

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE

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ECOLOGICAL RESTORATION—A VISIBLE DIFFERENCE FOR WILDLIFE

By Dr. Michael Horne, Watershed Biologist



Parella house and barns—Before

One of the most challenging tasks that an ecologist encounters is re-establishing natural habitats and ecosystem functions on previously disturbed or impacted environments, that is, the process of ecological restoration.

Starting in 2002, the Refuge began a large-scale ecological restoration project through removal of a back log of vacant homes and related structures. To date, 6 houses, 18 sheds, 3 barns, 2 swimming pools, and over 640 tons of asphalt have been removed, and

plans are in the works for more removal this summer at the former swim club on White Bridge Road. Following the removal of structures, the surrounding landscape is contoured to approximate natural topography. The soil is typically tilled up to reduce soil compaction and the area is then seeded and mulched.

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SECOND SUNDAYS... WITH FRIENDS

By Judy Schmidt

What's inside a wood duck box? Wood shavings... feathers... owl pellets... acorns... down... membranes... and eggs. This question and other wood duck facts were discussed February 8 at the 1st Second Sunday event where attendees got to check inside a wood duck box.

What are terminal buds, lenticels, bud scale scars and pith? They are all helpful for winter tree identification. Dorothy Smullen discussed these and winter flowers at the March 14 Second Sunday. Following the discussion, Louise Jensen led a winter plant ID walk, where visitors put their new knowledge to the test.



Louise Jensen discusses winter plant ID

There's always something new to learn at Great Swamp National Wildlife Refuge. Come join us on the second Sunday of each month through July—programs start at 2:00 at the Friends Bookstore & Gift Shop and are very informal and informative—plus there are refreshments, puzzles, displays, and fun activities for the whole family—it makes learning easy!

FRIENDS AT WORK...

Headed by Volunteer Coordinator Kathy Woodward, the Friends are again coordinating the volunteer "migration staffing". Beginning March 20, 2004 (the first day of Spring this year), volunteers have been staffing the Wildlife Observation Center and also the Overlook on Pleasant Plains Road. Volunteers at the Wildlife Observation Center have the benefit of the new Information Center (and a roof over their heads!) made possible by a grant from the Mushett Family Foundation. Volunteers greet visitors, answer questions, hand out maps and checklists, and keep track of the many visitor sightings—birds, frogs, snakes, turtles, flowers and plants, and mammals. The sightings lists are long—and there are special sightings... like huge snapping turtles, a red-tailed hawk eating a meal, muskrat and foxes, wood frogs mating—and much more.

Now that it's Spring, Judy Schmidt and her education committee are again leading walks for school and scout groups. Ages range from kindergarten to high school to college and even a few teacher groups. Leading group tours is a key part of the mission of the Friends.

Board member John Wilmot and Volunteer Jack Higgins represented the Friends of Great Swamp on April 18 at the Trailside Nature & Science Center's Wildlife Sunday. They re-

ported a steady stream of families coming to the display, some of whom had not visited the Refuge and many of whom hadn't visited in many years. A wolf at the table next to them, and a trained falcon flying over their heads kept things pretty exciting!

The Membership Committee, John Wilmot and Nancy Schenck, report a current total of 287 membership units (individuals, families, schools). Thanks to our members for their voluntary support of all of the activities that benefit the Great Swamp National Wildlife Refuge including the Bookstore & Gift Shop, migration staffing, and Refuge roadside and homestead cleanup days. Remember that members receive a 10 % discount at the Bookstore. Your renewal date is on the mailing label of this newsletter.

No—we haven't moved! But our address has changed. Harding Township has recently finished renumbering the roads. Consequently both Refuge Headquarters and the Friends Bookstore & Gift Shop—both in Harding Township—now have new street numbers. The Friends are now at 197 Pleasant Plains Road (physically). The address for Refuge Headquarters is now 241 Pleasant Plains Road, which is also the mailing address for the Friends. Please make note.

DISCOVERY DEN IS CROAKING!!!!

The new Discovery Den, our exhibit and display area in the Friends Bookstore & Gift Shop, has been transformed into a fun, interesting, and educational area for Refuge visitors to enjoy.

Dorothy Smullen and her Display Committee, Judy Schmidt, Deb Scala, and Gail Rapaport, have been working overtime. The theme for April was Frogs—and you never saw so many different kinds of activities, word puzzles, games, and interpretive displays. It's noisy when the room is filled with visitors learning and enjoying—and when you hear a loud laugh—you know someone is reading the Toadily Cool Jokes.

*What happened to the frog's car when his parking meter expired?
He got toad!*

The committee plans to change the displays each month, so in keeping with the season, and Friends events, May's themes will be wildlife mothers and International Migratory Bird Day. We have a selection of videos which can be shown for visitors—and an ongoing jigsaw puzzle. Stop by and see for yourself. It's too good to miss!

THANKS TO...

Once again, we'd like to say thank you to organizations and volunteers who have helped out during the past quarter.

- Paul Ford—for his donation of bluebird and wren nest boxes which he builds out of recycled wine cases. Education chair Judy Schmidt gives these nest boxes to some of the school groups who hang them in their school yard.
- Dan's Tree Service—for donating, delivering and placing tree stumps for visitor (and volunteer) seating at the Wildlife Observation Center's Information Center. Thank you Dan, Dave, and Patrick.
- Everyone who has donated used books to the Friends—we are improving the quality of our library with these donations. Those that we can't use in the library are being sold on our Used Book Truck, with profits going to benefit Refuge projects of course. Members may borrow books and videos from the Library—another one of the benefits of membership.

INTRODUCING SHARON MARINO, DEPUTY REFUGE MANAGER

Interview by Kathy Woodward

Shortly after Sharon Marino moved onto the Refuge last August, she awoke and heard owls—screech, great horned and barred owls all in one night. While less than a six hour drive from her previous assignment with the U.S. Fish and Wildlife Service in Massachusetts, Sharon realized she was in a whole new place as the recently appointed Deputy Refuge manager at Great Swamp NWR.

Sharon grew up in Manchester, CT, the youngest of three girls. She loved science and being outdoors, although much of her time in high school was spent on the soccer field.

Sharon went to the University of Rhode Island on a soccer scholarship and majored in biology and wildlife management. The summer after graduation, Sharon had a job as a biology technician at the Rhode Island NWR Complex, where she developed a passion for endangered species recovery work while helping with piping plover protection. While working on her Masters degree in Wildlife Ecology at the University of Connecticut, Sharon was employed as a wildlife biologist through the federal Student Career Experience Program (SCEP). Her thesis focused on the genetics of the wintering populations of greater scaup on Long Island Sound.

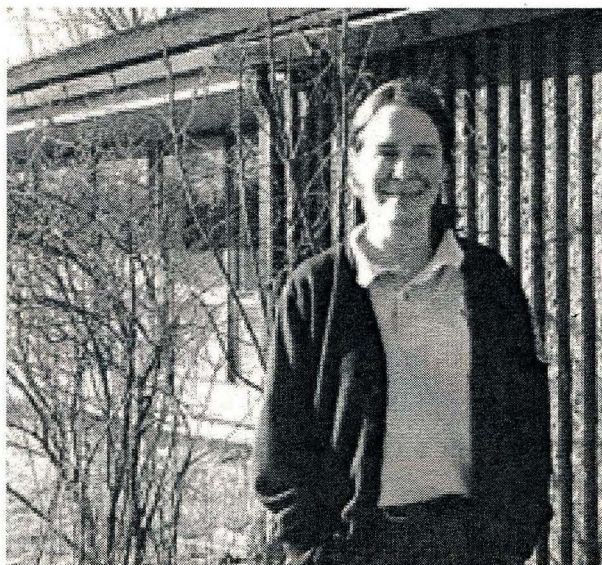
Following graduation, Sharon worked as the wildlife biologist and then Refuge Manager at Monomoy NWR, islands off Cape Cod, Massachusetts, where the challenges were numerous and the successes were sweet. The islands are prime nesting areas for common and roseate terns, piping plover and other shore, wading and seabirds. The area was

also a haul-out spot for hundreds of grey and harbor seal. The seals were vulnerable to boaters going through the channel too quickly. Sharon's job involved considerable public outreach to inform boaters and fishermen of practices which would prevent harm to the seals, nesting birds and the supporting environment. Night duty on the island included surveys of horseshoe crabs and monitoring of predators, especially coyotes, in the common tern colony of 9,000 nesting pairs. While coyotes were able to swim from island to island, Service personnel discouraged their dens on Monomoy Island, as protection for nesting birds.

Sharon came to Great Swamp NWR to gain experience working in another ecological area. Her husband, a pharmaceutical representative with a background in zoology, also enjoys life on the Refuge.

Sharon has spent the first several months getting to know the Refuge, while compiling and editing the recently released Environmental Assessment regarding the acquisition of the Weatherlea Farm property on Pleasant Plains Road, which is slated as the site of a Visitor Facility for Great Swamp NWR.

As Deputy Manager, Sharon is responsible for the oversight of much of the day to day operations of the Refuge. She is excited about spring and the chance to work outside, in addition to the inevitable office work. Sharon had heard very positive things about our Friends group even before her interview at Great Swamp NWR and she looks forward to working together.



HAPPENINGS ON THE REFUGE

Trail Update—the new trail extension from the short boardwalk at the Wildlife Observation Center should be open within the next month. The Friends are funding the construction of a small platform and blind which will overlook this very active impoundment area. Your membership, donations, and bookstore purchases at work!

Interns—two interns will be working this summer at the Refuge. Funding is being provided by the Friends and by the Mushett Family Foundation. Interns gain valuable field experience and the Refuge gains much needed assistance.

New Visitor Facility Update: The final Environmental Assessment has been completed and is available on the Refuge's web site (<http://greatswamp.fws.gov>); file copies are available at the Friends Library, Refuge Headquarters, and at the Information Center at the Wildlife Observation Center. The Refuge is working on securing the remaining funds for the purchase of the Weatherlea Farm property on Pleasant Plains Road.

Volunteer Needed: The Refuge has heavy equipment that needs painting. If you have some time during the week and can help out, please call 973-425-1222, or stop by Refuge Headquarters between 8 and 4:30, Monday—Friday.

ECOLOGICAL RESTORATION *continued from page 1*

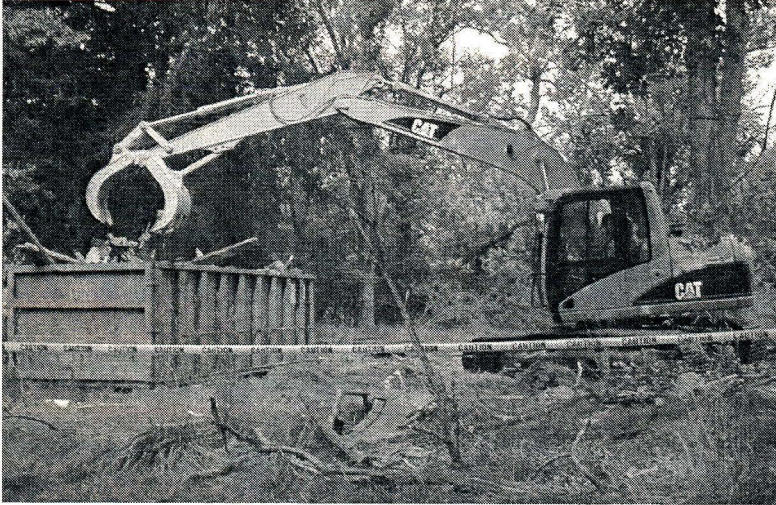
The seed mixture that the Refuge uses is a mixture of native warm and cool season grasses. Warm season grasses grow best during warmer and drier parts of the year, while cool season grasses

grow best during cooler and wetter parts of the year. That way, the seed mixture will provide some ground cover right away whenever it is applied during the growing season. In addition, we

also include a native legume in the mixture. Legumes are one type of plant that “fix” nitrogen, that is they take nitrogen from the air and incorporate it into the soil. This is important in areas that have poor soil where it is difficult to establish a beneficial plant community, but are very easily colonized by some invasive and non-native plants that are adapted to life in nutrient poor, disturbed areas. The seeding is intended to “jump start” the natural succession that will normally occur by trying to establish a beneficial plant community more quickly than would otherwise occur. “If you build it, they will come” also goes for wildlife, and when a new habitat is created, wildlife will start to colonize and use it.

Perhaps the biggest challenge to date has been restoration of the former Parrella property, which is located near the Wilderness Area Orange Trail access parking lot on the southern section of Meyersville Road. Much of the property was covered in asphalt up to a depth of two feet. Needless to say, there was

much more asphalt there than met the eye (630 tons), and it took approximately 2 months of consistent effort last summer to complete the removal. A lot of hand work also had to be com-



Excavator loading dumpster

pleted to get up small chunks that the equipment couldn't get. Following the removal, the “soil” that remained was extremely compacted and poor and had to be amended with organic material to facilitate germination and plant growth. We found a source of composted horse manure and got to work hauling and spreading it across the entire site and working it into the soil. The area was

seeded twice, once with our grass mixture, and once with a nurse crop of annual winter rye, and mulched with straw. The winter rye grows actively during extreme cold conditions and was intended to be there as a ground cover in the early spring. We are anxiously waiting to see how successful our efforts have been, and will be closely monitoring the area this spring and summer. Undoubtedly, there will be more seeding, more soil amendments, and invasive and non-native plant control required, but overall, I think we are well on our way to an ecologically functioning grassland habitat and beyond.

This coming summer, we are planning the largest restoration project to date in terms of area at the former swim club on White Bridge Road. Six sheds and a house will be removed from the property and the habitat will be restored. Over an acre of asphalt and concrete will also be removed. Existing ponds that resulted from a large asbestos waste clean-up on the property will be improved.

We will undoubtedly be looking for volunteer assistance on this project, so keep us in mind if you have any free time and want to make a visible difference for wildlife habitat.



After restoration—Grass provides ground cover

SWAMP TALK—22ND ANNUAL ROADSIDE CLEANUP

By Tom McFadden, Outdoor Recreation Planner

Once again the dedicated group of volunteers gathered on April 3, 2004 for the annual Clean-Up of Great Swamp NWR. This marked the 22nd year of this treasure hunting event. Seventeen volunteers braved the early morning damp weather to walk the nearly 6 miles of refuge, township and county roadsides in and around the Great Swamp Refuge.

Longhill Township has been a long time friend and supporter of this event by hauling all the trash and recyclables col-

lected by the volunteers. This has amounted to an estimated 16,500 lbs. of trash, 2,400lbs. of glass and 1,500 lbs. of aluminum cans over the 22 years! The efforts of these volunteers and Longhill Township are excellent demonstrations of citizens taking pride in their country!

Over the years many interesting things have been found along the roadways throughout the refuge. Some of these articles have included a rusted blank pistol, a golf club, a complete set of women's under clothes, brand new pink fuzzy slippers—still in the box, \$20 cash, a cell phone and some unmentionables!

So join us next year for the 23rd annual Clean-Up! You'll make new friends, feel good about what you're doing and who knows what you may find! Where is Jimmy Hoffa?



Roadside Cleanup Crew (standing, left to right): John Kunkel, Reggie Bateman, Bob Thompson, Frank Stillinger, Carl Woodward, John Wilmot Sr., Jack Higgins, Pete Axelrod, Rich Dufort, James Ahlstrom, Tony Cullen, Long Hill Township employee. Front row: Laurel Gould, Judy Schmidt, Corinna Catalano, Mark Catalano, Dave Smart. Missing from photo: Jane Kendall, Kathy Woodward.

HOMESTEAD CLEANUP—APRIL 24, 2004

By Laurel Gould

During Earth Week, volunteers traditionally assemble for the Spring Homestead Cleanup. This year, we had a beautiful sunny day as 22 volunteers, under the working supervision of Refuge biologist Craig Bitler, scoured refuge property on Carlton Road collecting hundreds of bottles and cans, and lugging out rusted car parts, tires, and other unrecognizable items. We went on to remove old fencing along Carlton Road and raked black plastic out of a nearby field. (Are we having fun yet?!) Then, we hauled debris out from a newly acquired refuge property—including a bathtub, sink, bicycle and other large items. Somehow, looking at a full dumpster helps make you feel less tired.

We regrouped over lunch and presented our award for the dirtiest volunteer to Beth Matyas, a first timer! Thanks to Lucent Technologies and volunteer Linda Byland who provided the lunch and Lucent t-shirts for all volunteers. As a result of these homestead cleanups, Craig reports that the major sites on the Refuge have been done—with only smaller sites remaining. I actually think the group was disappointed to hear that!



Homestead Cleanup Crew (left to right): Carrie O'Connell, Rich Dufort, Todd Goodman, Bob Thompson, John Wilmot Jr., Ken Kappy, Leo Hollein, Carl Woodward, Pam Kappy, Craig Bitler, Linda Drace Byland, Jack Higgins, Judy Schmidt, Gina Smith, Laura Nally, Kareen Rosenberg. Missing from photo: Kathy Woodward, Steve Byland, Laurel Gould, Pete Axelrod, John Wilmot Sr., Beth Matyas, Pam Wilmot

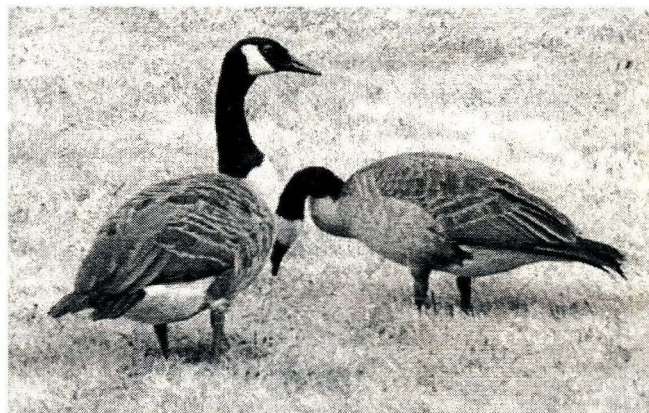
GETTING UP CLOSE AND PERSONAL WITH CANADA GEESE

By Leo Hollein

One of the volunteer activities offered by the Great Swamp National Wildlife Refuge (GSNWR) staff is to participate in the trapping and banding of Canada geese. The New Jersey Division of Fish and Wildlife monitors the resident Canada geese population and bands approximately 1.5% of the New Jersey resident Canada geese every year. The goal of the monitoring activity is to band the same number of geese from the various areas and habitats throughout the state. Volunteers are needed to assist the Fish and Wildlife employees. No banding is actually done in the GSNWR because the Swamp habitat (Canada geese prefer to graze on fields of short grass as shown in the figure) does not support a large Canada Goose breeding population. GSNWR volunteers are taken to goose rich locations (as you know there are many!) such as Johnson Park in New Brunswick and the former Duke Estate near Somerville to assist in the banding effort.

The question always asked is "How do you catch Canada geese?" Knowledge of Canada geese biology is the key. Shortly after their breeding season, Canada geese molt (shed old and grow new feathers). During the molting period from about mid June to early July, Canada geese are not able to fly. Capturing the geese during this time is like rounding up sheep. Except that these "sheep" can swim quite well.

It takes about a dozen people, the proper equipment and some stealth to corral a flock of geese. The equipment consists of portable fences and kayaks. The fences are aluminum frames about 4 feet high and 10 feet long. The frames are covered with netting. The kayaks are needed to drive geese ashore if they are in a pond or lake.



After a group of 50 to 100 geese are spotted, a group of volunteers is deployed by land and/or water to drive the geese by clapping and yelling to an area where others are hiding or waiting with the aluminum fences flat on the ground. Geese are wary of approaching people holding the fences upright. At the proper time the stationary group springs into action by grabbing the fences and surrounding the geese. The gaps between fences are quickly eliminated. After the geese are penned in, the fences are removed one by one until the geese are caged in a small area formed by four of the fences. The fences are then tied together and banding can commence.

Canada Geese do have an attitude problem during breeding season and when corralled in a small area. Several volunteers enter the pen and begin capturing the geese starting with the goslings. Some goslings still have their yellow down feathers while others are approaching adult plumage. Unlike adult geese the goslings do not honk but utter a high-pitched sound. The preferred capture technique is to grab the goose from behind. The goslings are held by their legs which are stronger than their wings. Mature geese are held at the top of their wings where they are attached to their backs. It is possible to hold and

lift an adult goose in one hand by grasping their wing tops. It is recommended to wear jeans, a long sleeve shirt and gloves while handling the geese. They have been known to nip a person. They also get excited when handled and may excrete some waste products on the handler.

Some adult geese are already banded. If so, the band number and location where the goose was caught are recorded. The goose is then released. The other geese are banded and sexed before being released. Hunters account for the largest number of recovered goose bands.



The Fish and Wildlife personnel sit on a chair while doing the banding. The goose is carried to the bander who then positions the goose so that it is head down with breast facing the bander. The goose is secured between the bander's legs. This position seems to calm the goose. Its legs are oriented upwards and convenient for banding. The bander then separates the feathers on the lower abdomen to expose the sexual organs. For those who want to avoid the experience of handling the geese, there is a need for volunteers to record the data and keep track of the bands.

The New Jersey Canada geese population that is non-migratory has grown from a few geese in the early 1960s to an estimated 80,000 breeding pairs. Canada geese usually do not breed until their third year. The geese mate for life and have been known to live as long as twenty years. As shown in the nest picture, Canada geese lay 4 to 8 eggs that are brooded for 25 to 30 days before hatching as fully feathered goslings capable of feeding themselves. The goslings remain under the watch of their parents for 40 to 70 days. Their nest of grass and sticks lined with down is usually located on the ground near water. The addling (shaking) of eggs to make them infertile and sport hunting of resident geese are ongoing control efforts to reduce the goose population. It is believed that the resident New Jersey Canada geese population has been relatively steady since the late 1990s.

GREAT BLUE HERON ROOKERY AT GREAT SWAMP

By Laurel Gould

Each spring, a spectacular event occurs in the Great Swamp National Wildlife Refuge as the great blue herons return to the rookery on Pleasant Plains Road for spring nesting. There is an unobstructed view of the rookery from the Overlook and powerful mounted scopes are available for visitors to use, bringing these huge birds, their nests, and their young into plain view.

Some great blue heron facts...

Great blue herons are colonial birds, meaning they tend to breed in groups of significant numbers.

Males are virtually indistinguishable from females.

They can stand at least 4 feet tall and few birds exceed their wingspan, which can be more than 6 feet from tip to tip.

Great blue herons eat fish but they are omnivorous carnivores, which means they eat almost anything that will fit in their gullets—including frogs, small turtles, snakes, grasshoppers, dragonflies, field mice, shrews, and even birds. They can see underwater while fishing and they hunt both day and night.

The male arrives at the rookery site first, selecting a nesting site and then displaying to attract a female. The nest is a platform of sticks made by both the male and female; they will fix up and reuse old nests.

The female lays a clutch of 3–6 bluish eggs which both parents incubate for about a month. The eggs are turned frequently in the nest in order to keep them evenly heated. Once hatched, both parents will feed the young (through regurgitation) and it will be six–eight weeks until the young birds can fly and find food on their own.

At Great Swamp, there are about 30 nests high in the dead trees in an impoundment area visible from the Overlook on Pleasant Plains Road. This has been an active rookery for about 25 years.

References: Allen, Hayward. The great blue heron. NorthWord Press, 1991. Kaufman, Kenn. Lives of North American birds. Houghton Mifflin, 1996.

Join us on Friday Nights in May

Every Friday evening in May, beginning at 5:00 p.m., New Jersey Audubon Society naturalists will join the Friends of Great Swamp in a "Rookery Watch"!

Come join us at the Overlook on Pleasant Plains Road and learn more about these magnificent birds and their special place at Great Swamp.



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

MAY 2004

Friends of Great Swamp NWR
241 Pleasant Plains Road
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