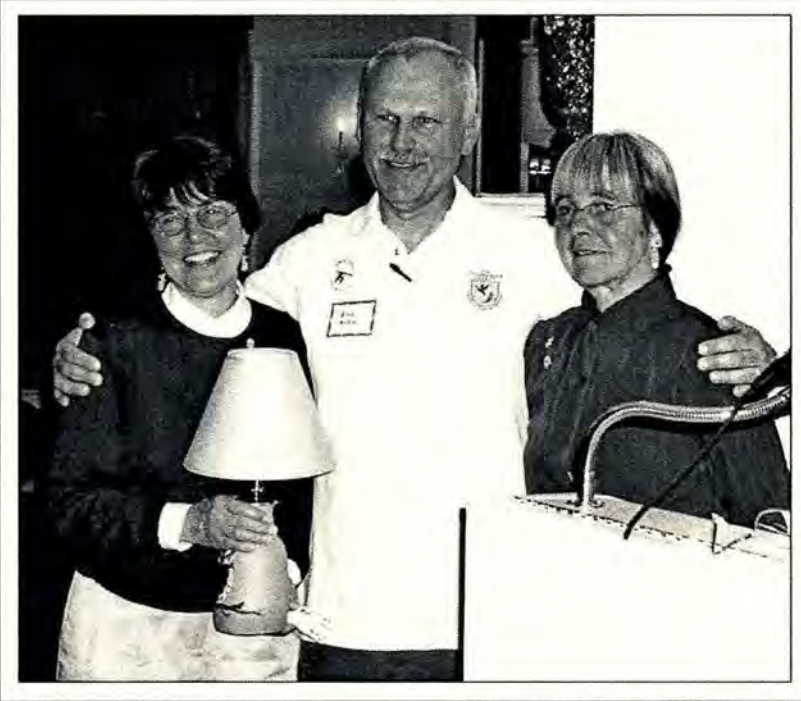
Volunteers: Chuck Whitmore, Dennis Branden, Rich Dufort, Anastasia Kidd, John Wilmot, Mike Hiotis, Judy Schmidt

VOLUNTEERS CELEBRATE AND ARE RECOGNIZED!

By Tom McFadden, Outdoor Recreation Planner

May 20, 2005: It had been raining all day which put a damper on preparations for the Annual Great Swamp Volunteer Dinner. The view that we hoped to see of the Refuge would be lost in the overcast sky. Just as Tony Cullen and I began to set up the tables at the Fairwinds Country Club, the sky began to lighten and then the sun came out! Within minutes blue sky appeared, sunshine was abundant, and the view of the Refuge was spectacular! Everything was coming together.

We finished setting up just as the volunteers began to arrive for what was to be the largest Volunteer/Friends awards ceremony in Great Swamp Refuge history! The food was flowing and all the volunteers seemed to be enjoying themselves which is what this event is all about. After an hour or so I began to start the show with some highlights about the volunteer program, then Friends President Judy Schmidt spoke about what the Friends had accomplished this past year.



Laurel Gould, Bill Koch, and Judy Schmidt

I then began calling up each volunteer to thank them for their contributions for that year. Then the 100-hour name tags were handed out by Friends Treasurer Laurel Gould. We then followed with the 250-hour pins; then the 500-hour pins and plaques were presented to Jim Cullen, Kathy Woodward, Jim Detizio, Leo Hollein, Lisa Molinari and Neil Borman. The one 1,000-hour award was presented to Laurel Gould and the single 1,500-hour pin to Friends President Judy Schmidt! What a night!

We also had more guests attending this year. Guests included Ed Henry, Refuge Manager at Wallkill NWR; Julia Somers, Executive Director, Great Swamp Watershed Association; Rob Jennings, Superintendent of Natural Resources Management, Morris County Park Commission; Cathy Schrien, Manager of Environmental Science Department, Somerset County Park Commission; and Ron Orlando, Wildlife Artist.

Refuge Volunteers and Friends were quite active this year with a record amount of awards being presented. All in all everyone enjoyed the evening and some even retreated to the Bam-

boo Lounge afterwards for some entertainment and refreshment! I'm sure next year's awards dinner will be just as nice!

REFUGE UPDATE

Visitor Facility Update

Things are moving ahead at the new visitor facility. A consultant, Oak Point Associates, was hired to do a conceptual design report. They will be looking at the existing buildings and grounds in order to develop a detailed plan for creating a public visitor facility from the existing property. That final report is expected in December. In the meantime, federal money has been earmarked for renovations to the house, a new pavilion, and outdoor composting restrooms. Congress is still working on the transportation funding legislation, but if passed there will be money for the new access road. Stay tuned...

Did you know?

The Great Swamp National Wildlife Refuge lies in three towns within Morris County: Chatham Township, Long Hill Township, and Harding Township. These towns cannot use the federal Great Swamp National Wildlife Refuge as a ratable, so the U.S. Fish & Wildlife Service compensates the towns for this tax-exempt land.

The Revenue Sharing Act of 1978 sets out guidelines for this distribution of payments to local units of government. Funds may be used for a wide variety of town-related projects. The funds are distributed based on the acreage of each within the Refuge and the most current appraised fair market value. Revenue sharing checks were distributed in July to the Townships of Chatham, Long Hill and Harding in the amounts of \$15,278, \$90,904 and \$248,959, respectively.

ASK THE REFUGE STAFF—WHAT HAPPENED TO THE POND?

Question: We used to enjoy observing a number of species of ducks and shorebirds in the pond just off the driveway leading to Refuge Headquarters. This year it was dry and the birds were not there. Is it possible to get water pumped into the pond? *Birdwatcher*

Dear Birdwatcher: Actually there was water in the pond this year but very few ducks, and no shorebirds, used the pond because of the dense vegetation. We have to set back normal plant succession every two years to make the pond attractive to ducks and shorebirds and also to improve visibility for visitors. We tried to take a tractor with disk into the pond last year on two occasions and both times the tractor got bogged down in the mud. We decided to wait for some really dry weather and got our wish early this summer. It took eight hours of staff time to disk the vegetation under and now it will be good for birds and visitors for another two years. If we do not get some heavy rains we will pump water into the pond for fall migration. We maintain the water depth at 4 to 6 inches for ducks and draw it down to where it barely covers the soil for shorebirds. *Craig Bitler, Refuge Biologist*

SUMMER INTERNSHIP AT GREAT SWAMP NWR

By Liz Peck, Friends-sponsored Refuge Intern

Having this internship has given me the opportunity to work with the U.S. Fish and Wildlife Service while also giving me a great educational experience. My first day of work involved all the Refuge staff working together to carry out the boards for the trail bridge project. In the few days following, I helped with rebuilding the bridge, though the leaky waders did not help. There were many projects that followed after that, such as the frog call and breeding bird surveys. There were a few projects that I have really enjoyed working on, and they have also been great educational experiences.

One of those projects was updating the Reptile, Amphibian and Fish brochure list for Great Swamp. Research was done for each species and a fish survey of Primrose Brook was also completed to get an idea of the species of fish in the Great Swamp. While surveying, I found that there was also a species of freshwater mussel present in Primrose Brook. It is called an Eastern Elliptio (*Elliptio complanata*), which is a common freshwater mussel in this area.

Another project has been baiting ducks and trapping raccoons. The ducks are baited with corn around a trap until they become used to the trap. Eventually, the ducks will be caught in the trap and we will be able to band them. The raccoons are being humanely trapped and then relocated to another part of the refuge. This is done to keep the raccoons from killing and eating the ducks once they are trapped. So far we have relocated six raccoons, two opossums, and a juvenile red fox, and we will start banding the ducks in August.

These are just a few of the experiences I have had and there are several others, such as Canada goose banding, great blue heron survey, mist-netting bats, turtle surveys, checking bluebird boxes, and other maintenance projects. Besides Refuge concerns, I have also helped the Friends group with one of their projects, the Swamp in a Box educational program. All of the experiences have allowed me to enjoy the outdoors in the Great Swamp and it is all thanks to the Friends group for making this internship possible.



Intern Liz Peck relocates an opossum

The Friends sponsored Liz's internship this year.

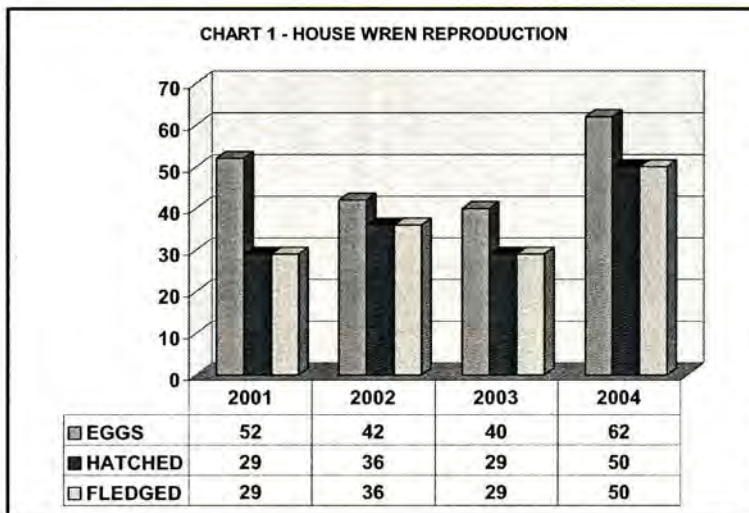
THE ENERGETIC BUT DESTRUCTIVE HOUSE WREN

Stories, charts and photos by Leo Hollein

House wrens are energetic, predominately brown, small birds that have the habit of cocking their barred tails. They have a loud bubbling song that is sung frequently during breeding season. The house wren is migratory and is only present in the Great Swamp National Wildlife Refuge (GSNWR) during the warmer months. House wrens build their nests in natural or artificial cavities. They use the song bird nest boxes in the GSNWR. Monitoring these nest boxes provides a way to observe their breeding activities.

HOUSE WRENS ARE VERY SUCCESSFUL IN FLEDGING HATCHLINGS

House wrens are the third most common occupant of the song bird nest boxes. Tree swallows nest in the greatest number of boxes followed by bluebirds. House wrens are a distant third and have averaged about 10 nestings (nests with eggs) in the last four seasons. By comparison, tree swallows and bluebirds together have averaged around 150 nestings in the same time period. Chart 1 presents the house wren nesting data for the 2001 through 2004 seasons.



As shown in the chart, house wren eggs do not always hatch due to predation, infertility or inadequate brooding. However, house wrens are very successful in fledging young from eggs that do hatch. In four years of nest box monitoring no dead young have been found in wren nests indicating that all the eggs that hatched fledged. On numerous occasions during this period dead tree swallow and bluebird hatchlings have been found in nests after their siblings have fledged.

WRENS MAY DESTROY NESTS OF OTHER BIRDS

House wrens arrive in the Great Swamp in late April or early May. The male establishes a territory, starts building a nest and sings tirelessly trying to attract a mate. It seems he is always successful. By the time the house wrens arrive in the GSNWR, bluebirds and tree swallows have already been competing for nest boxes.

These larger birds may already have established ownership and begun to lay eggs. House wrens prefer nest boxes that are not far from bushes. If a preferred box is already occupied, wrens have been observed entering the nest, pecking open the eggs and dropping the damaged eggs outside the nest box as shown in figure 1.

Destruction of eggs in nest boxes occurs during the egg laying period. Song birds do not start brooding (sitting on eggs periodically to assure proper temperature for embryo development) until they have completed laying their clutch. Therefore, the wren can enter the box unchallenged by the larger bird and destroy the existing eggs. The original tenant usually abandons the nest box if all its eggs have been destroyed. On occasion the host bird may catch the wren destroying its eggs and limit the destruction to one or two eggs. If this happens, the host pair may retain possession of the nest box and successfully raise the remainder of its clutch.

The wrens might build their nest atop the straw nest of a displaced bluebird or tree swallow. The bulk of the wren nest is made up of 4 to 6 inch long sticks that the wren maneuvers through the box entrance hole by holding the stick near its end and aligning it parallel to its body. The completed nest includes a central cup of straw and miscellaneous material. Before the wrens have completed laying their clutch and begun brooding, they might also destroy eggs in other nearby nest boxes.



Figure 1 – Damaged bluebird eggs

HOUSE WRENS DEFEND THEIR NEST BOXES

House wrens employ several strategies to protect their nests. The first involves the construction of their nests. The second is a distraction display. The entrance holes in the song bird boxes in the GSNWR are 1 ½ inches in diameter. This diameter hole is large enough for bluebirds and tree swallows as well as some other birds to enter. However, it is larger than the 1 and ¼ inch hole typical of custom-made wren boxes. House wrens in the GSNWR almost uniformly fill their nest box with sticks above the entrance hole. While a larger bird can enter the nest box hole, it is virtually impossible for a larger bird to squeeze through the interior pathway created by the wrens.

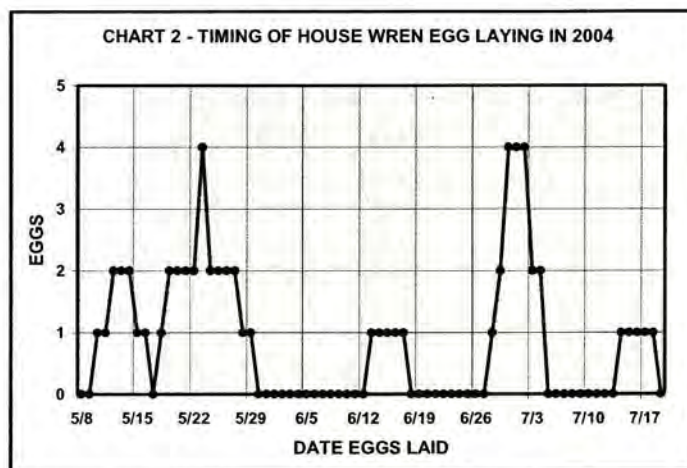
Adult wrens defend their nest when an intruder approaches by persistently uttering harsh scolding calls and jumping around in nearby shrubs. Both adults participate in this distraction display and continue scolding from a few feet until the intruder leaves.

House wrens typically lay five to seven white eggs that have extensive reddish-brown speckles. These eggs are much smaller and rounder than tree swallow or bluebird eggs. The adult wrens can be observed foraging almost constantly during daylight hours to capture small invertebrates. Hatchlings require lots of food to develop from nearly naked, egg-sized chicks to fully feathered adult-sized wrens in about 2 ½ weeks. The parent bringing food to the nestlings usually lands on top of the nest box and hesitates a few moments before entering to feed its calling young.

HOUSE WRENS RAISE TWO CLUTCHES

House wrens attempt to raise two clutches per year in the GSNWR. They will usually select a different box for their second brood. Only once in four seasons were house wrens observed reusing the same nest box following a successful fledging of their first clutch. This occurred when the first nest had been removed and the box cleaned shortly after the first clutch fledged. If predation of eggs occurs, wrens frequently will lay a second clutch in the same nest.

The fledgling house wrens seem to disperse from the nest box area within days of fledging. If it is the first clutch, the male remains in the territory and repeats his persistent singing to claim his territory. As illustrated in Chart 2, house wrens lay most of their eggs for the first clutch during the middle weeks in May. The second clutch is laid primarily in late June and early July. Like other song birds, wrens lay one egg a day until their clutch is completed. It usually takes about two weeks after fledging the first clutch before the wrens lay their first egg for the second clutch. After the second clutch fledges, the wrens adopt a lower profile and are less likely to be heard or seen until the next breeding season.



SWAMP IN A BOX (continued from page 1)

The Swamp in a Box is literally a large plastic box filled with educational materials ready for teachers to incorporate into their curriculum. The program is designed to bring the Great Swamp Refuge right into the classroom in order to increase knowledge, understanding, awareness and stewardship for this local refuge and the entire National Wildlife Refuge System. The program is designed for K-12 teachers and students and is correlated to NJ State core curriculum standards.

Each loanable box includes an awe-inspiring video which showcases the great variety of wildlife on refuges across the country. Also included is a new 11-minute video on the Great Swamp National Wildlife Refuge created by volunteers specifically for this project. The boxes also contain a number of educational materials which support topics related to science, wildlife, habitats, history, math and more. The boxes will be available for loan, but some of the materials may be kept by teachers for use in their class and some are for the students to keep and take home. School districts in the ten towns comprising the Great Swamp watershed have been targeted for initial mailings. The program will be launched in late September with a day-long kick-off event to introduce teachers to the program.

The Friends and the Refuge will continue to offer guided walks for school groups and other organizations—nothing compares to the excitement of observing nature first hand. However, volunteers are a limited resource and school budgets and time constraints do not always allow for field trips, so the Swamp in a Box can be used to introduce hundreds of students to this Refuge, located in their own back yard, providing information, sparking interest, and leading... who knows where.

STREAMBANK AND RIPARIAN CORRIDOR RESTORATION

By Michael T. Horne, PhD and Colin P. Osborn, GSNWR Staff

We often joke here in the watershed biology office that no stream in New Jersey would be complete without an old shopping cart or two thrown in, perhaps a ten-speed bicycle, or maybe even a half a dozen old tires. These items are commonly seen in streams that flow through urban and suburban areas (we're not sure why but they are almost always there). Unfortunately, other characteristics common in such streams are the absence of a riparian corridor (the vegetated strip of habitat that transitions from the edge of a stream to the adjacent uplands), steep and highly eroded banks, channelization, invasive species, and lack of valuable wildlife habitat. Even streams that flow through more pristine and natural areas can suffer from these types of problems...which brings us to the Great Brook on the Great Swamp National Wildlife Refuge.

The Refuge's Waterfowl Management Pools 1 and 2 are on-stream impoundments that hold back the flow of the Great Brook through a series of low profile man-made dikes. The dikes maintain emergent wetland habitat by capturing and holding upstream flows. The holding capacity of these dikes is limited and regulated by water control structures and passive spillways. The waterfowl management pools provide invaluable habitat for migratory waterfowl and numerous other species that rely on emergent wetlands.



View of the Great Brook below Pool 1 Water Control Structure. Note the highly eroded bank on the left-hand side.

Remember from above that the waterfowl management pools provide valuable emergent wetland habitat "...by capturing and holding upstream flows." Any time that flowing water is collected and held, energy is stored. On a more grand scale, this is how hydroelectric dams produce power and why historically, flour and grain mills as well as many other industries were located along streams and rivers.

When the water is released, so is some of this stored up energy, and sometimes that concentrated release of energy can lead to erosion and other problems. The design of the waterfowl management pools doesn't lead to these problems in the way one might think though. During moderate to heavy flooding, water is released across spillways or flows over the low profile dike structures, thus dissipating the energy over the entire surface area of the wetlands below each dike, resulting in a very low erosive force. However, during base flow and light to mild flooding events, the energy of the moving water is released through several outlets at one location (because the water isn't high enough to cross the spillways) thus concentrating the water and its energy in a small area. Unfortunately, this latter case occurs regularly and has led to bank erosion, degradation of the stream corridor, increased siltation, habitat degradation, and decreased water quality immediately downstream of the Waterfowl Management Pool 1 and 2 water control structures. Luckily, we have a plan to address this problem.

If this scenario was in an urban or suburban setting, a common and simple technique to stabilize the banks of the stream would be to use rip-rap. Rip-rap is a general term that describes large stone that is placed along stream banks to armor against the scouring effects of moving water. Although rip-rap is a very effective tool in streambank stabilization work, it

does have some drawbacks, especially when used exclusively. Its major shortcomings are that it does not improve the riparian corridor, does very little in terms of providing habitat, can actually facilitate degradation of aquatic habitats, and is not aesthetically pleasing. In an urban or suburban environment, stone blends in well amongst the concrete and asphalt but here in a wildlife refuge, it sticks out like a sore thumb.

Further, our plan is to restore the streambanks—not only stabilize them but to recreate the lush naturally-vegetated riparian corridors that once existed at these sites. This is why we have adopted an integrated “bio-remediation approach” to the problem. By limiting our use of rip-rap and by re-contouring and replanting the eroded areas with native, deeply rooting and water-loving vegetation, we will armor the bank with a living barrier that will hold the soils in place and help to dissipate the energy found in these concentrated flows. Soils will be further stabilized with biodegradable logs and erosion control blankets made from coconut fiber. The logs are secured at the toe of the banks and the blankets placed across the face of the banks to help hold the soils while the vegetative community is developing. Best of all, these newly established stream corridors will function as valuable wildlife habitat and help to prevent colonization of the stream bank by invasive plants. Many invasive plants, such as the dreaded Japanese knotweed (*Polygonum cuspidatum*), are adept at taking over large sections of riparian corridor. This is now occurring at an alarming rate in the upper Loantaka Brook.

Working with the New Jersey Department of Environmental Protection, we are in the process of obtaining the appropriate permits for the streambank restoration work. Our partners on the project are the Friends of the Great Swamp NWR, the Great Swamp Watershed Association, the Passaic River Coalition, and the Ten Towns Great Swamp Watershed Management Committee. If this were baseball we’d have to say that all our starters are on the field and we have a “deep bench” going into this one.

The project could happen as early as this Fall but will more likely occur early next Spring due to growing season constraints. As always, volunteer assistance with the restoration work is crucial, so if you’re interested, keep us in mind next Spring—probably about the time the wood frogs are calling. We can’t guarantee that the work will be as much “fun” as throwing a shopping cart or ten-speed bicycle into a stream, but you will have a great sense of satisfaction by helping us achieve our stream restoration goals.

WORLD SERIES OF BIRDING—REFUGE STYLE—2005

By Lisa Molinari and Laurel Gould

It was 3:00 a.m., May 14, 2005 and seven birders stood quietly at Impoundment Pool 2 on the Refuge listening for rails, owls, and any other birds calling in the night. The beginning of another World Series of Birding day – Refuge style.

For the past 4 years, the Refuge Rovers team has spent the better part of a day birding on the Refuge and each year the team tries to do better than the year before. In 2004, 91 species were seen or heard by team members—we didn’t think we could do any worse than that.

As it was just getting light, more team members joined the chase, calling out the birds by name as the dawn chorus got into full song. By noon, everyone was ready for lunch at the Friends—and a mid-day status check. We had recorded 110 species—already better than 2004. It was a beautiful afternoon, and even though only two additional species were added, our grand total was 112! Success!

The New Jersey Audubon Society’s one-day birdathon, called the World Series of Birding, takes place each year in May, a 24-hour period when teams scour the state to count bird species heard or seen and thousands of dollars are raised

for conservation. Many of these teams start at midnight in the Great Swamp Refuge where they hope to hear owls and rails. In order to get permission to bird in non-public areas, each team must turn in a checklist of birds they identified on the Refuge. This data is compiled and provides the Refuge with valuable information for comparisons over time.

Given the fact that most of the teams never see the Refuge by daylight, it is not surprising that the highest number of species reported are not the most common birds in the swamp. Seventeen teams reported the American bittern, and 16 teams reported the least bittern, king rail, Virginia rail, and sora. Six teams checked off the common moorhen. It’s exciting to know that these elusive species can be found on the Refuge.

This year, World Series of Birding teams, scouring the entire state for 24 hours, logged a total of 260 species. The combined number of species recorded by 20 World Series teams and the Refuge Rovers in the Refuge alone was 136—more than half of the statewide total. No wonder the Great Swamp National Wildlife Refuge is such a great place for birds—and birding!

FEDERAL DUCK STAMPS DO MAKE A DIFFERENCE—JUST ASK THE IVORY BILLED WOODPECKER

By Laurel Gould

The sighting of the ivory billed woodpecker is now being questioned, and it will be some time before we know for sure if this bird has been rescued from extinction. I don't know about you, but just the thought of it gives me goose-bumps. You all know the bird was sighted in the Cache River National Wildlife Refuge in Arkansas but did you know that hunters and birders have funded nearly 75 percent of the land acquisition for that Refuge through the purchase of Federal Duck Stamps? Now that's a really good reason to buy a duck stamp.



The purchase of duck stamps is a way to directly contribute to the purchase of migratory bird habitat for the refuge system. As if that isn't enough, the Federal Duck Stamp serves as an annual entrance pass to any national wildlife refuge that charges a fee—like neighboring refuges Forsythe, Walkkill River, Bombay Hook, Blackwater, Heinz NWR at Tinicum and Chincoteague. A few trips to these refuges and you've more than recouped the cost of the stamp.

The 2005-2006 Federal Duck Stamp is on sale at the Friends Bookstore & Gift Shop (open weekends) and at Refuge Headquarters during the week. Stop by and purchase some land for the refuge system today!

FRIENDS 2005 PHOTO CONTEST—A RESOUNDING SUCCESS

Twenty-nine photographers submitted a total of 196 photos in the Friends 2005 Photo Contest. The bulk of the entries were digital, although there were some slides and prints. Ray Lord had the fun of looking at all the photos as he compiled them on CDs—his comment was “Wow! Once I started I couldn't stop. They far exceeded my expectations.”

The entries will be judged again this year by professional photographer Blaine Rothauser and the winners will be announced at the Fall Festival, September 10.

The real winners of course are the Friends and the Refuge. These photos provide an ongoing resource which we have only begun to tap. Photos from last year's contest have been used in the new Refuge video, appeared in the newsletter, and enhanced our displays and flyers. As the new visitor center becomes a reality, photos will be selected for use in displays, educational programs, and video shows.

Thank you photographers—and watch for details about our 2006 photo contest coming soon.

VOLUNTEERS BUILD BENCHES FOR WOC



Volunteers George Solovay, Steve Gruber and Jack Smith try out one of the new benches they installed along the boardwalk trails at the Wildlife Observation Center (WOC). George built the benches; the Friends donated funds for the lumber.

VOLUNTEERS NEEDED SEPTEMBER 24 FIRST REFUGE WORK DAY SCHEDULED

As a result of the Joint Planning Meeting (see page 2), the first Refuge Work Day has been scheduled for Saturday, September 24.

As budget pressures continue to stretch available resources, volunteers can play a key role in helping Refuge operations, particularly in the maintenance area.

Possible projects include:

- cutting and brush-out of Pleasant Plains Road,
- trail maintenance,
- sanding and staining the Overlook kiosk.

The more volunteers—the more we can get done!

If you can help, please call the Friends or the Refuge.

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

Ask about our school or group memberships.

Annual Membership

Membership Type	<input type="checkbox"/> Family - \$25	<input type="checkbox"/> Individual—\$15
Gift	<input type="checkbox"/> Family - \$25	<input type="checkbox"/> Individual—\$15
Renewal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Donation—Thank You! \$ _____

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:

- Quarterly Newsletter
- 10% discount in Bookstore & Gift 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 Bookstore & Gift Shop for a Friends of Great Swamp Water Bottle -or- a Ron Orlando Great Swamp Centennial Poster.

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

Promoting the conservation of the natural
resources of the Refuge

Fostering public understanding and
appreciation of the Refuge, and

Engaging in activities that will support the mission of the Great Swamp National Wildlife Refuge.

Friends of
Great Swamp
National Wildlife Refuge

AUGUST 2005

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

