

ISSUE TWENTY EIGHT AUGUST 2008

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WILDLIFE OBSERVATION CENTER—SOMETHING FOR EVERYONE

In this issue, we are featuring the Wildlife Observation Center (WOC)—the hot spot at Great Swamp National Wildlife Refuge. The boardwalk trails built over water offer a close-up view of wildlife with minimum disturbance. Diverse habitats support a great variety of animal and plant life. It's no wonder that the WOC is such a popular visitor destination. Read the stories in this issue from Friends' Volunteer Coordinator Pat Giaimo, from long-time volunteer George Helmke, and from Friends' Education Chair Judy Schmidt (pages 6–7). The Wildlife Observation Center really is a special place... see for yourself.

VOLUNTEERING AT THE WILDLIFE OBSERVATION CENTER By George Helmke

It is always rewarding to volunteer one's time and services to benefit others. One is especially rewarded when volunteering at the Wildlife Observation Center (WOC) through the personal contact made with the visiting public, including family groups and children.

Some come to the WOC just for exercise, some with cameras for nature pictures, but most, it would appear, to be close to the natural world. It is a privilege to visit with them and learn of their interests. Upon leaving, visitors frequently report on what they have seen which is posted on a "sightings board". It is a major delight to talk with children about their sightings and help, when



George Helmke (right) demonstrates spotting scope techniques to fellow volunteer Gail Petrillo

needed, to identify uncertain sightings using the field guides on our bookshelf.

Among our most important visitors are children who enjoy our boardwalk bingo games. Those of us concerned with the preservation of wildlife and the future of our natural world understand the importance of involving children in this endeavor. Our future is in the hands of our youth! Hopefully more of our readers will avail themselves of the rewards of volunteering and sign up to help out at the WOC during the Fall season. More volunteers are needed

to expand the staffing days and to provide better coverage, particularly during the busy weekend periods. Don't miss this opportunity to serve.

SPRING STATISTICS TELL A STORY

By Pat Giaimo, Friends Volunteer Coordinator
The Spring Migration Season at Great Swamp NWR
was a great success, enjoyed by volunteers and
visitors alike. From March through June, for a total
of 67 days, six hours a day, there was a volunteer
at the Wildlife Observation Center to greet visitors,
answer questions, and explain what might be
seen on the trails. (continued on page 3)



Pat Giaimo (right) describes WOC trails to visitors

KEEPING UP WITH FRIENDS & THE REFUGE—NEWS, HIGHLIGHTS & UPDATES

Joint Planning Meeting—Looking Ahead Each year the Board and Refuge management get together to discuss plans and projects for the upcoming fiscal year. This year's meeting was held on August 6. Topics for discussion included the new visitor center (see story on page 3) and the upcoming Comprehensive Conservation Plan (CCP), both of which will require considerable resources. The CCP, mandated by Congress for all refuges, is a 15-year plan for each Refuge. The CCP will start at Great Swamp this Fall and must be

completed in two years. The Friends will Steve Henry, Deputy Refuge Manager, be able to assist, but it will require staff resources at all levels as well. Watch for more information on this initiative.

Steve Henry, Deputy Refuge Manager, was very excited about the new Junior Refuge Manager program which the Friends are developing, commenting

Refuge Manager Bill Koch commended the Board on the quality and number of public events sponsored by the Friends. This will continue to be an important role for our group. Tom McFadden, Outdoor Recreation Planner, noted that there is an increasing emphasis on non-consumptive recreation (hiking, photography, bird watching) especially when it involves families and children.

Steve Henry, Deputy Refuge Manager, was very excited about the new Junior Refuge Manager program which the Friends are developing, commenting that this supported the new Refuge priorities. The Board was challenged to continue to develop new and creative ways to "connect people and nature".

These meetings are an excellent opportunity to discuss issues and learn the Refuge priorities for the coming year, which helps in our own planning. Of course, it's always nice to learn that all we do is recognized and appreciated.

BE A FRIEND TO THE FRIENDS-JOIN THE BIG SIT!



The Friends of Great Swamp are again sponsoring The Big Sit! This year everyone can participate, whether they spend time in the circle or not, by pledging a sum for each species of bird seen by the bird watchers. On October 12, 2008 a 17 foot diameter circle will be set up at the Overlook on Pleasant Plains Road. Volunteer birders will be busy tallying species and anyone who wishes to help out is invited to join the circle and spend some time spotting birds. In 2007, the first year that The Big Sit! was held at Great Swamp, the count was 59 species identified from within the circle. This year, our (now more experienced) birders vow to exceed that number.

In order to raise money for Refuge projects, the Friends are using The Big Sit! as a fund raising initiative this year. A pledge form, for amounts ranging from 25 cents per species and up, is included in this newsletter and will be available on our web site. Money collected, which is tax-deductible, will be used to enhance birding at the new visitor center. On October 12, guided walks will also be scheduled from the Overlook; check our web site for more details. The Big Sit! is a international event held to count and report birds... and to have fun. Refuges are being encouraged to participate in order to raise awareness about the importance and value of these lands as birding destinations. Participants may want to bring a chair, binoculars, and some refreshments; dress for comfort. Any bird seen or heard by someone inside the circle is counted so we need people looking in all directions. Join us on October 12 for The Big Sit!

THANK YOU

Donations are made to Friends of Great Swamp NWR in a variety of ways and for a variety of reasons. All donations are used to fund projects and programs which benefit the Great Swamp National Wildlife Refuge. Thank you to all who have made donations to the Friends.

IN HONOR OF Stephanie Crater's 9th birthday Michael Norce

IN MEMORY OF
Dorothy B. Hawley
Berkeley Heights Public Library Staff
Phyllis & Joseph Carlinsky
Carolyn M. Cook
John & Carlyn Fitzpatrick
Laura & Larry Fuhro
Laurel M. Gould
Marcia S. Haller
Marilyn Hostettler
Jamie L. Irvin

Susan C. McNeil

Lee Parks Stone

David & Sharon Weiskopf

IN MEMORY OF
Anthony Kalwicz
Denise B. Corrigan-Dunne & John T.
Dunne
The Olsen Family (Rodney, Kristine,
Bonnie, Erin)
Richard & Irene Huzar

ExxonMobil
ExxonMobil recognizes volunteer hours donated by employees and retirees through their Volunteer Involvement Program. Once again, thank you to volunteers Jack Higgins, Leo Hollein, and Chuck Whitmore for volunteering their time at Great Swamp and for directing the donations to the Friends.

Matching Gifts
Lehman Brothers and employee Daniel
Dziemian.

Membership Donations
To all of you who added a donation to
your membership renewals—thank you:
R. Allen & Claire Simpson, Bill Boyle &
Karen Thompson, Candace & Richard
Paska, Laura & Joe Nally, Peter Savino,
Grant Price & Frances Wu, Robert Lin,
Rosemarie Widmer, Tom Gunia, Pat
Bell, Jane Kendall & David Dietz, Karen
English, Suzanne Wilcox, Joseph &
Marianne Cummins, Don & Ann
McCord, Marcia Hall, Florence Swanstrom, Chuck & Barbara Whitmore,

WILDLIFE OBSERVATION CENTER SPRING STATISTICS (Continued from page 1)

Volunteers counted a total of 10,319 visitors to the WOC while it was staffed this spring—some in strollers, some with canes, most who spoke English, some who didn't. These visitors came from at least 24 states and 17 different countries.

Next year, if you are looking for something to do with your mother on Mother's day, take her to the Wildlife Observation Center. This past May 11, 501 people did just that and it was the busiest day of the season and helped make May the most visited month. The busiest week, by far, was the week of May 21–26 (including Memorial day) with 1,445 visitors. Sunday was the most popular day with Saturday a close second. During the week the numbers varied greatly, often depending on the weather and whether school groups were visiting or not. All these visitors were greeted by 56 Friends who volunteered a total of 828 hours. In the Fall perhaps you would like join this dedicated group of volunteers and enjoy meeting people and seeing what is happening at the Swamp as the season changes. For this and other volunteer opportunities at Great Swamp, complete the volunteer sign-up form which can be found on the Friends' website.

VISITOR CENTER—PROGRESS & UPDATE

Work has been progressing both inside and outside the new visitor center at Great Swamp National Wildlife Refuge with an official opening planned in 2009—if all goes well.

The Phase I and Phase II renovations to the existing building have been completed and it's looking like a real visitor center complete with a reception area, an auditorium, a bookstore area, a library, the Discovery Den, and an exhibit room. The outdoor pavilion is finished and was put to good use on National Trails Day for volunteer registration and again in August when it was set up for a workshop on native plants. The outdoor restrooms are

also functional and received a fresh coat of paint during National Trails Day. Several of the Refuge staff have moved into the upstairs offices which provide more space and better working conditions.

Before the visitor center can be opened to the public, the new access road, a parking lot, and a cul-de-sac need to be completed. The Refuge has recently received the long awaited permits for this construction work and is in contact with the company that has been awarded the contract to begin the construction phase.

In June, the Friends celebrated National Trails Day by sponsoring a trail clearing event (see story on page 5). The new trail was defined and cleared; the Refuge is waiting to hear about a grant that would fund the completion of the trail and the con-

struction of viewing blinds. The new native plant bird-feeding garden is well under way and fall flowers are in bloom. This garden project was undertaken by the Friends' GardenKeepers Committee and will be the first in a series of demonstration gardens for education and visitor enjoyment.

The Friends have donated \$10,000 to the Refuge for a

conceptual plan for visitor center exhibits. Once this plan is done, the Friends can begin a fundraising effort to raise money for the exhibits. Work has begun on layout for the new bookstore which is expected to be operational when the visitor center opens. Discussion continues about the North Gate bridge on Pleasant Plains Road which has been closed to through traffic since 1986.

FEDERAL DUCK STAMPS—BUYING LAND FOR THE FUTURE OF REFUGES

Each year the top wildlife artists in the country compete in the oldest and most prestigious wildlife art competition in America—the Federal Duck Stamp competition administered by the U.S. Fish & Wildlife Service. This year artist Joe Hautman of Minnesota won the competition with his depiction of two pintail ducks.

The sale of Federal Duck Stamps raises about \$25 million each year to fund wetland habitat acquisition for the National Wildlife Refuge System. To date, more than \$700 million in Duck Stamp funds have been used to acquire 5.2 million acres



of habitat at hundreds of refuges in nearly every state in the nation. In New Jersey, more than 50,000 acres have been purchased through this program for the five national wild-life refuges, 2,808 of these acres at Great Swamp National Wildlife Refuge.

If you enjoy visiting Great Swamp NWR and other refuges around the country, then here's a chance for you to say thank you with the purchase of a Duck Stamp. It's valid as an annual entry pass to any National Wildlife Refuge that charges a fee. Collecting Duck Stamps is a great hobby—there are special frames made to hold a decade's worth of stamps and limited-edited prints of the winners are also a good collectible. Best of all, you are helping ensure the future of wetlands and waterfowl. Duck Stamps sell for \$15

and are sold at many post offices and online. They are also available at the Friends Bookstore & Gift Shop along with a free holder. Have you purchased your new Federal Duck Stamp yet?

AROUND THE SWAMP— PHOTO JOURNAL

By Laurel Gould



REFUGE WORK DAY ... JULY 12, 2008

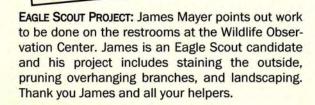
Fifteen volunteers braved the July heat to help with boardwalk maintenance at the Wildlife Observation Center. They pounded in nail-pops, pruned vegetation from the railings, and removed the invasive species that were blocking the view from the Garden Club Blind. Thanks to volunteers Robin Calderone, Corinna Catalano, Gaby Catalano, Mark Catalano, Denise Delgado, Karen English, Nancy Felicito, Pat Giaimo, Laurel Gould, Tara Hupenbecker, Laura Nally, Judy Schmidt, Meredith Swenson, Tyler Swenson, Kathy Woodward.

BOARDWALK DRAINAGE PROJECT COMPLETED

Walking the boardwalk trails at the Wildlife Observation Center could be a little tricky sometimes when water and leaves collected causing slippery conditions. Volunteers George Solovay and Steve Gruber headed a project to raise the rails along the new boardwalk section and insert spacers to allow water and leaves to run off the boardwalk surface. Here George Solovay and volunteer Joe Nally admire the completion of a long and grueling project. *Photo by Steve Gruber*.

SAVING NATIVE SPECIES

The Greenbelt Native Plant Center on Staten Island is collecting seeds from native plants for restoration projects and for long-term storage as part of the global effort to save threatened plants and trees. On August 12, staff from the Center visited the Refuge to collect seeds for their seed bank and to train volunteers on seed collection techniques. Here Camille Joseph (far right) from Greenbelt explains how to collect sedge seeds to Friends' volunteers David Mracek, Pat Giaimo, and Rich Dufort. Representatives from the Great Swamp Refuge staff and from Wallkill River NWR also attended the workshop. Photo by Dorothy Smullen.





INTERN LUNCH: Last year the Friends' Board hosted a luncheon for the Refuge interns. It was so much fun, we decided to do it again! This year, 11 interns joined the Board at the new visitor center sharing stories of their summer adventures and mishaps! Photo by Jane Kendall

FRIENDS PARTICIPATE IN NATIONAL TRAILS DAY 2008

By Karen English

An intrepid group of trail blazers rose early on Saturday, June 7 to take our first pass at creating a walking trail located at the new Helen C. Fenske Visitor Center. Thirty-four volunteers rallied at the new pavilion for registration, coffee and bagels. After choosing our tool of choice, five teams took on the day.

The new outdoor restrooms were given a coat of white paint by one team. A path was mown across the field by refuge staff in preparation for the day so the rest of the volunteers headed across the field to work on their assigned section of



Heading through the field for trail work

the new trail. Sections were informally dubbed the Passaic Straightaway, Vernal Pool Curve, the Wall, and the Poplar Homestretch. With birds twittering and mice quivering, obstacles such as Japanese barberry, multiflora rose, poison ivy, fallen trees and old wire fences proved to be no match for the volunteers.

Special thanks go the power tool trio of Joe Scala, Joe Nally and Bob McDonald who volunteered for "the Wall" and cleared the trail through a seemingly impenetrable thicket.



Joe Nally at "The Wall"!

Everyone worked safely and without incident and by noon with temperatures reaching into the 90's we had defined and cleared a seven-foot wide trail loop and also identified and relocated some favorite New Jersey native plants to enjoy in seasons to come. The day was a great success. Thanks to everyone who participated!



It sure doesn't look like a trail.

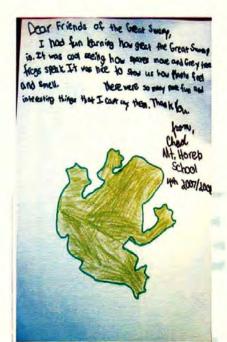


The trail is taking shape!



Karen English on "The Poplar Homestretch"

Tom McFadden, Outdoor Recreation Planner at the Refuge, said: "I finally got a chance to walk the trail and WOW, you all did a great job! I can't wait until it's done and open. That fire pit you uncovered was from the early 1980's when Mills Bockhoven's friend George Sauer would come out and camp with his grandchildren."







...if we can teach our children to honor nature's gifts

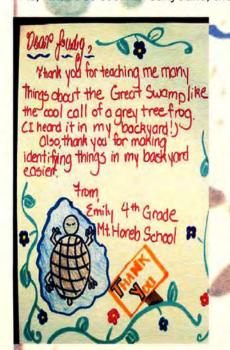
When spring comes to Great Swamp National Wildlife Refuge, so do the school buses. This spring, seven volunteers took students on interpretive tours along the boardwalk trails at the Wildlife Observation Center.

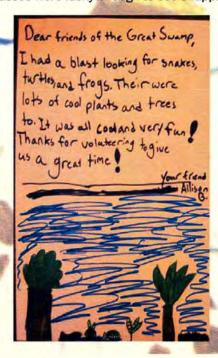
One of the first questions asked is always, "Are we going to see snakes?" Quickly followed by, "I am afraid of snakes". On one walk in early April the students counted 58 snakes. There were Northern water, garter, and ribbon snakes. The garter snakes were just emerging from hibernation and were in such a large gathering that it was hard to count them. Even the children that said they were afraid of snakes were now saying "cool" and "awesome".

On another trip, while explaining why the water in the woodland vernal pools was so dark and worked like a mirror, in the reflection we saw a Cooper's hawk fly into a nest it was building. As we watched its mate brought in a stick for the nest.

As we walk we look for birds and learn some bird calls. This year we got to see a veery's nest next to the boardwalk close to the ground. It is great when you challenge the students to find the mallard and goose nests and see how excited they get when the nests are spotted.

When George Helmke sets up the spotting scope on a turtle and each student has a chance to see it up close all you hear is, "that's so cool". In early June, two classes were lucky enough to see snapping turtles laying their eggs.

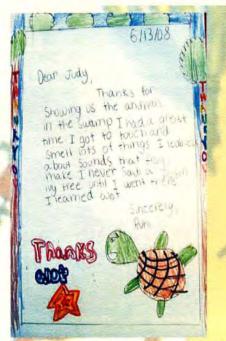




To the "Friends of the Great swamp"

I enjoyed seeing all the different animals and talking to a fing. I was happy of what I learned. It was cool to see how many different sounds fings made. It cool that diagonflies on mosquitoes.









-- the joys and beauties of the outdoors will be here forever

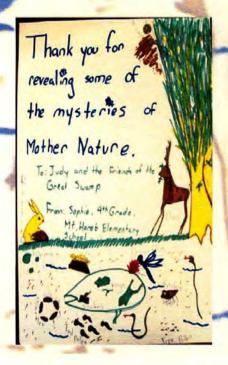
" Jimmy Carter

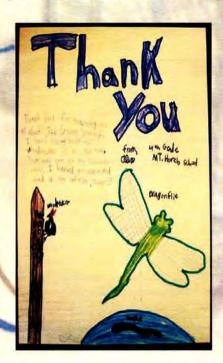
Trying to get the students to use all their senses, we feel ferns, moss, lichens, sweet gum balls, and fungi. They get to smell sweet gum leaves and skunk cabbage, look at tadpoles and orb weaver spiders, and one day they all got to watch a dragonfly emerge. We stop at a shagbark hickory and talk about bats and on a few trips we actually got to see the bats roosting in the kiosk.

All of the students love the frogs and when asked what sound a frog makes they always say "ribbit." I then tell them that we do a frog survey at Great Swamp by listening to their calls. I do the call and then ask them to do it back. We do the "peep" of the spring peeper the "quack" of the wood frog, the" boink" of the green frog and the "jug-o-rum" of the bullfrog. Then I explain that the frog I like best is the gray treefrog and I do its call—and on every trip we got them to answer us back.

The last school walk we gave this year was on June 20th. At the end of the walk one of the third grade students told me it was the best day he ever had and asked if he could give me a thank you hug—and that is one of the best reasons to take kids into the Great Swamp National Wildlife Refuge.

...Judy Schmidt, Education Chair, Friends of Great Swamp National Wildlife Refuge







CAVITY NESTERS HAVE FRIENDS

Story and photos by Leo Hollein

here are fewer than 40 species of cavity nesting birds in North America that will use man-made nest boxes. This is less than 10% of the bird species that breed in the same area. Cavity nests provide some protection both from the weather and from predation. Cavity nesting song birds take longer brooding their eggs before they hatch and feeding their young before they fledge than song birds that use open nests.

Birds that nest in artificial boxes are secondary cavity nesters that are not capable, in most cases, of making their own nest holes. Woodpeckers are primary cavity nesters that are capable of excavating their nest cavities in trees or wooden poles. In the distant past, secondary nesters were able to use vacant woodpecker holes or natural tree cavities for nesting. The reduction of native forests, removal of dead trees and the introduction of aggressive cavity nesting species (house sparrows and starlings) from Europe created a housing crisis. The widespread use of nest boxes has helped solve this housing shortage. Nest boxes have enabled populations of species formerly in decline, like



bluebirds, to rebound. The Friends of the Great Swamp National Wildlife Refuge support and participate in all the nest box programs on the Refuge.

FOUR BOX DESIGNS USED IN THE GREAT SWAMP

Cavity nesters come in different sizes and have different life styles. They are as large as a barn owl and as diminutive as a house wren or a prothonotary warbler. Secondary cavity nesters include a member or two from the following avian families: swallows, flycatchers, wrens, warblers, bluebirds, chickadees, titmice, nuthatches, flickers, ducks, owls and falcons. Eleven different avian species have been observed nesting in the Refuge nest boxes, such as the female hooded merganser shown above.

Naturally no single nest box design could accommodate this eclectic group. The box must also be put in the proper location and habitat to attract the intended guest. Four different types of nest boxes are currently used at the Refuge. All are intended for a specific species but are also used by others. Below is a summary of these boxes and their occupants.

The entry hole size and box volume varies with the target species. The entry hole varies from the one and one-half inch diameter hole used for the bluebird boxes to a six inch diameter hole used in the barn owl box. Since neither ducks nor kestrels build nests, the bottom of these boxes are filled with a layer of wood shavings prior to the nesting season to provide support for

Boxes	Target Species	Other Avian Nesters	Other Nesters	Box Fill
200	Wood duck Hooded merganser	Screech owl Great crested fly- catcher	Gray squirrel Flying squirrel	Wood chips
132	Eastern bluebird Tree swallow	House wren Tufted titmouse House sparrow Great crested fly- catcher	White-footed mice Flying squirrel	
5	American kestrel	European starling House sparrow Wood duck		Wood chips
1	Barn owl	Wood duck		

their eggs. Nothing is added to the bluebird or barn owl boxes. The photo (below right) shows a kestrel nest with five eggs resting on the wood shavings.

DIFFERENT SYSTEMS FOR DIFFERENT BOXES

Each type of nest box has its own protocol for location, monitoring and cleaning. The wood duck boxes are mounted on metal poles about seven feet above ground. They are protected with a large conical predator guard. The poles are primarily located in wooded areas not far from water. Wood duck boxes are inspected once a year in the late winter. By viewing the contents of the box it is possible to determine nesting success. The boxes are then emptied and new wood shavings are added. (Continued on page 9)



CAVITY NESTERS (continued from page 8)

The bluebird boxes are mounted on metal posts. The nest hole opening is about five feet above ground. The boxes are located in open areas and paired—two boxes on their own post within 30 feet of each other. Pairing enables both bluebirds and tree swallows to nest in the same area. These boxes are monitored weekly during the April to August breeding season to determine the number and success of nesting attempts. Nests are removed from the boxes once a clutch has fledged. At right, a male bluebird is shown bringing a grasshopper to the nest box to feed his offspring.

Kestrel boxes are mounted on a tree, post or building 15 to 25 feet above the ground. They are located in an open area. The entrance hole to the nest box is covered in the winter to prevent owls or mammals from nesting in them. As the kestrels begin their northern migration, the entry hole covers are removed. The boxes are checked weekly until kestrels begin nesting. If starlings or house sparrows take up residence, their nests



are removed to prevent them from breeding and to provide an opportunity for kestrels to nest. Starlings will not displace a nesting kestrel pair. The barn owl box is inspected periodically during the breeding season. It has been in place for two seasons. Hopefully it will host a barn owl family in the future that would become the twelfth cavity nesting species in the nest boxes.

A CLOSER LOOK... CRAYFISH

Story and photo by Laurel Gould

Crayfish are really cool! They look like little tiny lobsters and they make a great meal for many species of wildlife. Here are some crayfish facts and figures; crayfish...

- are invertebrates as they don't have a backbone
- live mainly in water
- have 10 legs; the front two legs are larger with claws which are used for eating and to defend itself from predators
- are omnivores eating underwater plants, fish eggs, snails, worms, insects... and even other crayfish!
- get eaten by many animals including birds, fish, raccoons, frogs and snakes
- are our largest freshwater crustacean.



A female crayfish carries her eggs on "swimmerets" located on the bottom of her abdomen which provides protection for the eggs. Young crayfish, when they hatch, remain attached to their mother's swimmerets for their first two molts.

Crayfish make shelters by digging tunnels into the soil which may be three feet or more deep. Dirt piled up around the opening forms a chimney which may be

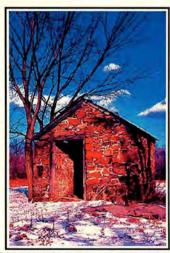
several inches high and is very noticeable in some of the wet fields around the Refuge. Most crayfish are nocturnal using their antennae to search for food at night. Crayfish are sensitive to pollution, chemicals, and natural disasters.

HISTORY MYSTERY

Do You Know What (or Where) This Is?

According to the photographer, this photo was taken several years ago on the Refuge, but he doesn't remember where! If you know the history of this stone house, or know where it is now, send the information to: Friends of Great Swamp NWR, 251 Pleasant Plains Road, Basking Ridge NJ 07920 or e-mail to webmaster@friendsofgreatswamp.org.

We'll publish responses in the next issue of the newsletter.



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WELCOMING SIGNS AROUND THE GREAT SWAMP—PART II

By Chuck Whitmore

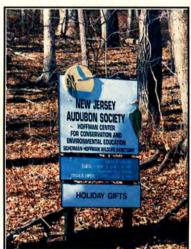
The name Great Swamp can mean different things to different people. In the last issue (May 2008), we took a closer look at three establishments which are under the ownership of governmental entities. To refresh your memory, they were the Great Swamp National Wildlife Refuge (U.S. Fish & Wildlife Service), the Great Swamp Outdoor Education Center (Morris County Park Commission), and Environmental Education Center (Somerset County Park Commission). Part II looks at three privately operated Great Swamp establishments. As was noted previously, this article briefly describes each with the intent of increasing awareness and encouraging visits to all of them—and to help visitors understand the recreational and educational role and resources of each.



Conservation Management Area — Great Swamp Watershed Association is located several miles north of the well defined "bowl", the level bottom of which we refer to as the Great Swamp proper, and it occupies about fifty acres of a smaller wetland and woodland area at slightly higher elevation. It contains footpaths and boardwalks and an actively managed area for the study of vegetation patterns. Its location is indicative of the scope of interest and activity of the Great Swamp Watershed Association, which covers and even extends beyond the 55-squaremile area of the watershed in which the Great Swamp itself is a central feature. The Conservation Management Area is at the end of Tiger Lily Lane, off James Street via Harter Road at the border between Morris and Harding Townships.

SCHERMAN-HOFFMAN WILDLIFE SANCTUARY

One of ten Centers operated by the New Jersey Audubon Society (NJAS), the Scherman-Hoffman Wildlife Sanctuary comprises more than 250 acres of woodland, field, and floodplain habitat together with the Hoffman Center for Conservation and Environmental Education. The Center has an environmental learning center, bookstore, and exhibits plus offices for NJAS personnel. Several miles of trails wind through the Sanctuary, to which the public is welcome. One of the trails, appropriately called the River Trail, follows a length of the Passaic River that is upstream of the Great Swamp and offers a somewhat different aspect due to the somewhat steeper gradient. The Sanctuary includes land in Bernardsville Borough and Bernards Township in Somerset County and in Harding Township in Morris County. The entrance is on Hardscrabble Road near the meeting point of the three municipalities.



RAPTOR TRUST WILD BIRD REHABILITATION FACILITY



The Raptor Trust Wild Bird Rehabilitation Facility is operated by The Raptor Trust. It differs from the

other establishments herein described in that it has no trails nor extensive acreage, but it does have a very special function in the world of wildlife interest, and it is a good and close neighbor to Great Swamp National Wildlife Refuge. It includes a hospital with state-of-the-art medical facilities, quality exterior housing for several hundred birds, and an education building. Located on White Bridge Road in Long Hill Township, the facility offers an opportunity to view at close range the many hawks, eagles, falcons and owls that are permanent residents there.

Each of these six establishments has its own special reason for being, and its own enthusiastic body of volunteers and supporters. We are fortunate to have within the confines of our watershed such a variety and richness of natural land-scapes and creatures of nature to visit, to assist, and to enjoy.

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	☐ Family - \$25	Individual—\$15
	Gift	☐ Family - \$25	Individual—\$15
	Renewal?	☐ Yes	No
	Dona	tion—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 satisfaction in supporting the Great Swamp National Wildlife Refuge.

Gift Memberships will include a coupon redeemable at the Friends Bookstore & Gift Shop for a Great Swamp 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 NWR 2008-09 CALENDAR OF EVENTS OCTOBER 2008 — NOVEMBER 2008

BOOKSTORE & GIFT SHOP

Saturday & Sunday, 11:00 am-5:00 pm Books & nature gifts for adults and kids. Prints, pottery, photos & jewelry by local artists. Refuge maps, checklists & information. Check the current sightings board-or add to it. And remember... the coffee's always on.

DISCOVERY DEN

Saturday & Sunday, 11:00 am-5:00 pm Located in the Friends Bookstore & Gift Shop, the Discovery Den has lots of free fun activities, exhibits, nature crafts, puzzles, & games for families. Seasonal activities change monthly. Stop by... and stay awhile!

OCTOBER

Weekends at the Bookstore, 11:00 am-5:00 pm DISCOVERY DEN-FAMILY FUN

Self-directed educational activities, crafts, and games for families. New topics seasonally.

OCTOBER 12—18 NATIONAL WILDLIFE REFUGE WEEK

Sunday, October 12-Saturday, October 18, 5:45 pm-dark SUNSET WALKS ALL WEEK

Join us each evening to watch the spectacular fall migration

of ducks-as well as other birds and wildlife at dusk. Easy guided walk to the Management Area impoundment pools to watch flock after flock of ducks fly in for the night. No two nights are the same. In case of rain, join us indoors for an exciting nature video program.



Sunday, October 12 (24 hours)

THE BIG SIT! COMES TO GREAT SWAMP NWR It's the 14th annual Big Sit! and refuges

are participating, including Great Swamp. For 24 hours beginning at 12:01 am Sunday, birders will tally species from



within a 17 foot "circle" at the Overlook on Pleasant Plains Road. Stop by and join the circle-stay a little while-or longer. Preregistration is required for night hours when refuge is closed; To sign up, e-mail: webmaster@friendsofgreatswamp.org This year the Friends are using The Big Sit! as a fundraiser. Find the pledge form on our website.

Sunday, October 12, 2:00-4:00 pm

SECOND SUNDAY... WITH FRIENDS—FAIRY RINGS & ELFIN PLANTS Join naturalist Dorothy Smullen in an exploration into the fascinating world of non-flowering plants. Just how do they reproduce and how long have they been on earth? Indoor program will be followed by a guided walk into the management area to discover this hidden world. Refreshments.

Saturday, October 18, 8:30 am-Noon FALL HOMESTEAD CLEANUP

End the week-long celebration of National Wildlife Refuge Week by joining our fall cleanup. Get some exercise and fresh air while you help remove man-made debris from the Refuge. It's hard, physical work, but very rewarding. Wear boots and gloves. Please be prompt as we will be carpooling to cleanup sites.

NOVEMBER

Weekends at the Bookstore, 11:00 am-5:00 pm DISCOVERY DEN-FAMILY FUN

The focus changes to winter wildlife. Self-directed educational activities, exhibits, crafts, and games for families.

Saturday, November 1, 8:30 am-Noon REFUGE WORK DAY-ROADSIDE CLEANUP

Volunteers are needed to pick up litter along Refuge roads and parking lots. Wear boots and gloves. Refreshments following the cleanup. Meet at Refuge Headquarters, 241 Pleasant Plains Road.

Sunday, November 9, 2:00-4:00 pm SECOND SUNDAY ... WITH FRIENDS-THE SWAMP WITH SHERB Local photographer Sherb Naulty spends a lot of time on the Refuge capturing the beauty of the swamp and its inhabitants. Join Sherb as he takes us on a breathtaking slide show tour of the Refuge as seen through the lens of his camera. Indoor program will be followed by a guided walk into the Management Area. Refreshments.

Saturday, November 15 and Wednesday, November 19 through Saturday, November 22

ANNUAL REFUGE DEER HUNT

Refuge closed; Bookstore and Discovery Den closed.

Saturday, November 29, 2:00-4:00 pm TRADITIONAL TURKEY WALK Join us for our traditional post-Thanksgiving Turkey Walk into the Refuge Management Area. We have yet to see a wild turkey, but it's a great way to walk off that turkey dinner and there's lots of other

wildlife to see. Light refreshments.



EVENT INFORMATION

- All programs are free; registration is not required unless noted.
- All programs meet at the Friends Bookstore & Gift Shop unless otherwise noted.
- Refuge Group Tours are available for schools, scouts, and other youth or adult organizations. Contact Judy Schmidt at 908-647-2508 to schedule a tour.
- Introduce the Refuge to your group meeting with a customized presentation about Great Swamp. Contact Kathy Woodward at 973-635-1083.

FRIENDS OF GREAT SWAMP NWR 2008-09 CALENDAR OF EVENTS DECEMBER 2008—MARCH 2009

DECEMBER 2008

Weekends at the Bookstore, 11:00 am-5:00 pm DISCOVERY DEN-FAMILY FUN

Self-directed educational activities, exhibits, crafts, and games for families. Topics change seasonally.

Saturday, December 6, 11:00 am-5:00 pm HOLIDAY SHOPPING-DOUBLE DISCOUNT DAY AT THE FRIENDS **BOOKSTORE & GIFT SHOP**

Can you imagine a better place to do your holiday shopping? 10% off all purchases-20% for members. No lines, free parking, refreshments all day. Best of all, proceeds are used to fund Refuge projects.

Saturday, December 6, 5:00 pm-8:00 pm ANNUAL FRIENDS MEMBER MEETING & POT LUCK DINNER Members Only. Business meeting, election of directors, the year in review (briefly). Bring your favorite dish or dessert to share. The Bookstore will be open for late shopping-and double discounts still apply! Dinner program to be announced.

Sunday, December 14, 2:00-4:00 pm SECOND SUNDAY... WITH FRIENDS-YOUR FAVORITE FIELD GUIDE Field guides are required tools for identifying plants and animals. Join our round-table discussion of the various field guides, share your favorite, and check out some of the new fields guides, especially those for young birders. Naturalist Dorothy Smullen will explain "How to use a key". Program includes a guided walk into the Management Area to try out our new "keying" skills. Refreshments.

Saturday, December 20, 2:00-4:00 pm CHRISTMAS BIRD COUNT AT GREAT SWAMP

Join the 109th annual Audubon Christmas Bird Count. Everyone can participate and beginning birders will be part of a group with experienced birders. This citizen science event is lots of fun and provides important data for bird conservation. Leave an e-mail (webmaster@friendsofgreatswamp.org) or phone message if you're interested in signing up for this annual event.

JANUARY 2009

Weekends at the Bookstore, 11:00 am-5:00 pm DISCOVERY DEN-FAMILY FUN

Self-directed educational activities, exhibits, crafts, and games for families. Topics changes seasonally.

Sunday, January 11, 2:00-4:00 pm SECOND SUNDAY ... WITH FRIENDS-WINTER BIRDING

Some of the best birding at the Refuge is in the winter months. Come find out what's around, how birds cope with winter, and how to identify the birds you see. Program includes a guided walk into the Management Area to test our new skills. Dress warmly. Refreshments.



FEBRUARY 2009

Weekends at the Bookstore, 11:00 am-5:00 pm DISCOVERY DEN-FAMILY FUN

Self-directed educational activities, exhibits, crafts, and games for families. Topics change seasonally.

Sunday, February 8, 2:00-4:00 pm SECOND SUNDAY...WITH FRIENDS-WHAT'S OUT YOUR WINDOW-**FEEDING WINTER BIRDS**

Nancy Schenck from Wild Birds Unlimited will talk about feeding and identifying winter feeder birds. Kids can make a Bird Feeder Field Guide to use for the Great Backyard Bird Count. Indoor program will be followed by a guided walk into the Management Area, Refreshments.

February 14-16, 11:00 am-4:00 pm GREAT BACKYARD BIRD COUNT (GBBC)

Join us at the Friends Bookstore and help count birds on the Refuge during the 12th annual Great Backyard Bird Count. Use your Bird Feeder Field Guide and win a free poster. Learn how to track and report your own GBBC!

Date, Time, & Topic To Be Announced ADVANCED VOLUNTEER TRAINING WORKSHOP

Here's your chance to participate in an in-depth workshop which will focus on a particular type of wildlife with a professional lecturer. Particularly recommended for Junior Refuge Manager Guide volunteers.



MARCH 2009

Weekends at the Bookstore, 11:00 am-5:00 pm

DISCOVERY DEN-FAMILY FUN

Self-directed educational activities, exhibits,

crafts, and games for families.

Sunday, March 8, 2:00-4:00 pm

SECOND SUNDAY...WITH FRIENDS-SIGNS OF SPRING

Join our informal "Show and Tell". Bring a photo or sample of your favorite sign of spring. Prizes for the best "signs". Program includes a walk into the Management Area to look for signs of spring. Refreshments.

Saturday, March 14-Sunday, June 14 SPRING MIGRATION STAFFING SEASON

During the busy spring migration season, volunteers staff the Wildlife Observation Center to provide visitor information. It's a great time to visit the Refuge-or become a volunteer!

Thursday, March 26, 6:00 pm-dusk

WOODCOCK WALK

The Greater Watchung Nature Club joins the Friends as American woodcock put on their elaborate mating displays. Indoor program on woodcocks will be followed by a guided walk to see their spectacular flight.





BE A FRIEND TO THE FRIENDS THE BIG SIT! PLEDGE FORM

Join The Big Sit! On October 12, 2008 Friends of Great Swamp will set up a "circle" at the Refuge Overlook area on Pleasant Plains Road to see how many different species of birds can be counted from within the 17' diameter circle.

You can support the Friends by pledging an amount for each species we count on October 12. Last year, the total count was 59 species! The money raised will be used to enhance birding at the new visitor center (such as a bird blind, hummingbird garden, or birdcam). The Big Sit! is an international event hosted by Bird Watcher's Digest. It's fun, we collect survey data, and it's a great opportunity to promote Refuges as birding hot spots.

\$0.25 a species	\$0.50 a species	\$1.00 a species	Other \$	a species	Other donation
ne					
dress					
mail					

Mail this form to Friends of Great Swamp NWR, 241 Pleasant Plains Road, Basking Ridge, NJ 07920 Consider joining us on October 12—check out our web site for details.

Friends of Great Swamp National Wildlife Refuge

www.friendsofgreatswamp.org