

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE

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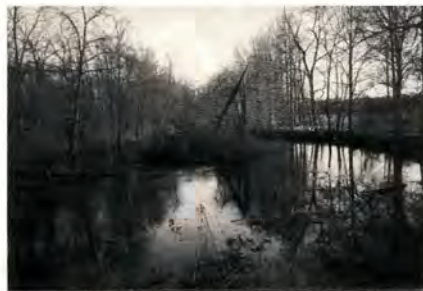
Kathy Woodward

Tom McFadden
GSNWR Liaison

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2003 PHOTO CONTEST WINNERS ANNOUNCED

Congratulations to the winners of our 2003 Photo Contest. Winners were announced at the November 29, 2003 Turkey Walk and each winner received a \$50 gift certificate in the Bookstore & Gift Shop. We'll have postcards of the winning photos in the Bookstore soon!



*2003 Friends Choice Category:
Kathy Reutlinger – Waiting for spring...*



*2003 Landscape Category:
Carole Wilmot – Early snow*

2004 PHOTO CONTEST GOES DIGITAL

Yes – we heard you! Digital photos will be accepted for the 2004 Photo Contest as well as color or black & white prints and slides.

Other changes recommended by our Photo Contest Committee—Ray Lord, Dorothy Smullen, John Wilmot, and Laurel Gould include:

- New categories
- New rules
- And a June 30 deadline!

A new objective of the photo contest is to create and build a digital library which would include photos of the swamp – wildlife, plants, scenes, and recreational activities. These digital library photos will be used for displays, presentations, publications, and more. The photos will be available on our website for easy access.

Check out the new Photo Contest Entry Form in this issue.

Then get out your camera and start snapping ! (Do digital cameras snap?)



*2003 Wildlife Category:
Dorothy Smullen –
Turkey Tails Trametes versicolor*

NEW DIRECTOR AND OFFICERS ELECTED FOR 2004

At the Friends of Great Swamp annual meeting held November 18, 2003, directors Kathy Woodward, Lisa Molinari, Judy Schmidt and Laurel Gould were re-elected for a two-year term; Dorothy Smullen was elected as a new director. Following the annual meeting, the Board elected the following officers: President: Judy Schmidt, Vice President: Neil Borman, Secretary: Lisa Molinari, Treasurer: Laurel Gould.

MEET DOROTHY SMULLEN—NEW FRIENDS DIRECTOR

Long Hill Township resident Dorothy Smullen is the newest member of the Friends' Board. Dorothy has a master's degree in biology from Brooklyn College and has held a variety of educator and leadership positions throughout her career, retiring recently from North Plainfield High School, where she taught environmental science, biology, and earth science.

assists the New Jersey Poison Control in mushroom poisoning cases (yes – she knows her fungi!) With a combination of scientific knowledge, an extensive background in education, and her passion for the outdoors and nature, Dorothy was a logical choice to serve as Chair of our new Displays and Exhibits Committee and will serve as our liaison to local schools.

In the early 1980's she served as Director of the Reeves-Reed Arboretum in Summit and she was chairman of the Long Hill Township Shade Tree Commission from 1982 – 1986. Dorothy is active in the New Jersey Mycological Association, is a life member of the North American Mycological Association, and

With some help from her husband Bill, Dorothy has already created a new interactive game for kids and says "I look forward to working to create a discover atmosphere in the exhibits of the new display room in 2004." (And, she could use some help! See the volunteer opportunities on page 10)

TRANSITIONS...

Kathy Woodward is one of the founding members of the Friends of Great Swamp and was our first vice-president. In October 2000, when then-president Wes DeCou resigned, Kathy was persuaded to step up to the presidency and was subsequently re-elected president in October 2001. After more than three years, Kathy has now turned the gavel over to Judy Schmidt (see Kathy's interview with Judy on page 3).

The Board would like to say a very special thank you to Kathy. She led our new Friends organization through formative years as we doubled our membership, tripled our volunteer hours, assumed more projects, and matured as a group. Her leadership, dedication, enthusiasm, and commitment to the Refuge were evident in everything she did – and she leaves an organization ready to take on new responsibilities. Fortunately for us, Kathy isn't going away! She was re-elected to the Board in 2003 and will serve as Volunteer Coordinator. Kathy has been increasingly active at the national level; during the past few years she has traveled to refuges across the country to mentor new Friends groups and just last year was elected to the Board of the National Wildlife Refuge Association. From the Board – and from the Friends – thank you Kathy.

THANKS TO...

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

- Presbyterian Church of Chatham Township: For their generous donation and continuing support.
- Somerset County United Way: For their continuing interest and support – and for decorating dozens of bookstore bags during National Family Volunteer Day.
- ExxonMobil: As part of the Volunteer Involvement Program, retired employees Leo Hollein, Jack Higgins, and Chuck Whitmore have each received \$500 for the Friends as recognition for their volunteer hours during the past quarter.
- Lucent Technologies: Thanks to Lucent Technologies for a grant which covered the re-carpeting in our new Exhibit Room – and thanks to Lucent employee and Friends volunteer Linda Byland for making it happen.
- Volunteer John Raab who is always ready with his tools – for giving us a inside view into an old wood duck box and for putting a professional finish on the new railing in the auditorium which was crafted by Roger Donat.
- Assumption School, Morristown: For renewing our web site – and for their ongoing support in innumerable ways.
- Volunteer Jim Cullen who installed lights (and heat!) in the new shed at the Wildlife Observation Center and uncovered a trespassing mouse!

INTRODUCING JUDY SCHMIDT... NEW FRIENDS PRESIDENT

Interview by Kathy Woodward

You know the saying "Actions speak louder than words." If, initially, Judy Schmidt seems a bit quiet, her actions are evidence of her many years of dedication and service to Great Swamp and our Friends group. She has mastered many crafts and loves to share her knowledge and skills.

Judy grew up in nearby Westfield, where she learned about the out-of-doors from her father's Sunday morning nature scavenger hunts. After high school, Judy trained as an LPN at Overlook Hospital, Summit and soon became the first LPN to work in Labor and Delivery. Fortunately, her marriage to Billy brought Judy to the Swamp. Billy was raised near Great Swamp and his grandparents lived in the home at the corner of New Vernon and White Bridge Roads (the Hamilton House). When they were expecting their second child, Billy and Judy found their house on White Bridge Road. Judy's grandmother-in-law would hitch a ride with the bread man and come to visit Judy. Having relatives in the area was a help in meeting and being accepted by the self-reliant folks who lived in the swamp. Judy quickly was involved in the activities of Meyersville and the area.

Shortly after they moved, the Newark Evening News ran a front page article announcing the creation of a new jetport, which put Billy and Judy's home in the middle of one of the runways! Apparently many of the neighbors were unfazed as they told Judy, "It will never happen!" Fortunately, many people, led by the housewives, wanted to be certain that the area was preserved. Through the efforts of citizens and newly formed groups, Great Swamp NWR was dedicated in 1964, forming the boundary of Judy's backyard.

Judy became one of the first volunteers for the refuge, helping with deer tagging, the annual goose round up, and frog and duck count surveys and wood duck box maintenance. The staff members were eager to share their knowledge with volunteers and Judy learned a lot. She and Billy kept track of evening duck numbers by moving a penny from one pocket to another, for every hundred arriving waterfowl! Judy was often interviewed by local press about her connection with the Refuge. One article title quoted Judy – "Don't Stomp on My Swamp!"

Judy loved her property, where she had a vegetable and flower garden and three hives of bees. On a visit to a Mr. Tyndall, a local beekeeper, Judy became intrigued with his wife's pottery. Judy took lessons and shared Marge Tyndall's kiln. Charges for kiln use were by the pound, which, Judy guesses, led her to become skilled at creating pottery with thin walls. Judy's delightful pottery is a best seller in the Friends bookstore.



Judy helps Brownies earn wildlife badges

With three children, Judy became a Scout leader, passing on her love of things wild. The Girl Scouts started a very successful recycling program in Long Hill Township. Judy also volunteered at the neighboring bird rehab center, Raptor Trust and became a wildlife rehabilitator, specializing in ducks. At a recent National Wildlife Refuge Association conference, Judy shared her hints with a fellow rehabilitator on keeping wood ducklings alive.

Five years ago, when the first meetings were held to consider a Friends group at Great Swamp NWR, Judy was invited by the Refuge staff to partici-

pate. She was elected to the original board of directors later that year. She easily moved into the position of leading group tours for scouts, school classes, community organizations and visiting dignitaries. Last year, Judy introduced over 400 visitors to Great Swamp and the Refuge system and organized the children's activities at our Fall Festival, including a scavenger hunt and Boardwalk Bingo.

Judy's passion for the Refuge is contagious. She knows the Refuge in all its seasons and continues to appreciate its treasures. Judy recalls being on a frog count one night, some years ago, with former Refuge biologist, Jackie Record, out by Impoundment 3, with the Hale-Bopp comet overhead. The Refuge seemed endless and time slowed. Judy's words and actions will serve her well as the newly elected President of Friends of Great Swamp National Wildlife Refuge.



Judy presents Congressman Rodney Frelinghuysen with Centennial Print

HAPPENINGS ON THE REFUGE

Trail Renovation: During this past summer, the boardwalk trails at the Wildlife Observation Center underwent some major improvements and renovations. The “short” boardwalk trail was rebuilt and all the planks and railings were replaced. The new planks are made from recycled plastic – thousands of plastic bottles compressed into “wood”. The spur trail from the short boardwalk out to the observation platform was resurfaced with stonedust and the entire trail is now wheelchair accessible.

New Trail Opens: Now for the really big news – the spur trail from the short boardwalk has been extended another quarter mile crossing the marsh and then continuing through upland forest. It leads to the edge of Pool 2, the second largest Refuge impoundment, providing a nice marshland view and a chance to see waterfowl. The new trail will be open in time for spring migration season – be sure to come by and take a hike!



A quiet place on the new trail...

Land Acquisition: The Refuge recently purchased the house and 22 acres of property at 1526 White Bridge Road, the former Mudd / Rose house and once the site of the Millridge Swim Club. Plans for the property are still being developed, but some of the outbuildings will be demolished.

Refuge Staff News: Marilyn Eames Refuge biologist, has accepted a new position at the Patuxent Wildlife Research Center and Refuge in Maryland. We wish her lots of good luck in her new position.

Interns: The Friends are pleased to sponsor the Refuge internship program this year by paying the stipend for one refuge assistant intern this summer. Interns are a valuable resource for the Refuge where they assist with refuge maintenance, invasive species control projects, wildlife surveys, bird banding, and bird box monitoring.

New Visitor Facility Update: The Refuge prepared a Draft Environmental Assessment for the proposed Visitor Center (see Issue 13 – November 2003). A public meeting was held on December 30, 2003 to receive comments. There were about 40 people in attendance; Bill Koch, Refuge Manager, explained the proposal and responded to a number of questions from the audience.

On behalf of the Friends, President Judy Schmidt spoke in favor of the proposal:

The Board of Directors of Friends of Great Swamp, after four years of public outreach providing weekend visitor service and educational tours, realize a great need for a visitor center to better serve the visiting public and to increase awareness of the National Wildlife Refuge System. This proposed site meets all the criteria as a preferred location and therefore we offer our support for this long-planned for and much needed Visitor Center.

The public comment period has ended, but a copy of the Draft Environmental Assessment is available in the Friends Library for review.

MEMBERS ARE OUR MOST IMPORTANT RESOURCE

Members – that’s you! – are so important to the Friends of Great Swamp. Membership dues are a significant and ongoing source of revenue to support our many Refuge projects. Members are a primary source for the volunteers who work on those projects. Member support is what keeps our organization going – without members there would be no Friends group.

People join groups like the Friends for many reasons. Some members become active volunteers and spend their time helping out – once a year, once a month, or in unique ways. But we have many members in far-away states – Colorado, Georgia, Rhode Island, Vermont – as well as New Jersey – members who support the Refuge through their membership dues and donations – and that’s important too!

Regardless of the reason for being a Friend, all members are connected by a feeling of appreciation for the Great Swamp National Wildlife Refuge and what it represents for us all.

NEW DISPLAY & EXHIBITS ROOM BECOMES A REALITY

How can we better serve visitors to the Refuge? This is a theme that occupies the Board at most meetings. One idea was to develop a display and education area. We had "squatting rights" in the Bookstore & Gift Shop where the library and some displays were set up in the Board meeting room – but it was hard to accomplish our objective in a multi-purpose room.

In November, the Refuge offered us a vacant room upstairs from the Bookstore – and we accepted – before they even got the offer out of their mouths! We painted the room, replaced the ceiling tiles, and moved our offices upstairs on January 11 – with the help of some members and two terrific guys who stopped by the Bookstore and ended up carrying out the really heavy furniture (thanks guys!).

Downstairs, we had new carpeting installed, made possible by a grant from Lucent Technologies. Our next step is to improve the display / exhibit area – and then keep it interesting, informative, and interactive.

We need volunteers who can help with the displays – or if you have a collection that you would like to exhibit for a month or so, please let us know. Leave your name and number at the Friends Bookstore – or leave a telephone message. We'd like to thank Mary Lou Weller whose local history display generated a lot of interest over the past few months.

We are also still building our Friends library – we could use donations of nature-related books in good condition.



Before — Friend's Office



After — Visitors enjoy new display room and library

WINTER RAINBOW SWAMP STROLL

By Dorothy Smullen

On a winter day, although the colors of gray, brown and dark green mixed with white snow predominate, there really is a rainbow out there to find – if you have good eyes. Below are some of the plants and their parts that show a winter rainbow. How many can you check off on a winter stroll?

VIOLET	<ul style="list-style-type: none"> • Wild raspberry canes (stems), <i>Rubus spp.</i> (especially wineberry) • Flowering dogwood twigs, <i>Cornus florida</i> 	YELLOW	<ul style="list-style-type: none"> • Willow twigs, <i>Salix spp.</i> • Certain crabapple fruits • Witch hazel flowers, <i>Hamamelis virginiana</i>
BLUE	<ul style="list-style-type: none"> • Red cedar Juniper "berries", <i>Juniperus virginiana</i> • Sassafras and catbrier berries 	ORANGE-RED	<ul style="list-style-type: none"> • Arils of Climbing bittersweet, <i>Celastrus scandens</i>
GREEN	<ul style="list-style-type: none"> • Catbrier (greenbrier) twigs, <i>Smilax spp.</i> (prickly vines with tendrils) • Sassafras twigs, <i>Sassafras albidum</i> • Evergreen gymnosperms and angiosperms 	RED	<ul style="list-style-type: none"> • Staghorn Sumac berries, <i>Rhus typhina</i> • Barberry berries, <i>Berberis spp.</i> • Flowering dogwood fruits • Holly berries...Winterberry loses its leaves; the American holly, <i>Ilex opaca</i>, is evergreen. • Red osier Dogwood twigs, <i>Cornus sericea</i>

2003 — A YEAR TO BRAG ABOUT

It's been a busy... and exciting year for the Friends and for the Great Swamp National Wildlife Refuge. Let's take a look at some of the highlights from a very special year.

Centennial Celebration

2003 was, of course, the 100th anniversary of the national wildlife refuge system—and the Friends joined right in the celebration...

- Participated in the March 15 Centennial Kick-off event, donated items for the time capsule, and hosted the Centennial Bus Tour for lunch.
- Printed and sold a GSNWR Centennial Poster, based on an original design donated by artist Ron Orlando.
- Donated copies of the Smithsonian Book of National Wildlife Refuges to local libraries and education centers.
- Co-sponsored a Centennial Fall Festival jointly with the Refuge—attendance exceeded 800 visitors.
- Set up Centennial displays in local libraries.

New information center at Wildlife Observation Center

The most popular Refuge destination is the Wildlife Observation Center (WOC) which offers boardwalk trails and blinds for wildlife viewing. This past year, with a generous grant from the Mushett Family Foundation, a small building was purchased which now serves as an information center. During the busy fall migration season, volunteers provided weekend visitors with brochures, information, and introduced the challenging boardwalk bingo game, welcoming as many as 400 visitors a day to the WOC.

Frogs and Toads of the Great Swamp Video Program

With a grant from the National Fish and Wildlife Foundation, a video was produced to help identify and learn about the frogs and toads of the Great Swamp. It provides close-up photos highlighting diagnostic markings accompanied by the mating call for each species—and includes a quiz at the end! This video will be used for the Friends' annual Frog Walk event and is available for loan to schools and organizations.

Working with Schools and the Community

Since the inception of the Friends, volunteers have assumed responsibility for providing the majority of school and group tours at the Refuge. Led by Education & Outreach Chair Judy Schmidt, volunteers welcomed 22 groups totaling 400 people, predominantly school and youth groups. Groups from nearby communities and as far away as Newark receive an introduction to the Refuge and the refuge system; groups are led on interpretive walks which support their specific curriculum or program requirements.

Neighboring Assumption School in Morristown chose the topic "Assumption School is for the birds... and the environ-

ment" for their Middle States re-accreditation. One of the specific projects in their program was to involve sixth grade students in learning more about the Great Swamp National Wildlife Refuge. The Friends partnered with Assumption School and worked with the students to help them prepare their talks for a guided tour of the Refuge for the official Accreditation Team visit.

Membership \$\$\$ at Work

The Friends support the Refuge in many different ways—and one is to help with the funding of projects, including:

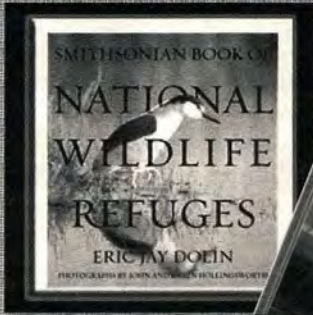
- Co-sponsoring the Volunteer Recognition Dinner.
- Providing lunch for participants at the annual Fishing Derby event.
- Funding replacement railings for the boardwalk trails.
- Funding maintenance and repair materials for the blue-bird boxes.
- Re-printing of the best-selling Tree & Shrub Guide to the Wildlife Observation Center.
- Co-sponsoring the Centennial Fall Festival with the Refuge.

Volunteers at Work

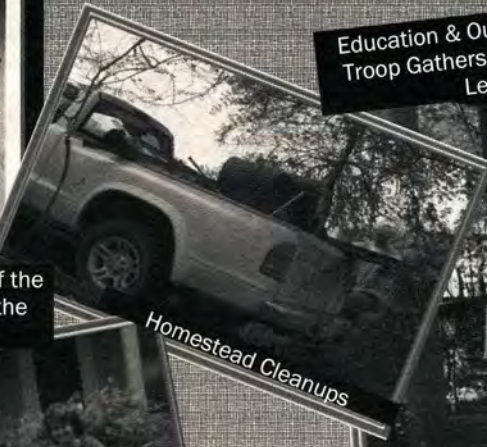
This year, a record 2,083 hours of volunteer activities were reported by Friends volunteers including:

- Two Homestead Cleanups held in the spring and fall.
- The annual Spring Roadside Cleanup.
- Hosting events for the public such as the Sunset Walks during National Wildlife Refuge Week, the annual Fall Festival, and special programs like the Frog Walks, Turkey Walk, Woodcock Watch, Rookery Watch, Oral History Day, and more—to introduce visitors to what's special about the Refuge.
- Leading the Refuge Rovers team on the World Series of Birding.
- Producing the Coordinated Calendar of weekend events in the swamp.
- Staffing the Bookstore & Gift Shop on weekends from September through June, welcoming 2,226 visitors.
- Staffing the Wildlife Observation Center and Heron Rookery during migration seasons.
- Maintenance and improvements to the Friends Office and Bookstore including a new native plant garden.
- Wood duck box cleaning, repairing and data collection.
- Publishing a quarterly newsletter, maintaining a Friends web site, and sponsoring a photo contest.

Things to brag about...



Centennial Gift to each of the Ten-Towns Libraries in the community



Homestead Cleanups

Education & Outreach: Brownie Troop Gathers after Boardwalk Lesson



Biologist Dr. Michael Horne teaches kids about wildlife



Education & Outreach: Brownies Love to Earn Their Badges Here



Refuge Manager Bill Koch takes visitors on educational walk at Fall Festival



Cathy Borman Staffs Bookstore — Open Every Weekend to Help Visitors

Small Boy—Big Toy! Heavy Equipment Display at Fall Festival



NFWF Grant funds Frogs & Toads Educational Video Program



Assumption School takes Middlestates Team on a Guided Refuge Tour



Mushett Foundation Grant funds information hut at Wildlife Observation Center



Original Centennial Artwork donated by Ron Orlando

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

CULLING THE HERD

By Leo Hollein

Whitetail deer are the most numerous large mammals in the Great Swamp National Wildlife Refuge (GSNWR). They are beautiful and graceful animals. It is a pleasure to watch whitetails especially the fawns in the spring and bucks in the fall.

Whitetails can run as fast as 35 miles per hour and jump a fence eight feet tall. They are reddish brown in the spring and summer. Their coats turn a dark grayish brown in the fall. When frightened or uncertain they will occasionally snort and stamp their hooves before running away with their tails erect displaying their name sake white underside. I remember how thrilled I was to see a whitetail deer in my yard for the first time about twenty years ago. Now I am ambivalent as these stately animals appear in my yard frequently near dawn or dusk in gangs of 6 or more (Figure 1) to



FIGURE 1 - WHITETAIL DEER FEEDING

feast on my shrubs and flowers.

Whitetail deer are browsers. They will eat most green plants including aquatic ones in the summer. They prefer acorns, other nuts, birdseed and corn in the fall. During the winter they will eat the bark of trees and buds from bushes and trees.

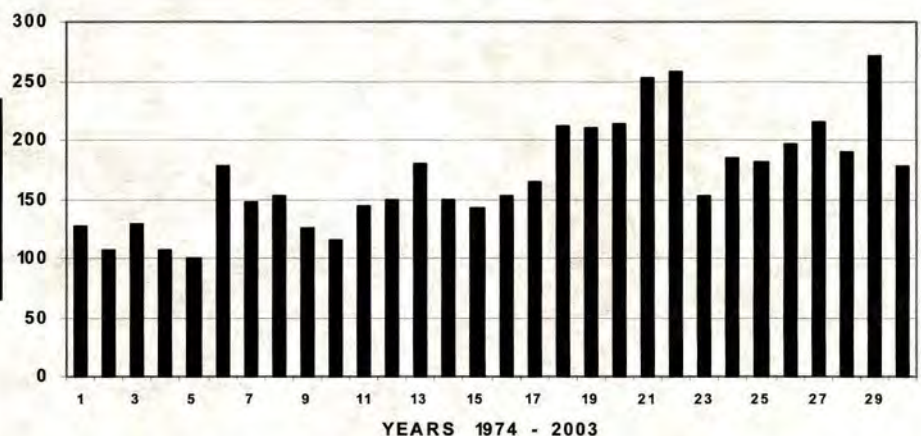
In the Great Swamp an over abundance of whitetail deer will browse much of the vegetation in the Refuge. Deer will eat tree saplings preventing natural regeneration. Plants that deer avoid such as Japanese Barberry will become the predominate vegetation in the under story. This reduces the diversity of vegetation and wildlife. Left unchecked the deer population could increase until starvation trims their numbers during a severe winter. Historically wolves, cougars, bears and humans (native Americans) preyed on

deer in New Jersey. Now only hunters and a few bears prey on them. The hunters are restricted to certain areas and limited to a hunting season. Collisions with cars do take a toll on the deer herd. However, this is an expensive and dangerous way to reduce the deer population.

The mission of the US Fish and Wildlife Department is to manage the Refuge to sustain a diverse and viable wildlife population. To achieve this an annual deer hunt was initiated in 1974. Three hundred hunting permits for the four-day season are issued based on a lottery system. The objective of the hunt is to stabilize the deer population in the Great Swamp so that both the vegetation and the deer herd are maintained in a healthy condition. The annual deer harvest for the 30 years of the hunt is shown in Figure 2. The annual deer harvest has increased with time reflecting the growth of the GSNWR from about 3,000 to 7,500 acres since the hunt began. The average harvest for the 30 years is 170 deer.

Prior to the hunt the GSNWR staff post the various parking areas as well as install signs and flagging to indicate the areas where hunting is not allowed. Hunters check in and out of the GSNWR headquarters each day of the hunt. They are assigned specific parking areas throughout the Refuge. The harvested deer are brought to the check station where the weight, age and sex of the deer are recorded along with the kill location. The number of points and diameter of the base of the antlers are also recorded for the bucks. Age is determined by examining the teeth. Deer continually wear down their teeth through out their lifetime.

FIGURE 2 - DEER HUNT YIELD



For the GSNWR hunt, the average adult doe weights about 80 to 90 pounds after field dressing (removing the internal body cavity organs) while the bucks weigh about 100 to 120 pounds on average. The six months old fawns are in the 40 to 60 pound range. A numbered aluminum transportation tag is attached to the deer so it can be transported legally out of the Refuge. Volunteers assist in running the check station that becomes hectic at dusk when groups of hunters arrive simultaneously with their harvest.

The most significant recent change in deer hunting rules went into effect beginning with the 1999 hunt. The new system is called the "earn a buck" program and was aimed at reducing the doe (adult female) population that annually can have twins or even triplets under favorable conditions. This program requires a hunter to first harvest an adult doe before earning the right (buck permit) to harvest a buck. If the hunter harvests a fawn first, the hunter cannot earn a buck permit for that year. If this hunter subsequently harvests two adult does, then a buck permit is earned for the following year. A hunter in the Great Swamp can harvest an unlimited number of antlerless deer but only one buck per season.

The previous deer hunting system was called the "hunter's choice". Under this program a hunter could harvest a maximum of two deer of either sex each day. In theory a hunter could harvest 8 bucks and no does.

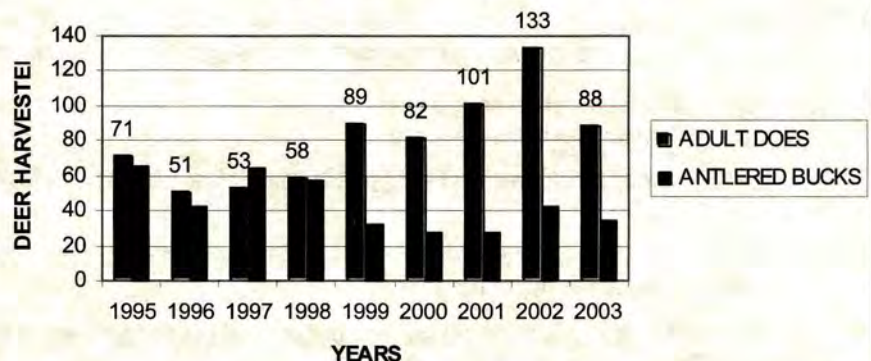
Figure 3 illustrates the positive impact of this change in hunting rules. The left side of Figure 3 (years 1995 through 1998) shows the results of the last four years of the "hunter's choice" harvests. The right side of Figure 3 (years 1999 through 2003) presents the results for the first five years of the "earn a buck" program. The "earn a buck" approach is resulting in a higher percentage of does being taken as well as a higher number of does (average of 99 does per year) than for hunter's choice system (average of 58 does per year). While the harvest of antlered deer has also declined, a much higher percentage of the bucks har-

vested are 2 ½ years or older.

The harvest for 2002 was 271 deer and 133 adult does. These were the highest totals for the 30 hunts. The mild winter of 2001-02 and the good 2002 hunting weather (cold and snowy) contributed to these results. The harvest for 2003 was 178 deer and 88 adult does. This was comparable to the harvest during the first three years of the "earn a buck" hunts and followed the harsh winter of 2002-03.

Typically, about 50% of the deer are harvested in the first day of the hunt. Deer hunting is similar to fishing in that some hunters seem to get most of the deer while many hunters are unsuccessful. Hunters range in age from twelve to over seventy. Frequently the hunting groups consist of family members – brothers, grandsons, fathers and grandfathers. All the hunters for the 2002 and 2003 hunt were male. Unlike at Augusta National, the GSNWR deer hunt is open to female hunters.

FIGURE 3 - ADULT DEER DISTRIBUTION



Note: Many thanks to Craig Bitler who provided data and information for this article.

DID YOU KNOW...

Compiled by Judy Schmidt

- Spider silk is the strongest natural fiber known to man.
- Spiders have oil on their bodies and claws that grasp the silk so they don't get trapped in their own webs.
- Hummingbird nests are made of spider web silk and lichens are about the size of a walnut shell half.
- To prepare for migration, the ruby throated hummingbird increases its body weight by 50 percent.
- Fall migration from north to south lasts more than twice as long as spring migration.
- A bird's feathers are heavier than its skeleton.
- Most birds lose about 1 percent of their weight each hour when migrating.
- The call of a saw-whet owl can be heard a half mile... or more.

*What Friends Do***VOLUNTEER OPPORTUNITIES**

Volunteers play a key role in helping the U.S. Fish & Wildlife Service fulfill its mission. There are many ways to help—just look at the variety of opportunities below.

The amount of time you volunteer is up to you—once a year, a few hours each month, or by helping at one or more events.

You'll learn a lot—about the Refuge and about wildlife. You'll make new friends and meet new people. You'll make a contribution to this unique and beautiful area. Together we can make a noticeable difference for visitors and wildlife.

- ☐ **Bookstore:** Welcome visitors, answer questions, provide information. Staff sales desk. Can you spend 3 hours a month? Weekends, 11–2 or 2–5.
- ☐ **Wildlife Observation Center and Heron Rookery Overlook:** Enjoy the outdoors while you welcome visitors and help them enjoy their visit. Weekends, 11–5 or 1–5 spring and fall. Once a month—or more!
- ☐ **Special events:** Assist with evening or weekend programs—set-up, welcoming visitors, refreshments, clean-up. (Spring events are listed on enclosed Events Calendar.)
- ☐ **Native gardens:** Help create and maintain native plant gardens at Bookstore, Refuge Headquarters, and Wildlife Observation Center. Flexible.
- ☐ **Homestead Cleanup:** Join a work crew to remove man-made debris from the Refuge. This is heavy, outdoor work but you sure get your exercise – and you get to see areas of the Refuge normally closed to the public. Spring and Fall.
- ☐ **Education:** Conduct or assist with scheduled school, scout, or group tours, usually 2-3 hours long. Answer questions, show video programs, provide orientation to the Refuge. Must be available on weekdays.
- ☐ **Displays and Exhibits:** Help create and maintain displays and exhibits. If you have a special collection, consider setting up a month-long exhibit. Flexible.
- ☐ **Roadside Cleanup:** Pick up litter along public roads that cross the Refuge. The more volunteers, the more roads we can cover. April 3.
- ☐ **Public Relations:** Help issue press releases, maintain media contact lists, develop flyers and posters, assist with distribution of publicity in the community.
- ☐ **Fall Festival Planning:** Join us in planning our annual September Fall Festival. Volunteers needed for food, logistics, kids activities, walks and talks, publicity.
- ☐ **Photo Library:** Help document refuge plants and wildlife. Organize digital library.

SECOND SUNDAYS... WITH FRIENDS

Last year, when Friends board member Judy Schmidt attended the national Friends Conference in Washington D.C., she talked to other Friends groups from around the country—and shared ideas. One idea Judy really liked was the concept of a regularly scheduled day every month when there would be a program, walk, or activity at the Refuge.

And so the plan for “Second Sunday” was born—and it’s now official! On the second Sunday of every month, the Friends will host an open house at the Bookstore & Gift Shop. There will be a short program, refreshments, and ongoing activities like wildlife videos, jigsaw puzzles, watching the birds at the feeder, and some activities for kids.

So join us, from now through June, on the second Sunday of every month, between 2:00 and 4:00 pm. It’s casual, informal, and unstructured. What a nice way to spend a Sunday afternoon... with Friends.

February—volunteers will talk about cleaning out the wood duck boxes—and the surprises they find.

March—we’ll do some winter plant ID—a real challenge unless you know what to look for!

April – no program on Easter Sunday.

May—we’ll celebrate Mother’s Day... Swamp style.

June—learn how to identify ferns in the swamp—slide program followed by a short walk.

SIGNUP FORM — WILDLIFE OBSERVATION CENTER AND HERON ROOKERY OVERLOOK

Spring and fall migration are the busiest times at Great Swamp National Wildlife Refuge – it's when we see the most visitors – and the most wildlife as thousands of ducks and other migratory birds pass through the Refuge on their way to nesting grounds. During these busy weeks, volunteers staff the Wildlife Observation Center and the Heron Rookery Overlook to help visitors enjoy the Refuge. Volunteers provide maps and brochures to the public, answer questions and give directions, and help point out interesting sightings in the Refuge.

We need volunteers!

We need volunteers for the spring migration season to staff the Wildlife Observation Center or the Heron Rookery Overlook on Saturdays and Sundays, from March 20 through May 23. If you have a few hours to spare, please sign up below. You can sign up for one slot – or for more! New volunteers are welcome! We provide orientation training and will pair you up with an experienced volunteer.

It's a great way to spend a few hours outdoors, enjoy the Refuge, and meet some of the nicest people.

Day	Date	11:00 am - 1:00 pm	1:00 pm - 5:00 pm
Saturday	March 20		
Sunday	March 21		
Saturday	March 27		
Sunday	March 28		
Saturday	April 3		
Sunday	April 4		
Saturday	April 10		
Sunday	April 11		
Saturday	April 17		
Sunday	April 18		
Saturday	April 24		
Sunday	April 25		
Saturday	May 1		
Sunday	May 2		
Saturday	May 8		
Sunday	May 9		
Saturday	May 15		
Sunday	May 16		
Saturday	May 22		
Sunday	May 23		

Fill in days and times that you are available. Sign up for one time slot or an entire day.
Mail this form to Great Swamp NWR, 152 Pleasant Plains Road, Basking Ridge, NJ 07920

Name: _____

Address: _____

Phone: _____

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

FEBRUARY 2004

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

