

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE

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Centennial Celebration

CENTENNIAL KICK-OFF

March 14, 2003 will mark a milestone in the history of wildlife conservation in America – the Centennial anniversary of the National Wildlife Refuge System. In 1903, President Theodore Roosevelt set aside Pelican Island, Florida as a refuge for birds. Today the National Wildlife Refuge System includes 530 refuges encompassing more than 94 million acres of lands in every state and many U.S. territories.

On November 2, 2002 the Friends of Great Swamp will kick off our Centennial Celebration – a prelude to the events planned for 2003. Friends' artist Ron Orlando has created a fabulous painting that truly captures the essence of Great Swamp National Wildlife Refuge. He has donated the design to the Friends for our Centennial Poster – appropriately called *Celebrating a Century of Discovery*. We'll be hosting a buffet breakfast with Ron who will be autographing posters which will be available for sale throughout the Centennial Year. For a sneak peek, and information on ordering a copy of the poster, visit our web site.

As the new year unfolds, we'll be hosting a variety of events to celebrate – history nights, Refuge tours, a World Series of Birding, and we'll be partnering with the Refuge in the burial of a time capsule on March 14 and a Fall Festival—Centennial Style in October! Watch for more details – or if you're interested in helping plan these celebrations, give us a call.

Learning About Swamp Life

DAFFODILS AND LILACS TELL A TALE

By Judy Schmidt

In the spring, when you visit the Refuge, you often see bunches of daffodils and lilac bushes in bloom – the last trace that someone lived there. As Great Swamp National Wildlife Refuge was being established many homes were purchased and removed, leaving only the plants behind. What stories they could tell.

For example, the Orange Trail is the continuation of White Bridge Road where there were several houses and farms. Walking down the Trail from the White Bridge Road parking lot, the first daffodils that you see on the left mark the site of the Sander Sawmill and farm; the Sawmill was started in 1925 and operated until 1967. Continuing down the trail, you pass the site of the White Farm and then, where there are more daffodils, you'll find where Henry "Pop" Bear lived; he raised and ran coon dogs for the locals who spent weekends trap shooting. On the right side of the trail, the Werner's had a windmill to generate their electricity and a little further down lived Charlie Wanford who made weathervanes.



Demolition in progress — Spring 2002

– continued on page 7

PRESIDENT'S MESSAGE

From Kathy Woodward

Three years ago this month, our Friends group was established. Since then, we have grown and changed, but our mission remains that of supporting Great Swamp National Wildlife Refuge. We've learned and accomplished much. Two years ago, at the opening of the bookstore and the first Fall Festival, we flagged down cyclists on Pleasant Plains Road, inviting them in for ice tea and an introduction to the Friends group. Last fall, over two hundred people enjoyed our anniversary party and this year we had nearly 500 folks attend!

With guidance from Refuge staff, leadership of our Board and help of our volunteers, our activities have increased. The bookstore is now open Saturdays and Sundays. We provide education to groups and individuals and sponsor numerous annual events and work projects. Our newly published tree guide is outstanding and we have just received another grant to produce a video about the amphibians of the Refuge. We keep finding new ways to aid and assist the Refuge staff.

In July, while on vacation, my husband Carl and I visited Red Rock Lakes NWR in southwestern Montana. Due west of Yellowstone, Red Rock Lakes is a bit off the beaten

track, but well worth the trip. Set in the heart of Centennial Valley, the Refuge is home to pronghorn antelope, elk, moose, and waterfowl, including the incredible trumpeter swans.

When Refuge manager Danny Gomez learned we were from a Friends group, he arranged an impromptu visit with a local rancher to discuss the possibility of a Friends group there. It was exciting to talk about our group and realize how much we have accomplished in the past three years. Listening to our host describe the history and beauties of the Valley, I realized another benefit of Friends. The members know and love their Refuge, wherever it is. They have close connections to the land, usually over many years. They know why the daffodils are there. (See related article). Friends often have a long-range perspective on the issues and prospects for the Refuge. Working along with the professional staff, the resultant team has extra dedication and information.

As we move into our fourth year and the Refuge system's Centennial year, I look forward to additional collaboration between staff and volunteers to continue to support and enhance Great Swamp.

About the Friends

FRIENDS BOARD OF DIRECTORS — CHANGES

Susan Reed has resigned from our Board of Directors. She assisted with our publicity for several years. We thank Susan for her contributions as a Board member and wish her well with her new endeavors, personally and professionally.

The Board welcomes John Wilmot who was elected to fill the Board position vacated by Susan Reed. John has been an active Friends volunteer for the past few years – you may have seen him behind the desk in the Bookstore & Gift Shop on weekends. He also participated in the World Series of Birding this past May as a member of the Friends of Great Swamp birding team.

John and his family have long enjoyed the Great Swamp National Wildlife Refuge. He moved into the area in 1973 with his wife Carole; daughter Pam was a summer intern with the Youth Conservation Corps (YCC) here at the Swamp; and John follows in his son's footsteps – John Jr. was a past member of the Friends Board of Directors. John brings valuable experience from his career in the pharmaceutical manufacturing industry and a keen and personal interest in the Refuge.

THANK YOU TO...

John Raab – The nifty pamphlet dispenser boxes which hold our new Tree & Shrub Guide at the Wildlife Observation Center are the handiwork of John Raab, who made and donated the boxes. Berkeley Hardware kindly donated the Plexiglas for the front of the boxes. John also made 12 birdhouses that he donated to our Friends group. Several of the houses were awarded as prizes at our Fall Festival and a few are available for sale at the Friends Bookstore & Gift Shop.

Public Service Enterprise Group (PSEG) – PSEG recognizes volunteer activities of their employees through a Dollars for Doers grant program. Recently the Friends received a \$250 donation from PSEG to recognize the activities of volunteer and Friends Board member Laurel Gould. The money will be used to expand the binoculars for loan program, which provides binoculars for group tours and school classes that visit the swamp.

ExxonMobil – Thanks to volunteer Leo Hollein, retired from ExxonMobil, who has again been recognized by his company for his many volunteer hours at Great Swamp National Wildlife Refuge. Leo has been active in the Bluebird project (see story on pages 4-5) and has earmarked the \$500 donation for continued support of that project.

*What Friends Do***TAKING A WALK IN THE GREAT SWAMP**

By Judy Schmidt, Education and Outreach Chair

In the first seven months of this year, 16 guided walks have been given to 280 participants. There have been five scout troops, seven school groups, the Morris County Chamber of Commerce, a group from the N.E.S.E.A. Building Energy Conference, Student Conservation Association, and the Garden Club of the Oranges.

Half of the tours were on the boardwalk and lasted about 1½ hours. Other walks started at the Friends Office and Bookstore and included a video program about the Refuge System. These were mostly scout troops doing badge work or school groups doing class work such as water and air testing.



Assumption School Brownies enjoy a day at Great Swamp

The smallest group was the Garden Club with only four members making the day, but after the walk they came back to the Friends Office and Bookstore, had lunch, and did some shopping! The largest group was 75—fifth grade students, parents, and teachers—from Millburn School. During the five hours they were at the Swamp, the three classes did two different walks and visited the Raptor Trust, all the while trying to find the answers to questions given to them by their teachers.

The tour leaders are Friends volunteers Cathy Borman, Neil Borman, Charlie Gould, Marcia Rymer, Nancy Schenck, and Board Member Judy Schmidt – together they have donated a total of 68 hours to this program.

Through the generosity of members and matching corporate grants, the Friends have a collection of binoculars that are loaned to participants in guided walks such as these. When you hand a visitor a pair of binoculars, you can suddenly see them get focused on why they are here in the Great Swamp.

*Happenings on the Refuge***WHAT'S NEW IN THE SWAMP****New Boardwalk Loop is Complete – Check It Out!**

The new loop on the boardwalk at the Wildlife Observation Center is done! Just in time for a Fall walk. Passing through open swamp and then into the woods, it joins the old boardwalk. If you turn left, the boardwalk leads to the blind. If you turn right, you'll return to the parking lot. Either way, it's a wonderful addition to this very popular spot in the Great Swamp National Wildlife Refuge.

Fencing Replaced — At the Wildlife Observation Center's short boardwalk – notice the new fencing around the Blind, which helps visitors get a close-up view of wildlife. Your membership dollars and proceeds from the Bookstore & Gift Shop were used to pay for part of the fencing. Thanks to all of you for your contributions and support.

The New Tree & Shrub Guide – A Best Seller!

The new Tree & Shrub Guide to the Boardwalk Trail has been available for visitor use since June 1 and our biggest problem has been keeping the dispenser box stocked with copies. It is obviously a popular item for visitors walking the boardwalk. Copies are available at the Friends Bookstore & Gift Shop if the box is empty.

Scopes at the Heron Rookery Overlook are in place providing spectacular close-up views of the (now empty) nests of the Great Blue Herons. But next spring, visitors will get a wonderful peek at the fledging herons. Right now, the scopes are being used to spot migrating and winter hawks – and the close-up view of the red headed woodpeckers is just fabulous. These new scopes were made possible by the Friends of Great Swamp (that's you!) and a matching grant from the Fish and Wildlife Foundation.

GSNWR is on the web! Check out the new web site for the Great Swamp National Wildlife Refuge – located at <http://greatswamp.fws.gov>.

*Friends at Work***HELPING BLUEBIRDS REPRODUCE**

By Leo Hollein

Competitors and Predators

It seems like a simple concept. Build and erect nest boxes in the proper habitat and they will come – the bluebirds. As with many situations in life, however, complications can mount quickly. The Great Swamp is a very challenging place for bluebirds to raise a family. The Swamp has a variety of nest box competitors and predators.

*Stovepipe Predator Guard*

Nest Box Unit II is the area west of Pleasant Plains road and south of the closed bridge. Unit II has 47 nest boxes that are monitored by volunteers on a weekly basis during the breeding season. These nest boxes have been built and installed specifically for bluebirds who are dependent to a large degree on these manufactured homes. Unfortunately, the other denizens of the Swamp don't know or don't care that the boxes were built for bluebirds. In the last two years, five different cavity nesting birds have nested in the boxes as well as two different mammals. In order of nesting frequency the birds are tree swallows, eastern bluebirds, house wrens, tufted titmice and house sparrows. All of these birds can raise multiple clutches in a nesting season. However, a greater percentage of bluebirds fledge multiple broods than for the other species. A nest box can be used by several species in the same year. Tree swallows and bluebirds are the predominate occupants of the boxes. House wrens not only compete for empty boxes but may destroy the eggs of nesting birds by pecking them. Then, the wrens may nest in these abandoned boxes. House sparrows are an invasive, non-native species introduced from Europe. Their eggs are destroyed when found in the nest boxes.

House mice are an all too common year-round resident of the nest boxes. They construct their own nests and typically raise litters of 4 young in the boxes. The mice along with their nests are removed whenever they are found. The mice tend to recolonize the same box repeatedly and can prevent birds from nesting. The mice can also enter boxes in use by birds and disrupt their breeding. Use of a stovepipe predator guard has been extremely successful in preventing mice from occupying the nest boxes.

For the 2002 nesting season, 17 posts in Unit II were fitted with stovepipe predator guards. No mice or mice nests have been found in these boxes. During the 2002 season mice continued to nest in boxes with conical predator guards or no predator guards at about the same frequency as in 2001. The plan is to install the stovepipe predator guards on all posts.

There are also cohabitators of the boxes (wasps) and parasites (blowflies). Paper wasps build umbrella-shaped, colony nests that are usually located on the inside roofs of the boxes. They occasionally kill tree swallows whose dead bodies are found in the box. When present, paper wasp nests and wasps are removed with care, as they are skilled at stinging. Wasps have not been found in boxes used by bluebirds. Evidently, bluebirds prey on them. Mud dauber wasp nests are also found occasionally in the nest boxes. These solitary wasps are docile and not likely to sting birds or monitors.

Blowfly larva are parasites and feed on the blood of nestlings. This usually is not fatal. After a clutch fledges, the old nest is removed from the box in the hope that the impact of blowflies on succeeding clutches will be reduced.

There are also visitors to the nest boxes looking for a free meal. Predator guards (conical or stove pipe) are installed on most posts to prevent or at least reduce snake and raccoon predation. The snakes leave no signs of entry. The nest is still in good condition but empty after their visit. Raccoons have ripped open boxes to get their meal. Both prefer eggs to nestlings – just like humans. Predation of nests almost always involves eggs. Once the eggs have hatched there is a high probability that the young will fledge.

While it is not possible to positively identify the predator in all cases, total egg predation can be accurately measured. Bluebird nest predation rate was 21% in 2001 and 43% in 2002. Tree swallow nest predation was 13% in 2001 and 26% in 2002. Unlike bluebirds, tree swallows are very reluctant to leave their nests when they are brooding eggs or young hatchlings. Sometimes tree swallows need to be physically moved by hand in order to count the eggs in a nest. Tree swallows also dive bomb nest monitors as they approach their boxes. The combination of their aggressive behavior towards potential threats and their reluctance to leave their nests may be the reasons for the lower egg predation rate for tree swallows.

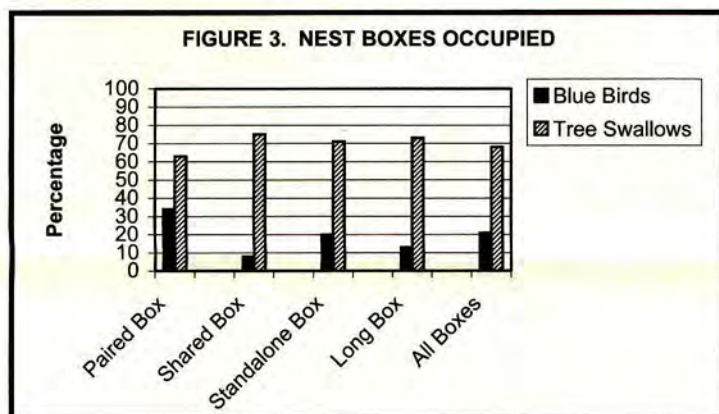
Dead nestlings are sometimes found in nest boxes. The causes for dead nestlings include:

- ✓ Blowflies or paper wasps,
- ✓ Death of a parent due to avian or other predation,
- ✓ Insufficient food supply prevents the entire clutch from fledging – survival of the fittest starts at an early age,
- ✓ Parents abandoning nest – when the time comes, tree swallows will migrate leaving not fully developed young to die in the nest; this occurs with second broods,
- ✓ On rare occasions a hatchling will not fledge (leave nest box) with nest mates and will eventually starve to death.

In 2001, 93 % of both bluebird and tree swallow hatchlings fledged.

Nest Box Configuration

One of the disappointments of Unit II is that bluebirds over a two-year period used only 21% of the nest boxes. Tree swallows used 68% of the boxes. This greater than 3/1 ratio of tree swallows to bluebirds is unusually high for bluebird nest box trails in New Jersey. The New Jersey Nestbox Record Program (NRP) overseen by the NJ Division of Fish and Wildlife summarized annual nest box breeding activity in bluebird nest box trails for a ten-year period. For all locations except the Great Swamp, bluebirds used about the same or more nest boxes than tree swallows. The combination of open fields, lots of water and available nest boxes found in the Swamp appears to be the ideal habitat for tree swallows. A review of the nest data indicates that steps can and are already being taken to increase the ratio of nesting bluebirds to tree swallows.



Occupancy rates for Bluebirds and Tree Swallows for a two-year period (2001-2002)

Unit II has two types of bird boxes, the traditional vertical box, and a long horizontal box. The boxes are also arranged in three different configurations:

- ✓ Paired – Boxes on single posts about 30 feet apart.
- ✓ Shared – Two boxes on a single post.
- ✓ Standalone – A single box on its own post at least 300 feet from the next nearest nest box.

Both types of box are used in the three configurations.

As shown in the graph, tree swallows use all of the configurations and boxes at about the same frequency that varies from 63 – 75%. The smallest percentage (63%) of boxes used by tree swallows is paired boxes. Bluebirds nest in paired boxes with greater frequency (34%) than for the other configurations. Bluebirds used only 8% of the shared boxes and 13% of the long boxes. Paired boxes are preferred because both bluebirds and tree swallows are territorial when it comes to nesting.

Neither species will initially allow another pair of the same species to nest within about 30 feet. However, tree swallows, unlike bluebirds, will allow another tree swallow pair to nest in the other paired box once they have completed laying and begun brooding their eggs.

The standalone boxes are predominately used by tree swallows who work in groups of 3-5 to harass a potential bluebird pair in the contest to use the box. The tree swallows usually win these contests especially when it involves a potential second nesting for the bluebirds. Bluebirds begin nesting earlier than tree swallows and have a better chance for securing a standalone box for their initial nesting.

The number of paired nest boxes in Unit II was increased from 8 in 2001 to 22 in 2002. The most significant change observed was that the number of bluebird pairs increased their frequency of second nestings in Unit II from 50% in 2001 to 75% in 2002.

To encourage increased bluebird nesting, the primary step is to configure all nest boxes as pairs located within 30 feet of each other. Based on the data above this would increase the bluebird usage of nest boxes from 21 to 34%.

It is also planned to replace all long boxes with conventional vertical nest boxes and to eliminate the shared box configuration. This should further increase the percentage of bluebirds using the nest boxes.

FALL FESTIVAL IN FOCUS HIGHLIGHTS FROM THE SEPTEMBER 2002 FALL FESTIVAL

*The weather? Perfect!
The food? Tasty!
The visitors? Nearly 500!!
The Friends of Great Swamp Third
Annual Fall Festival...a great success!!*



T.R. Bear Joins Refuge staff—Jamie Britt and Tom McFadden welcoming visitors



Suzanne Mahoney leads a wildflower walk



Kids enjoyed a variety of interactive activities



Can you find the real Barred Owl?



Kids made bird-feeder cones — you can too!

FOR THE BIRDS... RECIPE

1 package lard
4 cups oatmeal
1 jar (18 oz) Peanut Butter
4 cups corn meal
Melt lard and Peanut Butter
Stir in dry ingredients
Add raisins (optional)
Fill cone (pine or spruce) with mixture.

Sit back and enjoy the birds!

CALENDAR OF EVENTS

Every Weekend	Friends Bookstore & Gift Shop—Saturdays from 11:00 am—5:00 pm and Sundays from 1:00—4:00 pm. Specialty nature items, visitor information, trail maps, checklists, free coffee, and more. All proceeds support Refuge projects.
November 1, 2002	Deadline for the 2002 Photo Contest.
November 2, 2002	Brunch with Friends Artist Ron Orlando – reservations required. 10:00 am. Friends Bookstore & Gift Shop.
November 2, 2002	Bookstore & Gift Shop Holiday Open House – Get your Holiday Shopping done early! 11:00 am—5:00 pm. Check out our new merchandise, talk to the artists, get your Centennial poster auto-graphed. Refreshments and a gift basket give-away. Friends Bookstore & Gift shop.
November 3, 2002	Birding and Natural History of Great Swamp. 8:00—10:00 am. Join Naturalists Steve and Linda Byland at the Wildlife Observation Center. Co-sponsored by New Jersey Audubon Society and Friends of Great Swamp. Additional program dates are November 17th, December 1st and December 15th.
November 30, 2002	Turkey Walk and Photo Contest Award Presentation – 2:00 pm. Friends Office and Bookstore.
December 4 – 7, 2002	Refuge (including Friends Bookstore & Gift Shop) closed to visitors – Deer Hunt.
December 22, 2002	Last day for Holiday shopping at the Friends Bookstore & Gift Shop.
January 4, 2003	Friends Bookstore & Gift shop opens for the Winter Season – stop by for information, maps, coffee and cookies. This is one of the best times to visit the Refuge.
March 14, 2003	Centennial Event – Burying of the time capsule. Details will be announced.

LILACS AND DAFFODILS — continued from page 1



Just before you get to the large pines, the Trapp Farm used to sell fruits and vegetables at a roadside stand. On New Vernon Road, driving north toward the Wildlife Observation Center, you'll pass the site of the Havriluk Dairy Farm on the left, one of the last places in New Jersey where you could buy raw milk.

Just a little further on the right, daffodils mark the location of the Hilbert Farm and just as you turn into the Wildlife Observation Center, lilacs and daffodils mark the site of the Borako Farm. Looking out the observation blind at the end of the long boardwalk, yellow daffodils bloom in the field marking the Denhart Farm where milk cows were raised.

If you drive down Pleasant Plains Road, you'll notice daffodils in bloom on the right side of the road – the yard of the Pages. The Refuge Headquarters Building was the site of

the Armon Farm and the Friends Office and Bookstore was once the Lamson Dairy Farm. Further up the road where it bends sharply, crops of hay and vegetables were raised on the Beard Farm.

This past Spring, the Refuge removed two houses and a barn on White Bridge Road and next Spring there will be daffodils blooming to mark the site where homes once stood. If you know the family names, or the history of any of these homesteads, call or come visit us in the Friends Office and Bookstore (formerly Lamson Dairy Farm) and let us know! We're hoping to develop a homestead history of the Refuge as a Centennial project – and we're looking for photos, newspaper articles, or family histories.

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

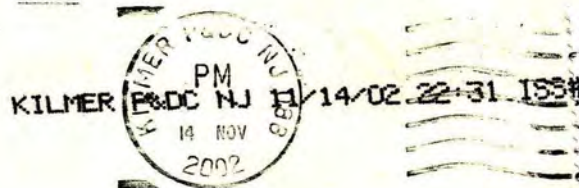
Promoting the conservation of the natural
resources of the Refuge

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 2002





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CELEBRATING A CENTURY OF DISCOVERY
NATIONAL WILDLIFE REFUGE SYSTEM 1903-2003

Friends of Great Swamp National Wildlife Refuge

Ron Orlando

Searching for the Perfect Gift?

SHOP AT THE FRIENDS OF GREAT SWAMP BOOKSTORE & GIFT SHOP

SELECTED MERCHANDISE	SIZE	COLOR/ STYLE	QTY.	PRICE	TOTAL
Sweatshirt—Hooded Merganser Adult sizes — S, M, L, XL, XXL Color — 1=Birch 2=Periblu 3=Jade 4=Granite				\$19.95	
Sweatshirt – American Kestrel Adult sizes — S, M, L, XL, XXL Color – 1=Birch 2=Natural				\$19.95	
Mouse Pad – 2001 Photo contest winners Style 1=White Oaks 2=Green Heron 3=Lily Pads	—			\$9.50	
Pin—GSNWR Blue Goose Pin (oval)	—	—		\$3.10	
Patch—GSNWR Blue Goose Patch (oval)	—	—		\$3.10	
Passport—Blue Goose Passport Book	—	—		\$6.30	
Poster -Great Swamp National Wildlife Refuge Centennial Poster by Friends artist Ron Orlando 18" x 24" See reverse. For full color picture, visit our web site.	—	—		\$12.00	

Total (prices include tax where applicable)	
Less 10% Member discount	
Sub Total	
Shipping and Handling	
... up to \$15.00	\$2.50
\$15.01 - \$35.00	\$3.00
\$35.01 - \$60.00	\$4.00
\$60.01 to \$100	\$5.00
Over \$100	\$6.00
Merchandise Total	
Gift Certificate – Can't decide what to give? How about a gift certificate? We'll send you a gift certificate in the amount you specify. May be redeemed at any time in the Friends Bookstore & Gift Shop.	
Specify amount	
Memberships – Individual=\$15.00 Family=\$25 I would like to give a gift Membership to Friends of Great Swamp to:	
Name:	
Address:	
Phone:	
Total Amount Enclosed	

Method of Payment – Checks or money orders made payable to Friends of Great Swamp
Mail order and payment to: Friends of Great Swamp, 152 Pleasant Plains Road, Basking Ridge, NJ 07920

Please print clearly

Name _____

Address _____

City _____ State _____ Zip _____

Daytime phone _____

THANK YOU FOR YOUR ORDER – ALL PROCEEDS BENEFIT REFUGE PROJECTS
www.friendsofgreatswamp.org — 973.425.9510