

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE

INSIDE THIS ISSUE

Keeping Up with Friends	2
Trail Tales	3
Wilderness Area Kiosks	3
Kestrels	4
Meet Scot Kuhn—Intern	5
Indiana Bats	6
Forged from Stone	8
Federal Duck Stamps	10
AT&T Cares	10

Board of Directors

Judy Schmidt
President

John Wilmot
Vice-President

Lisa Molinari
Secretary

Laurel Gould
Treasurer

Dennis Branden

Pat Giaimo

Laura Nally

Dorothy Smullen

Kathy Woodward

Tom McFadden
GSNWR Liaison

Laurel Gould
Editor

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

2006 PHOTO CONTEST WINNERS ANNOUNCED—2007 CONTEST UNDERWAY!

One hundred and sixty-seven photographs of birds, wildlife, and refuge scenes were submitted by 26 photographers in the Friends of Great Swamp 2006 Amateur Photo Contest. This year over 75% of the entries were digital photographs. Blaine Rothausen, of Natural Eyes—Wildlife & Landscape Photography, once again volunteered to judge the photos; the seven winners were announced during the annual Fall Festival on September 9, 2006.

This is the sixth year that the Friends have sponsored a photo contest. Past photographs have been used for displays, educational programs and in the Great Swamp video recently produced by the Friends. Postcards, puzzles, and mouse pads depicting winning photos are sold in the bookstore producing revenue for refuge projects. The Friends digital photo library is a growing resource for the future. All in all, this has been a very successful endeavor for the Friends.

The Friends are sponsoring a 2007 Nature Photo Contest. Entry forms are available at the Bookstore, at Refuge Headquarters or from the Friends' web site. Once again, there is a separate Youth Category for those age 16 and under. The deadline is June 30, 2007.



Friends Choice—Deborah Lewinson



1st place, Landscape—Michael Stadelmeier



1st place, Wildlife—Jim Gilbert

2006 REFUGE PHOTO CONTEST WINNERS

- Friends Choice—Deborah Lewinson
- 1st, place, Wildlife, Jim Gilbert
- 2nd place, Wildlife, R. Allen Simpson
- 3rd place, Wildlife, Barbara Frankenfield
- 1st place, Landscape, Michael Stadelmeier
- 2nd place, Landscape, Maureen Stewart
- 3rd place, Landscape, Neil Nappe

All seven winning photos are posted on the Friends' website.

KEEPING UP WITH FRIENDS—NEWS & HIGHLIGHTS & UPDATES

RON ORLANDO DONATES ORIGINAL MINIATURE PAINTING

Ron Orlando has been a generous supporter of the Friends for many years now—the six original Great Swamp t-shirt designs, one for each annual Fall Festival event, are just one indication. Ron also designed the Great Swamp NWR Centennial Poster in 2003, and he donates 50% from the sales of his prints in the Bookstore to the Friends. Now, Ron has generously donated an original miniature painting to help with fundraising for the developing visitor center.

The painting, along with other items, will be part of a silent auction to be held on December 2 during the Friends Annual Meeting. While you're saving up for the auction, you can see Ron's painting on display in the Friends' Bookstore & Gift Shop, open weekends from 11:00 am–5:00 pm.

REFUGE 2006 BIRD LIST UPDATE

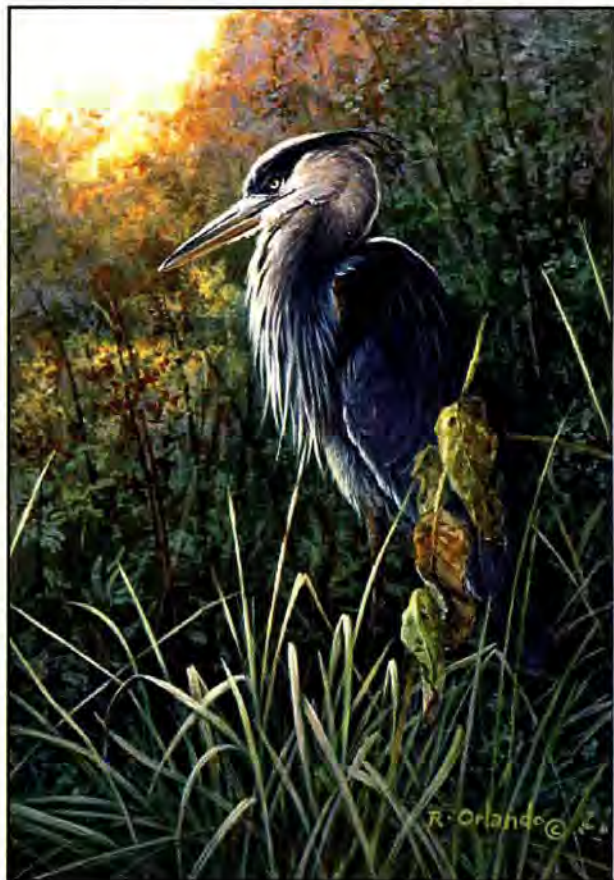
By Pat Giaimo

We are having a wonderful response in our attempt to see how many different bird species are sighted on the Refuge in 2006. As of the end of September, 171 species have been reported by our diligent bird watchers, and there are still a couple of months left to try and increase that number. This number is a good percentage (70%) of the 244 species listed as "might be encountered".

All the birds listed as abundant or common have been reported as well as many of the uncommon species, but there are still some that we want to know if you have seen.

Some of the birds listed as uncommon which have not been reported are the least bittern, which also breeds in the Swamp, gadwall, and three thrushes: gray-cheeked, Bicknell's, and Swainson's. Other "uncommons" not yet reported are the American pipit and the bay-breasted, Cape May, Tennessee, and Nashville warblers. The pectoral sandpiper and common nighthawk are also not checked off.

A few birds listed as breeding in the swamp are also among the missing. The king rail and common moorhen have not been reported as having been seen or heard, nor has the yellow-breasted chat. On the plus side, the red-headed woodpecker has been recently reported and checked off. Thank you for your interest in this project and keep looking!



"Sunset Blue" - Original miniature painting

SPECIAL THANKS

A special thanks to Michael Noll who recently donated a number of items to our Friends' archives including:

- the agenda and booklet for the dedication of the Great Swamp National Wildlife Refuge on May 29, 1964;
- newspaper clippings covering the events on that day, with the headline: "Udall gets bird's-eye view of wildlife refuge".
- an illustrated brochure, "Wilderness Area Proposal, M. Hartley Dodge Unit, Great Swamp National Wildlife Refuge".

The Friends are collecting historical materials and memorabilia to be used for displays and exhibits at the developing visitor center where they will be used to help tell the story of this area and of the Great Swamp National Wildlife Refuge—keep this in mind if you come across any historical materials!

Thanks to volunteer Leo Hollein and ExxonMobil. The Friends have again been awarded \$500 as part of ExxonMobil's Volunteer Involvement Program which recognizes volunteer hours donated to non-profit organizations by employees and retired employees. Among other volunteer activities, Leo is responsible for monitoring the bluebird trail at the Refuge.

MEMORIALS & TRIBUTES

In memory of Rich Schneck
Conrad and Joan A. Haenny

In memory of Marguerite Kelly Hollein
Anonymous

TRAIL TALES

By Tom McFadden, Outdoor Recreation Planner, GSNWR

Want to relax, have fun, explore? Take a hike in the Great Swamp National Wildlife Refuge. With almost 10 miles of marked trails one can get away and experience all types of feelings—one being the feeling of solitude. These trails (if you know which ones) are hardly used at certain times of the year and one can truly be alone if you want. I have walked these trails for twenty-five years and can say that each time that I walked them it's been a different experience.

Keen in on your senses. Sound, smell, and sight are different each time one walks a trail. Certain fragrances from plants will fill the air in the summer along with birds singing and frogs calling. Also fall, winter and spring bring their own distinctive characteristics. Have you ever smelled the air before and after a rain? Write down what you experienced

and compare your notes each time you take a hike and I assure you it will always be different.

Have you ever heard a red fox yelp, a coyote howl, or a young barred owl call? You may be surprised at what these calls sound like. I remember one summer night, shortly after arriving at Great Swamp in the early 80's, I was awakened by what sounded like a women screaming outside my window. Upon investigating, at 2:00 a.m. in the morning, I discovered a young barred owl trying to perfect his call! I've heard other nighttime sounds that I have not been able to identify to this date. The next time you walk a trail, use all your senses and you may discover a whole new world. I did!

I even found Bully Bully, but that will be another Trail Tale!

NEW WILDERNESS AREA KIOSKS TELL GREAT SWAMP STORY

By Laurel Gould

We have a story to tell about the Wilderness Area at Great Swamp—and now, there are four new kiosks to tell visitors about these Great Swamp firsts! These kiosks were purchased by the Friends of Great Swamp using money raised during the Walk for Wilderness held in 2004, along with a generous grant from the Wildwood Foundation, and also using funds from membership dues, bookstore sales, and donations. Each kiosk has a panel with a magnificent color photo (taken by Bob Johnson) and includes a brief explanation of Great Swamp's wilderness story. There is also a bulletin board panel on each kiosk for posting maps, events, and refuge information. The kiosks were assembled and erected as an Eagle Scout project by Joey Cowper with a team of his family and friends as volunteers. Watch for more information on this project in an upcoming newsletter.

In the meantime, hike out to the wilderness area and take a look for yourself. Or join us on November 12, from 1:00 – 4:00 p.m. when the Friends will sponsor a Second Sunday Wilderness Hike, with an introductory talk (meet at the Friends Bookstore) by Deputy Refuge Manager Steve Henry at 1:00, followed by carpools to one of the wilderness areas at 2:00 for a guided hike.

The complete text on the interpretive panels reads

You are about to enter the Wilderness Area of Great Swamp National Wildlife Refuge. Designated by Congress in 1968, this area is part of the 100 million acre National Wilderness Preservation System and is distinguished in being the first Wilderness Area on a National Wildlife Refuge and the first in the U.S. Department of the Interior.

The Wilderness Area exists today because local citizens joined together with government to preserve this natural area for the continued enjoyment and inspiration of all citizens. Wilderness areas provide primitive recreation opportunities, a place for wilderness education and research, and allow natural progression for indigenous plants and animals. There are 3,660 acres in the Great Swamp Wilderness Area containing many important habitats for fish, wildlife, and plants. Eight & a half miles of marked trails allow the public to access the wilderness to observe and enjoy its wildlife, and to experience undisturbed solitude.

"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."



KESTRELS FLEDGE SEVEN FROM NEST BOXES

By Leo Hollein

American kestrels (*Falco sparverius*) are the smallest of the North American falcons and the one most frequently observed in the Great Swamp National Wildlife Refuge (GSNWR). The cavity nesting kestrel is the only falcon to nest in the GSNWR. These mourning dove-sized falcons were formerly known as sparrow hawks for their tendency to prey on sparrows. Kestrels have rusty colored backs and tails with black barring. The slightly smaller male is distinguished by his blue-grey wings. The wings of the female are the same color as her back. Both sexes have distinctive black and white facial patterns highlighted by two vertical black stripes. Like all falcons they have long, pointed wings and a long tail.



Three kestrel hatchlings. Photo by Colin Osborn

Kestrels are most often seen during spring and fall migrations perching on the power lines or hovering while hunting prey in the fields along Pleasant Plains Road. While still widespread, kestrel populations have been declining throughout New Jersey and the Northeast. There is evidence that breeding birds, migrants and wintering bird numbers have all declined. ⁽¹⁾ Hawk watch counts have declined significantly since the late 1980s. Breeding pairs in nest boxes at the Hawk Mountain Sanctuary in the last three seasons are about half of what they were in the 1990s. ⁽²⁾ Christmas bird count totals for New Jersey are less than a third of the numbers reported in the 1980s. ⁽¹⁾ It should be noted that the over-wintering kestrel population in New Jersey is relatively small and represents less than 2% of the kestrels counted annually at the Cape May hawk watch.

Reasons for Decline in Kestrel Population Not Known

The major reasons for the declining kestrel population are not known. Among the theories are:

- Loss of kestrel habitat due to reduction in open areas and farm fields;
- Use of pesticides that concentrate in species at the top of the food chain;
- Lack of, or competition for, suitable cavity nest sites;
- West Nile virus or other avian diseases;
- Rebound in the population of Cooper's hawks that prey on smaller birds. ⁽²⁾

All of the above factors could contribute to the decline in kestrel numbers. The management area of the Great Swamp National Wildlife Refuge provides an excellent habitat for kestrels eliminating two of the above potential factors. The management area has large, open fields that are mowed periodically. Pesticides that can concentrate in predators like kestrels are not used on these fields. A third factor can be eliminated by installing and monitoring nest boxes to insure suitable nest sites are available. Kestrels are secondary cavity

nesters and cannot excavate their own nest holes.

West Nile virus and the increased population of larger avian predators are potentially negative factors that will continue to exist in the GSNWR and may impact the kestrel population. Cooper's hawks and larger avian predators are known to prey on kestrels that perch conspicuously in open areas or hover over open areas as they hunt their prey. While all measures of kestrel populations have declined, all corresponding data for Cooper's hawks have increased significantly over the last several decades. ⁽²⁾

Two Nest Boxes Installed in Fall of 2005

In the fall of 2005, two kestrel nest boxes were installed as a test program. They were located in classic kestrel nesting sites. One was placed about 15 feet up a tree trunk in the middle of a field behind the Friends' bookstore. The other was placed on the side of a barn facing an open field. The bottoms of the boxes were filled with a layer of wood chips to assist kestrels as they do not build a nest. A cover was placed over the 3 inch diameter entrance hole to prevent screech owls or rodents from taking up residency in the boxes during the winter. Kestrel and screech owl box designs are identical. The nest hole covers were removed in early March in preparation for the arrival of migrating kestrels.

The nest boxes were inspected twice during the early spring. A partial straw nest, built most likely by starlings, was removed from one of the boxes. The formation of a large central depression in the wood chips indicated kestrels had located the boxes and eventually would nest. Adult kestrels are secretive around their nests and are only infrequently observed in the vicinity of the nest boxes. The boxes were inspected in mid-June to confirm nesting had occurred and to monitor nesting status. Three hatchling kestrels were present in one of the boxes and four hatchlings were found in the other box. The adult kestrels stayed away during the June nest visits and did not attempt to intimidate the nest box monitors in any way.



Volunteer Lou Pisane mounts new kestrel box

The boxes were inspected and cleaned out in mid-August after all seven young had fledged. The residual material in one box yielded no clues about the hatchling diet. The other box had identifiable partial skeletal remains of a small rodent and a number of song birds. A set of dragonfly wings was also present. One of the song birds was a bluebird based on feathers found in the box—an unfortunate victim of this bird-eats-bird world. Bluebirds did fledge young from a nest box in the field adjacent to the kestrel nest. Bluebirds must learn quickly as they did not attempt a second nesting during the season in this box.

Kestrel Boxes Will be Doubled for 2007 Season

As a result of the successful test in 2006, two additional boxes have been installed for the 2007 season. These new boxes

are being located in different areas, far from the original boxes. One will be located on a tree in the middle of a field and the other on a building overlooking a field. Hopefully the nesting kestrel population will double next season and provide more opportunities to view these colorful falcons. See if you can spot the existing and new nest boxes that are visible from Pleasant Plains Road.

Many thanks to Lou Pisane who built, installed and monitored the kestrel test boxes.

Notes

1. J. Walsh, V. Elia, R. Kane and T. Halliwell, *Birds of New Jersey*, New Jersey Audubon Society. 1999, pp. 192-194.

2. K. Bildstein, *Uncommon Kestrels*. Hawk Mountain News, Autumn 2005, pp. 10-12.

FRIENDS FUND REFUGE INTERN SCOTT KUHN

By Scott Kuhn, 2006 Great Swamp National Wildlife Refuge Intern

Driving down Highway 287 at 5:30 in the evening with the reoccurring thought that New Jersey really is a long way from home for this hairy biologist is how I began my adventure at the Great Swamp NWR. My name is Scott Kuhn and I am an intern here at the Swamp for the 2006 summer season. I attend Southwestern College in Kansas and I will complete my degree in Biology with minors in Environmental Issues and Leadership.



Refuge Intern Scott Kuhn with two new "friends"

Born and raised in western Kansas, this is my first time driving east of the Mississippi, although I have flown east to visit several times. In addition to the insanity of rush hour traffic, there are several other small differences I have noted between home and here. While the heat and wind are mild compared to home, the humidity more than makes up for it. Also, in Kansas, where you can look out and see the next county, we measure distances in terms of miles, whereas in New Jersey, when asking how far away something is, you will get a response in terms of minutes. All in all, I have adjusted quite well to this wilderness in the suburbs and I'm enjoying my time here.

Some of the projects that I have been involved with here include the seasonal frog surveys, goose and duck banding, and the on-going maintenance and invasive species work. I have also had the chance to participate in some exciting turtle and bat studies

I want to thank the Friends' group for funding this opportunity for me and for setting the example of stewardship. We sometimes fail to recognize that wild places are often in our very own backyards. The Friends' group realizes this and has done and continues to do an amazing job. Thank you.

ENDANGERED INDIANA BATS AND THEIR GREAT SWAMP HOME

By Marilyn Kitchell

One of the most exciting discoveries made at the refuge last summer was the presence of the Indiana bat (*Myotis sodalis*), a federally endangered species ranging throughout the Northeast and Midwest (see Friends' Newsletter, February 2006, "Endangered Indiana Bats Found in Great Swamp"). What made the discovery even more exciting was the capture of juveniles and reproductively active females, indicating that a maternity colony was likely to be found nearby. This would

make Great Swamp the first place in the state known to have a summer maternity colony of Indiana bats. In response to this discovery, former staff member Marilyn (Eames) Kitchell (back as a SCEP student but this time with a new last name) has begun a 2-year masters research project studying the distribution of Indiana bats on the refuge and identifying specific trees and foraging areas

that are providing habitat for maternity colonies. This information will help us to understand what characteristics are important in providing summer habitat and will improve our ability to manage for this species. That being said, the Indiana bat is a species new to most of us familiar with the refuge. A greater perspective on this species' plight makes the refuge's work this summer even more exciting... not only for us, but for the community of bat researchers as well.

The Indiana bat's core range is located in the Midwestern states of Indiana, Missouri and Kentucky, but sizeable populations occur throughout the Northeast from New Hampshire to West Virginia. Migratory in nature, the bats hibernate from October through April in

caves and abandoned mines (termed 'hibernacula') and move to suitable summer habitats upon emergence. While mating occurs in the fall before bats enter hibernation, females don't become pregnant until they emerge in the spring (a phenomenon known as 'delayed fertilization'; this reduces the metabolic demands on the females during hibernation.) Females typically leave the hibernacula ahead of males and may travel over 300 miles to suit-



Bat being held in gloved hand of volunteer

able summer habitats where they form maternity colonies and roost together, usually in groups of less than 100, to pup and raise young. Young are born in June or early July and become volant (capable of flight) in 3-5 weeks. Most males, free of the metabolic demands of supporting and raising young, summer near the hibernacula while some disperse throughout the range to roost individually or in small numbers. Bats generally cluster together in roosts between the exfoliating bark and the trunk of dead and dying trees, or in species of trees with naturally peeling bark such as shagbark hickory. The most important characteristic in roost trees is exfoliating bark, although exposure to sunlight, canopy closure and tree diameter also play important roles. You

may have noticed that the refuge has no shortage of dead and dying trees or of shagbark hickories, which may be one of the reasons Indiana bats were found here.

The species' decline was initially attributed to disturbance to caves during hibernation, causing bats to burn through their fat stores more quickly and leaving them short of the energy needed to survive. However, the protec-

tion of most of the major known hibernacula seemed to do little to slow the species' decline. Research then turned to the bats' summer habits, with much of the work coming out of the Midwest where the population is the largest. Very little is known about the species' summer habitat requirements, especially in the eastern United States where there is a documented research need for additional information. That's one of the reasons the work at Great Swamp is so exciting, and so important. So far, research out of the Midwest indicates that one or more primary roosts and multiple alternate roosts may be utilized

throughout the summer, with bats switching roost sites every 2-4 days. It will be interesting to see whether this pattern of activity holds for our colony at Great Swamp, or whether a different pattern is seen in the bats of the northeast.

The 2006 'batting' season at Great Swamp began in June, lasted through the middle of August and included a LOT of long days and late nights. While I was responsible for most of the work, I had lots of late night help from some William Paterson University (WPU) undergraduate students and my WPU advisor Dr. Lance Risley. The refuge interns and staff also provided occasional help throughout the summer, both during the day and throughout the night. Our afternoon and evening activities usually

included selecting the location for the nets, setting up the nets, and grabbing some dinner. The nets (30 feet in height, set up vertically across potential travel corridors such as forested roads and streams) were opened at 9 p.m. and were checked every 10-15 minutes until 2 a.m. Reproductively active females that were caught were frequently outfitted with radio transmitters, which are attached between the shoulder blades with a surgical latex adhesive designed to drop off in two weeks or so. We typically left the nets in place for two nights (closed when not in use) and removed them at the end of the second night.

Most nights I'd be home by 4:30 a.m., just in time to catch about 8 hours of sleep before returning to locate the trees the bats were roosting in. While we'd only net about 2-3 times per week, the bats needed to be located in their roosts every day (including weekends.) Although this meant a very long and exhausting summer, the hard work pro-

duced exciting results. Among the 238 bats caught throughout the summer, Indiana bats were the third most common (40 caught) behind little browns (*Myotis lucifugus*; 98 caught) and big browns (*Eptesicus fuscus*; 63 caught.) Of the 40 Indiana's, 26 were adult females and 9 were juveniles, consistent with last year's evidence pointing to the presence of maternity colonies on the refuge. Most importantly, 10 of the adult females were transmittered and led us to 35 roost trees, including one that held over 250 bats! While we were not able to follow the bats as they foraged at night (next summer's work will incorporate this), we were able to learn a lot about the Indiana bat's use of the refuge, including the location of two and possibly three maternity colonies.

Next summer we'll repeat all of this, as well as document nightly foraging habits and perform nightly emergence counts at trees where transmittered bats are known to be roosting. This will essentially double our workload, so if you're

interested in this project I could definitely use your help!

We'll need volunteers to assist with emergence counts (revealing how many bats are in a given roost tree) and detection surveys (helping us decide where to net each week.) We'll likely have multiple trees on any given night where emergence counts need to be performed, so we can certainly use multiple helpers! The work will begin around May 15 and will continue until the third week of August; emergence counts take about 1 hour and detection surveys take about 2 hours, both beginning around sunset. If you're interested, contact Marilyn Kitchell at <kitchellm@student.wpunj.edu>.

Among the 238 bats caught throughout the summer, Indiana bats were the third most common

BALD EAGLE RELEASED AT GREAT SWAMP NATIONAL WILDLIFE REFUGE

By Steve Henry, Deputy Refuge Manager, Great Swamp NWR



Several dozen enthusiastic onlookers witnessed the release of a rehabilitated bald eagle at a media event in the Great Swamp National Wildlife Refuge on July 7, 2006. State Assemblyman Jon Bramnick was the guest of honor and had the privilege of releasing the bird. The 4-year old male eagle was found with an injured left wing along the Delaware River by state wildlife officers seven weeks earlier. The eagle was transported to The Raptor Trust, a well-known bird rehabilitation center and Refuge partner, for treatment.

This is the second time in recent years that a rehabilitated bald eagle has been released

on the Refuge. In 2004, Congressman Rodney Frelinghuysen released an eagle that had also recovered under The Raptor Trust's care. Originally listed as an Endangered, bald eagles were reclassified to Threatened in 1995 and have been proposed for delisting as a result of successful recovery efforts.

FORGED FROM STONE

By Blaine Rothaus, *Natural Eyes—Wildlife & Landscape Photography*

It gets harder and harder to find nature's pulse in the present state of human congestion. In the town of Florham Park where I abode, as well as the towns that surround it, the natural landscapes have been carved up to resemble a post-Thanksgiving turkey. It pains me to report that in order for one to witness nature in totality you must now travel to the farthest reaches of the planet. Ecological totality is truly a concept of the past.

To prove this point one has only to examine the ecology of the backyard compared with the state it was in a mere 20 years past. Species once common, now rare in our woodlands, have collided with the effects of wanton fragmentation perpetuated by the juggernaut of sprawl. One example of a species caught within the bottleneck of human expansion is the state threatened wood turtle (*Glyptemys insculpta*). Without the prophetic powers of a crystal ball I can tell you that the future existence of this four-legged armored fortress is not secure. The Great Swamp might be one of only a handful of safe havens for this species to inhabit in the state. It saddens me to think that in order for future generations to immerse themselves in ecological systems bearing a hint of their former grandeur that living museums like the Great Swamp might be their only remaining solitude. Blue spotted salamanders, roosting Indiana bats, green orchids and wood turtles will need the swamp in an uncompromised state if they are to be existent in decades to come.

To give the wood turtle its due you must first find one. One must travel deeper into the woods to come nose to brow with this creature that the earth has forged from stone. Most sightings these days are of the two-dimensional kind; adults found crushed on roads, high-

ways, and railroad beds. When you think about how long this species has been around, fossil records indicate 1.8 million years, it's disheartening to realize that its shelf life is on the verge of expiration. Turtles have survived five ice ages and the weighty footsteps of dinosaurs, yet this reclusive denizen of our backyards is in the mist of its greatest challenge. An endangered species biologist recently said it best when describing this species, "If a wood turtle is not a testament to the concept of—if it ain't broke don't fix it—I don't know what is". Through no design of its own, this incredibly adapted life form finds itself at the doorstep of human expansion in clear sight of the endless night that is extinction.

For now at least the wood turtle finds sanctuary in the Great Swamp. The Primrose, Passaic, Middle, Black and Loantaka Brooks are all known to harbor wood turtle. Wood turtles are stream dependent creatures, breeding

tions increase due to human presence; and road mortality on new roads through former wood turtle habitat—and on and on.

So what, you might ask. Why should anyone in my town or the next town care if wood turtles go bye-bye? Would we notice or even give it a fleeting cognitive thought if this species were to vanish from the planet? Why should we anyway—we cannot grind it up to fuel our cars or heat buildings, we cannot feed the masses with its flesh, we cannot build additions to our homes with its body—why should we care?

Homocentric questions like these all too often demand that the biosphere work for man and man only or else be sacrificed in the name of progress. Human evolution has imprinted in our genes an uncontrollable impulse to subjugate all other life forms solely for the benefit of our own species. I'm afraid this, in the end, will be a killer gene that results in

our undoing. In order for our species to survive, we must use the evolutionary advantage of cognitive reasoning and learn that balance and stability are the basic underpinnings of ecology. We must find a way to turn off this gene when looking at life forms as commodities.

Unfortunately for my wood turtle buddies, they have no direct benefits yet discovered that would make life better for people. Like so many other creatures, this

species is intricately woven in the fabric of our own survival. Getting people to realize the intrinsic price tag of species as they pertain to ecological systems is tricky business. The problem is the average man thinks myopically—incapable of seeing past the next subdivision. Species all over the world, at first thought to be worthless, have proved themselves to us in countless ways. Not nearly enough has been made of this. The fight against world hunger, disease, and scientific understanding owe much to our earth's biodiversity.



directly in, foraging about, and utilizing them to go hither and fro. During winter months the turtles always go back to their natal streams to hibernate on the bottom, or in the undercuts of the banks. Outside of the Great Swamp the effects that humans impose on turtle security are many. Collection from kids that move into an area formerly occupied by turtles; collections for the pet trade (wood turtles can fetch \$500 a pop in Europe); predation on turtle nests and young as local wildlife popula-

We destroy far too many species before they've had a chance to prove their merit. Scientists have estimated that extinctions are occurring at 100 times the historic background rate. Less than 2% of all life forms have been analyzed in enough biological detail to extract the resource they may produce. The few that received the attention they deserved

base and wanted to clear some of the last remaining forest patch that harbored the plant. Imagine the laughter in public forums when some conservation minded group announced that they wanted to save "the periwinkle". That same laughter surrounds me when I talk about blue-spotted salamanders, swamp pink and barred owls.



Photo by Blaine Rothausen

yielded a cornucopia of assistance to humanity. You name an affliction that has plagued man and you can bet there is a drug out there with a natural component to help in its cure. It has been estimated that 45% of all pharmaceuticals have a direct biochemical ingredient derived directly from a plant or animal. To illustrate, I'll give one example of a species which, before its notoriety, was as mundane as a wood turtle is to most of us. A nondescript plant from Madagascar may put the exclamation on my point. Residing on this large island is a periwinkle plant whose leaves hold within its biochemistry an alkaloid capable of stopping Hodgkin's disease in its track.

Now imagine the indigenous people living near the habitat of this plant without the knowledge that this herb held in its tissue the cure for this significant human affliction. Suppose that the villagers needed to expand their agricultural

Scientists must take the time to evaluate species beyond their anatomical descriptions. They must do this in order to unlock the secrets that might cure the next cancer, design the next robotic, or give insight as to the true value a species represents in the process of ecological functioning.

That is the connection to which I originally alluded. We must stop this nonsense of analyzing the value of species in the present as if they were penny stocks. This is environmental accounting in the name of barbarism. Even if we never use the wood turtle for direct benefit to humans, ecologists understand the role they play in nature's grand scheme. Plants, animals, microbes, fungi are set in place to perform a multitude of ecological functions directly responsible for the stabilization of our forests, deserts, and oceans. We of course cash-in through the use of these healthy ecosystems.

People often ask me if we need all the multitude of species to accomplish the task. The fact that biodiversity exhibits some redundancy is what ecologists call "over yielding". The more species that have evolved to perform the same functions, the better chance the system has to succeed. The result is the ability for whole ecological systems to purify watersheds, cycle nutrients, and cleanse the air. These life-sustaining functions come without a price tag, free of charge and replete with quality of life benefit. Bear this in mind the next time someone snickers at the supermarket or post office at the mention of a blue-spotted salamander, barred owl, or wood turtle that stopped the development down the road due to the fact it was merely found there.

I realize that the wood turtle has provided the developing community with a migraine. I have testified in court on behalf of this species' biology as it pertains to state wetland regulations. I have heard first hand the chuckling banter of lawyers and engineers in back hallways poking fun at those who dare juxtapose the needs of mankind with that of a simple turtle. How easily we forget our species' interconnection, role and reliance with all other life on this planet we share.

Finally I must offer up a final reason for man to do his part in saving wood turtles in addition to all other companions riding on this big rock. The wood turtle, the blue whale, and even the lady bug outside your window represent life on the only planet in the universe where any living thing is found to exist. Herein lies an ethical excuse to do our part to assure its continuance. Paul Ehrlich in his book "Extinction" brought this point home when he stated: "along with the preeminence that *Homo sapiens* has achieved goes a very great moral responsibility—a stewardship, if you will—upon which we must not turn our backs. Perhaps because we have the power to destroy them, we must respect the rights of our co-inhabitants on Earth".

I take solace in the fact that the Refuge should be safe haven for these ancient denizens, at least for now, until man finds a way to work out the kinks.

PUT YOUR STAMP ON THE FUTURE—BUY FEDERAL DUCK STAMPS

By Laurel Gould

Not surprisingly, there have been some changes over the years—the price has gone up from \$1 to \$15, the stamps are now in full color, and they are purchased by people who carry binoculars as well as those who carry guns. Yet the original purpose of the federal duck stamp program, to purchase wetlands for migratory birds, has not changed. Since the inception of this program in 1934, more than 500 million acres have been purchased for national wildlife refuges, including more than 2,500 acres of land at Great Swamp National Wildlife Refuge.

The winning artist this year, selected from a field of 232 entries, is Sherrie Russell Meline from Mt. Shasta, California, with a close-up painting of a Ross' Goose. This is only the second time in history that the prize has been awarded to a woman wildlife artist.



The new 2006-2007 Federal Duck Stamp is now available for sale at the Friends Bookstore & Gift Shop and also at Refuge Headquarters. Your \$15 purchase price goes a long way! A valid duck stamp can be used for free admis-

Beyond that, the purchase of a duck stamp is an investment in conservation—and a good one; 98% of every Federal Duck Stamp dollar goes directly into the Migratory Bird Conservation fund for the purchase of wetland habitat. Collecting duck stamps can be a fun and rewarding hobby—there are even special frames available for displaying a growing collection.

Over the years, duck stamp sales have been declining while the price of wetland habitat has soared. Today the program needs your help. If you visit and enjoy national wildlife refuges, help ensure that these lands will be protected and maintained for generations to come by purchasing the new Federal Duck Stamp.

The current Federal Duck Stamp serves as your annual entry pass to national wildlife refuges; however several of the older stamps are still available for sale at the Friends' Bookstore, as well as the shadowbox frames to display the stamps—so get started on your duck stamp collection right now!

sion to any refuge open to the public – and there are more than 545 National Wildlife Refuges spread across all 50 states with some of the best birding, wildlife viewing, photography, and recreational opportunities in the country.

AT&T CARES DAY—JUNE 2006

Friends' Board member and AT&T employee Dennis Branden once again spearheaded a work day for AT&T employees at the Refuge. On June 29, seven AT&T employees descended on the Wildlife Observation Center to help shift and replace railings along the boardwalk trails. When the boardwalk was constructed, little space was left at the bottom of the railings and visitors have complained about the water and leaves which accumulate on the boardwalks, making walking slippery. The plan is to raise the bottom board to leave enough space for water to flow off and leaves to fall out.

Thanks to volunteers George Solovay and Steve Gruber for directing the project and Refuge interns, Chris and Scott who pitched in for the entire day. This is a major project which is not yet completed and will be the focus of an upcoming Refuge Work Day on November 4.



AT&T employees taking a day off from work!!

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 GSNWR pin or patch.

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
OCTOBER 2006

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

