



the Swamp Scene

friends of great swamp national wildlife refuge

ISSUE THIRTY

MAY 2009

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Junior Refuge Manager Great Swamp National Wildlife Refuge

JUNIOR REFUGE MANAGER—DAY 1

By Judy Schmidt

April 25, 2009: After a year of preparation, the Junior Refuge Manager kickoff day arrived clear and hot. The Activity Books were ready, the food was set out, and 15 trained volunteer Guides were at the ready. The Guides were stationed at the greeting table, the frog station, the snake station, and the turtle station—all equipped with backpacks full of information, binoculars, and

scopes. Then the children arrived!



Volunteer Swamp Nature Guides set up on kickoff day

At the frog station we had one bullfrog that posed in the scope from 11:00 until 2:00 and got rave reviews. "I didn't know frogs got so big." "I never knew frogs made so many sounds."

At the snake station there were a lot of Northern water snakes in plain view. Some of the comments were: "I never saw a snake this close and in a tree;" "I never knew snakes could smell with their tongues." One child answered the question: Why are people afraid of snakes?

"Because they have no legs and slither." "I used to be afraid of snakes but they are so cool!"



Justin Henry gets started on his Activity Book with help from Dad, Steve Henry, and Swamp Nature Guide John Wilmot (rear).

At the turtle station we heard: "I never knew turtles had so many colors." "I never knew turtles had such long toe nails; they are awesome." We were not able to get a turtle in the scope as most of them were swimming, so the scope was used to view the female mallard sitting on her nest close by.



Aspiring Junior Refuge Manager Fiona Mulvey works on her Activity Book.

As the children completed the questions on each topic, the pages were "certified" by one of the Swamp Nature Guides. I don't know who had more fun—the children or the Guides! One mother remarked that this was the best nature event she and her children had ever attended, and that she had never encountered such wonderful volunteers as our Guides. All told, the day was a great success. (More photos and Junior Refuge Manager story on page 10)

KEEPING UP WITH FRIENDS—NEWS, HIGHLIGHTS & UPDATES

THE FRIENDS TAKE SPRING CLEANING SERIOUSLY IN APRIL



Outdoor Recreation Planner Tom McFadden gives directions to one of the Roadside Cleanup crew teams (l to r) Hanina Osborn, Tom McFadden, Peter Osborn, Colin Osborn

seeds was spread, then covered with hay. Check out these sites when you visit and follow the growth of new wildlife habitat. When you finish a job like this you are tired and dirty, but you can clearly see that you have made a difference.

HOMESTEAD CLEANUP: Saturday, April 11 was a rainy morning, yet thirteen intrepid volunteers showed up for the semi-annual Homestead Cleanup. On this day, Refuge biologist Craig Bitler, who coordinates the Homestead Cleanups, informed the group that the project was to continue removing old fencing from the former sheep farm on Pleasant Plains Road. Fencing which has been in place for decades becomes overgrown with shrubs and brush and entwined with tree limbs and roots—not an easy job to get out. By 11:00 the rain was falling harder and the volunteers were soaked through—time to call it a day. Everyone met at the Friends Bookstore for a hot lunch and some hot coffee. According to Craig, one more Homestead Cleanup should finish the rest of that section of fencing. Mark your calendars for October!

ROADSIDE CLEANUP: On April 4, twenty-nine volunteers took to the road on a cool but pleasant Saturday morning for the semi-annual Refuge Roadside Cleanup. Roadside cleanups involve walking along the major roads and picking up all reachable litter which accumulates over the winter months. Organizer Tom McFadden estimated that 400 pounds of trash and 250 pounds of recyclables were collected.

HABITAT RESTORATION: On April 9, in response to a “Help in a Hurry” call for volunteers, thirteen Friends and four Refuge staff worked on a habitat restoration project. When the refuge acquires land and the buildings are removed the land is then turned into suitable wildlife habitat. This winter a home and barn were removed on White Bridge Road and a barn was removed on New Vernon Road. This barn was the last structure left in the Wilderness Area. The group hand-picked smaller debris left behind after the bulldozer had been through, including tires, metal, glass, wood and other objects. When the site was clean, a mixture of native grass and flower



Soggy (but smiling) volunteer Nancy Felicito at Homestead Cleanup
Photo by Nick Sciara

THANK YOU FOR YOUR DONATIONS

Donations made to Friends of Great Swamp National Wildlife Refuge make up a significant portion of the Friends annual income and allow us to fund a variety of projects and programs which benefit Great Swamp National Wildlife Refuge, its wildlife and its visitors. Thank you to all who have made recent donations to the Friends.

- The Wildwood Foundation
- In Honor of Francyne Rosenweig from Jay Messing and a matching corporate donation from Global Impact

INDIVIDUAL DONATIONS

- Dennis Branden
- Svetlana A. Sukhishvili & Vassili V. Belov
- Carl & Alice Woodward Jr.

MEMBERSHIP DONATIONS

To all of you who added an additional donation to your membership renewals, thank you.

Robert Schwaneberg, John Kostek, Marc Mallett, James Emert, Christine Brown, Mary & C. Graydon Rogers, Mr & Mrs James Sinni, Ursula M. Sommer, Susan & Charlie Friedman, Robert T. Walsh, Mr & Mrs John H. Raab, the Smullen Family, Steve Henry, Shirlee Chaplin, Bill Boyle & Karen Thompson, Joanne & Charles Foster, Janet & Gene Bolla, Donald & Jeane McLellan, Paul Ford, Joann & George Apgar, Steve & Terry Burdick, Candace & Richard Paska, David Blanchard, Blaine Rothausen, Holly J. Dunbar and her employer matching gift from Duke Farms Foundation, David Beechner and a three-for-one matching gift from Illinois Tool Works Foundation, William O. Watts and a two-for-one matching gift from J&J Family of Companies.

AROUND THE REFUGE... WITH STEVE HENRY, DEPUTY REFUGE MANAGER

Editor's note: Once again I had an opportunity to sit down with Steve Henry who highlighted the progress, priorities, and news at Great Swamp National Wildlife Refuge. Thank you Steve.

FEDERAL STIMULUS DOLLARS FOR GREAT SWAMP

The Refuge will receive \$474,000 as part of the Federal stimulus package, the bulk of which (\$330,000) will help fund the design, fabrication, and installation of exhibits at the Helen C. Fenske Visitor Center. It has yet to be determined if the funding will be sufficient to complete the exhibit project or if additional funds will be required. The remaining funds target several much-needed projects.

- \$33,000 will be used to upgrade and improve the South Gate entrance on Pleasant Plains Road with a more modern and functional gate system.
- \$60,000 will be used to replace a failing water control structure between impoundment pools 1 and 2.
- \$51,000 is earmarked for the demolition of the Friends Bookstore (& office). The parking lot will remain for public use as needed. The small shed behind the Bookstore will be relocated to the visitor center property.

HABITAT MANAGEMENT

Over the winter 40 acres of brush land were treated with a hydroax—a large piece of equipment which is used to clear shrubs and even small trees leaving the roots to help hold the soil in place. Desirable trees are also left standing. This type of habitat management is necessary to set back natural succession and maintain habitat diversity for wildlife.

The Quick property barn on New Vernon Road was demolished over the winter; the house across the road will be removed in the near future. There was some initial interest from contractors in salvaging the old lumber from the barn, but in the end there were no bids. The Friends helped with final cleanup and seeding of this site. The Warnicke site on White Bridge Road was also cleared and seeded (see related story on page 2). Old house sites on Pleasant Plains Road will be graded and seeded this year, an ongoing process to restore native wildlife habitat within the Refuge.

PERSONNEL NEWS

There will be a lot of new faces on the Refuge this summer. Nine interns have been hired for the season including a crew of five who will be studying the bat population with a focus on the endangered Indiana bat. The primary hibernacula was hit hard this winter by White Nose Syndrome, so it will be important to see how the overall bat population is impacted. Once again, Friends of Great Swamp and the Mushett Family Foundation are sponsoring two interns. As part of the Conservation Internship Program, an intern will be available for six months to assist with the Comprehensive Conservation Plan. A familiar face, Chris Hernandez will be back for his third summer. He will continue vegetation surveys, help with the turtle projects, and take an active role in the greenhouse. Kenny Kim, a senior at Madison High School, who has been volunteering during this school year, finishes up his work with a Day of Service on May 20; he and a group of his classmates will spend the day removing invasive species at the

visitor center and will also start some native plant seeds in the greenhouse. Greenbelt Native Plant Center is donating native Joe-pye weed seeds for this project, seeds which were previously collected at the Refuge.

With the retirement of Mel Smith, long-time maintenance worker at Great Swamp, the decision was made to relocate that maintenance position to the Wallkill River National Wildlife Refuge for the good of the Complex, with the understanding that the position will return to Great Swamp if Wallkill has an opportunity to hire in the future.

SUMMER PROJECTS AT GREAT SWAMP

- Indiana bat studies will be ongoing during the summer and the Refuge is hosting a bat workshop for professional biologists at the end of May.
- Turtle surveys and habitat management will be a priority with a particular focus on bog turtles and wood turtles.
- Work is underway on invasive species control; targets include phragmites, barberry, knotweed—and an emerging plant problem—wisteria.
- Greenbelt Native Plant Center on Staten Island will return for their third season to collect seeds which are used throughout the New York metropolitan area for native plant restoration and in national and international seeds banks.
- Maintenance work on Pleasant Plains Road and management roads is also a priority.

PUBLIC USE

May 9 is the annual World Series of Birding and the Refuge is again allowing participating teams into closed areas of the Refuge. These teams are required to submit their bird sighting checklists which provide data about bird activity during night and early morning hours, a time which is less well studied. Teams are being informed of some changes which will be implemented next year. There will be foot access only to the Management Area (no motor vehicles will be allowed) and all participants must be members of an officially registered World Series of Birding team. These changes will improve resource protection, enhance visitor safety, and reduce administrative burden for the Refuge.

The Refuge will host a Bio-Blitz on May 15 and 16, sponsored by the Great Swamp Watershed Association, Friends of Great Swamp, and U.S. Fish & Wildlife Service. The major objective is to inventory as many species as possible in a 24-hour period. Scientists will be locating, identifying, and inventorying plant and animal life. Although the Refuge has been well studied over the past 50 years, some taxa are not as well documented including plants, invertebrates, and fungi. The Bio-Blitz will also provide educational opportunities for the public. There will be a number of interpretive walks and the opportunity to interact with these experts during the event.

"FRIENDS UNITE!" —2009 NATIONAL WILDLIFE REFUGE SYSTEM FRIENDS CONFERENCE

By Jane Kendall

The Friends Unite! Conference, sponsored by the National Wildlife Refuge Association (NWRA) and the U.S. Fish and Wildlife Service, was held in Washington D.C. February 21-24, 2009. It attracted attendees from 161 Friends groups in 49 states and included participation of 350 "Friends" and 150 Refuge, NWRA, and other organizations dedicated to the preservation of wildlife. Marilyn Kitchell, Park Ranger, represented the Great Swamp National Wildlife Refuge; representing the Friends of Great Swamp were board members Susan Garretson Friedman, Jane Kendall, and Kathy Woodward, although Kathy's role was primarily in support of the conference since she is on the Board of the NWRA. She, and the others, did a great job organizing it and identifying thoughtful presentations.

The theme was all about the "power of uniting". Over 200 of us visited our lawmakers on Capitol Hill February 24 to campaign for additional Refuge funding and to ask for support for more land acquisition. Our delegation visited the offices of New Jersey Senators Menendez and Lautenberg. We personally spoke with Representative Rodney Frelinghuysen and visited the office of Representative Leonard Lance, both representatives of New Jersey districts where many of our volunteers and members reside.

At the conference itself, a representative for Ken Salazar, the new Secretary of the Interior, outlined Secretary Salazar's priorities:

- Energy/renewable energy
- Preserving national historical landscapes
- Incorporating youth into these projects (*Think: Last Child in the Woods*)

Rowan Gould, Acting Director of U.S. Fish and Wildlife Service, indicated there are three areas of concern:

- making visitors feel welcome
- demonstrating stewardship, and
- taking on key challenges such as having enough water, invasive species, and climate change.

We attended several interesting workshops. One focused on **Working with Diverse Audience—Making Refuges More Inclusive**. Questions posed were: Are the interests of the environmental educator the same as that of both suburban and urban kids? What are the messages we give these kids? Nationally, 45% of kids under 5 are minorities; 16% of white kids live in poverty; 45% of black kids live in poverty. 85% of people live in urban areas. What kind of outreach can help us reach new audiences? How can we culturally tailor our programs to be relevant?

The workshop on **Climate Change** challenged us to think to the future, and the chilling message was: When you undertake to restore habitat to its natural state, don't look back to the way it was, look forward; plan for a warmer future and

plants that will tolerate warmer climates.

A workshop on **Citizen Science Programs for Engaging the Public** looked at ways to engage all of us in tracking species in our habitats, tracking migration, and even tracking the blooming of plants across zones. The work of volunteer Leo Hollein and his team working with the bluebird population on our Refuge fits right into this theme!

We attended a Workshop on **Connecting Birders and Refuges**. There is now technology that can engage our active and enthusiastic birding population to help track our birds in different parts of the Refuge through an interactive software system we can envision in the new Helen C. Fenske Visitor Center. Imagine being able to drop by to report exactly where you saw the snipe or heard the woodcock, and then returning to see other places on the refuge where they may have been sighted!

Another interesting workshop related to **Organizing in the Age of Connectivity**. This Workshop focused on the use of technology to reach out to audiences that use technology to communicate regularly, such as Facebook. We're looking at how this might be an exciting resource at the Refuge.



Friends visit Washington, D.C. (Photo by Evan Hirsche, NWRA)

There were many sessions related to running successful Friends Groups, thinking strategically, finding fundraising sources, and running successful nature stores. There was also lots of time to network and learn about interesting projects at other refuges. We came home with lots of ideas and energy around these subjects and we hope if one or more also excites you that you will let us know so you can be part of our further explorations.

A NEW REFUGE NEARBY IN PENNSYLVANIA'S CHERRY VALLEY

By Kathy Woodward

On December 23, 2008, the Director of the U.S. Fish and Wildlife Service approved Cherry Valley National Wildlife Refuge by establishing a boundary for the refuge that encompasses 20,466 acres in Monroe and Northampton counties in Pennsylvania's Pocono Mountains. Within this boundary, the Service is now authorized to purchase land outright from willing sellers and protect other acres through voluntary conservation easements, thus preserving not only habitat for the rare plants and animals, but also the scenic rural landscape of working farms and private homes. Cherry Valley is the first new national wildlife refuge in the northeastern United States since 2001, when the Assabet River NWR was established in Massachusetts.

Cherry Creek, a tributary of the Delaware River, and the nearby Kittatinny Ridge are key pieces in the Atlantic flyway for bird migration. The area provides incredibly rich habitat for a variety of endangered plants and animals including the Indiana bat, bog turtle, American eel, dwarf wedge mussel, bald eagle, northeastern bulrush, spreading globe flower, and the small whorled pogonia, a rare orchid. The proximity to the Appalachian Trail makes preservation of this viewshed a matter of added importance.

The Nature Conservancy has been working to protect this region for more than 15 years and helped evaluate the potential for a refuge. The refuge proposal has had strong support from a local conservation group, Friends of Cherry Valley, and other residents of Cherry Valley, many of whom spoke in favor of the refuge during public meetings. Our own Mike Horne, U.S. Fish and Wildlife Service Watershed Biologist, was part of the team that succeeded in bringing the concept of a refuge in Cherry Valley to fruition.



Photo by George Gress

A FEW FACTS ON FERNS

By Dorothy Smullen

Some 350 million years ago, ferns and their allies were the dominant plants on land. Forests of tall horsetails and club mosses (*Lycopods*) existed. They became our coal deposits when they fell over in swampy regions (now Pennsylvania and other states). Within the next 100 million years, the gymnosperms (conifers, cycads and ginkgoes) arose and became dominant. Flowering plants did not develop until another 100 million years. Both the flowering plants and gymnosperms reproduce by forming seeds. Present-day ferns and their allies never make seeds. They reproduce by forming microscopic spores that are dispersed by the wind.



Cinnamon fern at Great Swamp
(Photo by Laurel Gould)

Fern spores are found in spore cases, many of which are enclosed or clustered in a structure called a sorus (the plural is sori). Sori are usually located on the underside of a mature fern leaf, which is called a frond. Young leaves unroll and are called fiddleheads because of their resemblance to the end of a violin. When sori are mature, they look brown in color, and new gardeners think their fern plant has been attacked by scale insects. Some ferns have sori on specialized parts (top or middle) of the frond, or on separate stalks, such as the cinnamon fern (shown left).

There are about 15 species of ferns at Great Swamp National Wildlife Refuge. Common species found along trails at the Wildlife Observation Center are cinnamon fern, New York fern and royal fern. On the path near the restrooms you can find sensitive fern and bracken fern. Christmas fern grows in front of the Friends Bookstore & Gift Shop. There is an identification key to Great Swamp ferns available at the Bookstore.



Fiddlehead—Cinnamon fern
(Photo by Laurel Gould)

1981—THE START OF SOMETHING BIG!

By Laurel Gould

There is a 500 hour Volunteer Honor Roll Board hanging at Refuge Headquarters with the name of each volunteer who has reached this milestone engraved on a brass plate. The first name on the Honor Roll is John Kunkel—1991. But John's story starts some ten years earlier when he was bicycling through the Refuge and stopped at Headquarters to see if he could volunteer. John had the good fortune to meet newly arrived staff member Tom McFadden. Tom had personally experienced the power and potential of volunteers when, several years before, he had volunteered at the Delaware Water Gap, spending 12-hour days (at no pay) and having a ball. Based on his experiences, Tom was convinced that a volunteer program could be used to greatly benefit the Refuge—and the volunteers. Tom put John right to work and recruited additional volunteers, implementing the first formal volunteer program at the Refuge. At the end of that first year there were 17 volunteers who donated a total of 2,352.5 hours. Tom is very proud of what volunteers have contributed to Great Swamp helping with just about everything on the Refuge. As Tom pages through the lists of volunteer names year by year, he points out the many names of those who have pursued a career in the U.S. Fish & Wildlife Service or other environmental areas. He notes that *"it's been rewarding to see people going into the field and I've made many good friends"*. Back in 1981, John Kunkel's first job was putting up fences and since then has "done everything", enjoying most his work with wildlife and getting out in the field. He says there wasn't even an official volunteer patch when he started and

they had to create one (by sewing together two patches) which he still wears. John lives 60 miles away now and it's harder for him to help out, but he was there at this past April's roadside

cleanup with the next generation of volunteer recruits—daughter Lauren and her friend Ashley.

From a small start back in 1981, Tom has developed the volunteer program into a major resource for the Refuge with 3,032 volunteers over the years and a savings of some 1.5 million dollars. He has touched hundreds of lives in a meaningful way. Volunteers serve as ambassadors, spreading the word about wildlife and the Refuge; they learn a lot during their volunteer work, and many are still actively involved at Great Swamp or at other natural areas. By the way, two members of that original group of 17 are still active volunteers—John Kunkel of course, and Friends Board Member and Education Committee Chair, Judy Schmidt.



April 4, 2009 Roadside Cleanup volunteers (l to r)
Bill Ayres, John Kunkel, Rich Dufort,
James Ahlstrom



FISCAL YEAR 2008—CELEBRATING 11,984.5 DONATED VOLUNTEER HOURS AT GREAT SWAMP NATIONAL WILDLIFE REFUGE

The 23d annual Volunteer Recognition Event was held on April 17, 2009 at Dolce Basking Ridge with over 100 volunteers, guests, and Refuge staff enjoying the dinner and awards.

Outdoor Recreation Planner Tom McFadden and Deputy Refuge Manager Steve Henry presented certificates and awards to the volunteers. Eagle Scout candidate James Mayer received special recognition for his Eagle Scout project at the Wildlife Observation Center.



Photos

Top: Deputy Refuge Manager Steve Henry presents 1,000 hour award to volunteer Louis Pisane (right)

Far left: Volunteers Laura Nally and George Helmke receive 500 hour awards.

Bottom right: Volunteers Karen English and Carl Woodward are among those who received 250 hour awards from Steve Henry.

ACTIVE VOLUNTEERS DONATE 11,984.5 HOURS IN FISCAL YEAR 2008

Listed below are the active volunteers for Fiscal Year 2008 (October 1, 2007 through September 30, 2008).

The number in parentheses is the total number of hours contributed to Great Swamp National Wildlife Refuge since first becoming a volunteer.

Joann Apgar (92.5)	Holly Dunbar (12)	Paul Jacks (8)	Brian Osborn (28)	George Solovay (911.5)
Autumn Aulicky (9)	Olivia Dunham (3)	Ken Johnson (103)	Claudia Osborn (85.5)	Marie Springer (66)
Carly Aulicky (9)	Roger Edwards (263.5)	Bruce Jordan (13)	Hanina Osborn (339.5)	Janet Stadelmeier (15.5)
Pete Axelrod (233)	Nancy Egan (40.5)	Mary Ellen Kapalo (3)	Peter Osborn (51)	Chris Stadtmueller (133)
Bill Ayres (316.5)	Georgia Eisenhart (6)	Jane Kendall (371)	Tom Ostrand (105)	Bob Stanton (370)
Brenda Ayres (206)	Karen English (393.5)	Terri Kenner (21)	Ruben Owens (25)	Matt Steffens (110)
Moir Blake (7)	Nancy Felicito (205.5)	Siobhan Kirk (4)	Liz Parker (2)	Meridith Swenson (25)
Dennis Branden (816)	Ralph Fischer (75)	Neil Klingenburg (187.5)	Mark Parker-Magyar (2)	Tyler Swenson (3)
Bob Brandt (587)	Hunter Flatt (4)	Rachel Koch (22)	Candace Paska (207)	Angela Tata (3)
Bill Burriss (105)	Robyn Flatt (4)	Ryan Koch (33.5)	Diane Peer (66)	Elaine Taub (9)
Steve Byland (745.5)	Paul Ford (70)	Travis Koch (29)	Dixon Peer (213.5)	Ryan Teti (3)
Ray Cabrera (53)	Joanne Foster (27)	Bonnie Kushnerick (47)	Chris Petrillo (38.5)	Kelly Tiece (480)
Robin Calderone (3)	Susan Friedman (417)	John Kunkel (588.5)	Gail Petrillo (41.5)	Josh Unorski (4)
Joan Carpinello (18)	Jane George (91)	Lorrie Lane (30)	Joe Pignatelli (480)	Matthew Unorski (4)
Pat Carruthers (4)	Spencer George (43.5)	Kathy Lawson (143.5)	Louis Pisane (1,086)	Diane Veres (4)
Terry Carruthers (46.5)	Pat Giaimo (1,233.5)	Ruth Lloyd (126)	Lori Prosser (133.5)	Mary Jane Walsh (49)
Corinna Catalano (20)	Jerry Giordano (3.5)	Ray Lord (159)	Sandra Pruzansky (76.5)	Kevin Ward (27.5)
Gaby Catalano (3)	Ellen Goldberg (80)	Jennifer Malavasi (20)	Lisa Quartararo (25)	Matthew Ward (8.5)
Mark Catalano (31)	Eloise Gorski (198)	Paul Maurer (210)	John Raab (283.5)	Esther Warner (116.5)
Teri Catalano (326)	Charles Gould (131)	James Mayer (18)	Sandhya Rao (7)	Elaine Weyuker (66)
Helen Chandler (27.5)	Laurel Gould (3,148.5)	Charlie McCarthy (3)	Gail Rapaport (413)	Anna Whistler (17)
Dianna Clemens (3)	Steve Gruber (250)	Ann McCord (59)	Brian Redick (24)	Justin Whitehurst (41)
Kean M. Clifford (440)	Courtney Gurkas (3)	Don McCord (55.5)	Shirley Richardson (81.5)	Barbara Whitmore (23.5)
Charlie Cotton (453.5)	Marcie Hall (2)	Bob McDonald (30)	Edythe Risberg (310)	Chuck Whitmore (904.5)
Rich Cowper (86.5)	Nancy Hayes (4)	Don McLellan (43.5)	Blaine Rothauser (132.5)	John Wilmot, Sr. (586)
Betsy Coyne (133.5)	Kathy Heeney (3.5)	Jeane McLellan (40)	Roz Rothman (10.5)	John Wilmot, Jr. (51.5)
George Coyne (143)	George Helmke (570.5)	Pat Miller (4)	Dick Ryan (2)	Barbara Wingel (330.5)
Emily Cullen (93.5)	Greg Henderson (73.5)	Kirk Moehle (3)	Mary Sanko (49.5)	Carl Woodward (257)
Jonathan Curry (5.5)	Steve Henry (142.5)	Lisa Molinari (700)	Deb Scala (948)	Kathy Woodward (1,794)
Dawn Del Guercio (15)	Mariana Hernandez (92.5)	Ruth Morgan (80)	Joe Scala (143)	Ruth Zippler (35)
Ted Del Guercio (9)	Jack Higgins (832.5)	Bridget Mracek (148.5)	Nancy Schenck (702)	
Denise Delgado (3)	Maryann Higgins (28.5)	David Mracek (196)	Judy Schmidt (3,672.5)	
Lee Delitzscher (52.5)	Chris Hildebrand (153.5)	Judith Murphy (3.5)	Mary Ann Schmit (30)	
Janene DePalo (49.5)	Bob Hofmann (138.5)	Roz Mytelka (242.5)	Jean Sebesta (5,058.5)	
Jim Detizio (713.5)	Leo Hollein (1,979)	Joe Nally (123)	Marv Sebesta (928)	
Peter Detizio (6)	Peter Hrinewski (480)	Laura Nally (773.5)	Gina Smith (63)	
Deborah Dewey (4)	Tara Huepenbecker (3)	Melinda Nye (142.5)	Bill Smullen (98.5)	
Rich Dufort (235.5)	Ed Ibe (3.5)	Lillian O'Brien (207.5)	Dorothy Smullen (1,620)	

**Thank You
Volunteers!**

NOTABLE VOLUNTEER MILESTONES

100 HOUR CLUB

Bill Burriss, Charlie Cotton, Betsy Coyne, George Coyne, Eloise Gorski, Bob Hofmann, Ken Johnson, Neil Klingenburg, Ruth Lloyd, Bridget Mracek, David Mracek, Joe Nally, Tom Ostrand, Candy Paska, Joe Scala, Matt Steffens, Esther Warner

250 HOUR PIN

Kean M. Clifford, Charlie Cotton, Roger Edwards, Karen English, Susan Garretson Friedman, Steve Gruber, Peter Hrinewski, Jane Kendall, Joe Pignatelli, John Raab, Kelly Tiece, Carl Woodward

500 HOUR PIN

1,000 HOUR PIN

1,500 HOUR PIN

3,000 HOUR PIN

3,500 HOUR PIN

George Helmke
Laura Nally

Pat Giaimo
Louis Pisane

Dorothy Smullen
Kathy Woodward

Laurel Gould

Judy Schmidt

WHERE DO OUR MALLARDS AND WOOD DUCKS GO?

By Leo Hollein



Wood duck hen leaving nest box Photo by Melinda Nye

The Great Swamp National Wildlife Refuge is a duck nursery. The most common breeding ducks on the Refuge are wood ducks and mallards. Over 200 nest boxes are maintained for cavity nesting ducks. While other birds and wildlife use these boxes, wood ducks are the primary residents. Wood ducks begin laying their clutch of 10 to 15 eggs in late March. The hen begins brooding the eggs once the clutch is complete. The drake is not involved in brooding. The eggs hatch in 4-5 weeks.¹ The wet hatchlings dry into fluffy ducklings. One day after hatching the ducklings tumble out of the box at the urging of their mother and follow her to the relative security of a pond or stream. The ducklings are capable of feeding themselves but will not be able to fly for several months.

Mallards are the most common and widespread nesting duck in New Jersey. The Refuge has a robust mallard population. Mallards are a large, hardy duck that nest on the ground. Mallards begin laying their clutch of usually 7 to 10 eggs in late March.

The hen begins brooding the eggs once the clutch is complete. The eggs hatch in about 4 weeks.¹ The ducklings are capable of feeding themselves upon hatching and will be able to fly in 6 to 8 weeks.

Since 1970 the Refuge staff with the help of volunteers have trapped and banded wood ducks and mallards in August and September. The Patuxent Bird Banding Laboratory in Maryland is the clearinghouse for data on bands—both those initially placed on birds and those recovered at a later date. The table at right compares duck banding and recovery history for the Great Swamp National Wildlife Refuge. As illustrated by the data, most recovered bands are from hatch year ducks that are shot in the fall. The overall recovery of bands is nearly twice as high for mallards as for wood ducks. Wood ducks are secretive and only half the size of mallards. This probably accounts for their lower band recovery rate.

WOOD DUCKS MIGRATE SOUTH IN THE FALL

The map on page 9 shows where the wood duck bands were recovered. About 90% of the bands are recovered from ducks along the Atlantic Flyway that consists of the 16 states

	Wood Ducks	Mallards
Number banded	4,037	1,810
Total number of bands recovered	331	263
Percent of bands recovered from hatch year ducks (%)	51	81
Percent of bands recovered by hunters (%)	91	81
Percent of total bands recovered (%)	8	15



Male wood duck in eclipse plumage awaiting banding (Photo by Leo Hollein)

that border the Atlantic Ocean. Over 50% of the wood duck bands were recovered in the Carolinas, Georgia and Florida. Only 7% of the bands were recovered from states or provinces north of the Great Swamp National Wildlife Refuge. Bands have been recovered from 22 states, 3 Canadian provinces and 2 Mexican states. The most distant wood duck band from the Refuge was recovered 2,200 miles away in the Mexican State of Sinaloa that borders the Gulf of California. Another band was recovered in the Mexican state of Durango. There is a large scale color map at Refuge Headquarters that depicts the recovery points.

The wood duck longevity record based on a recovered band is 22 years and 6 months. One Refuge duck band was recovered 9 years and 5 months after it was banded as an adult in 1991. Therefore, this duck lived for more than 10 years. Several other bands were recovered from wood ducks that were banded 9 years and 4 months previously at Great Swamp. (continued on page 9)

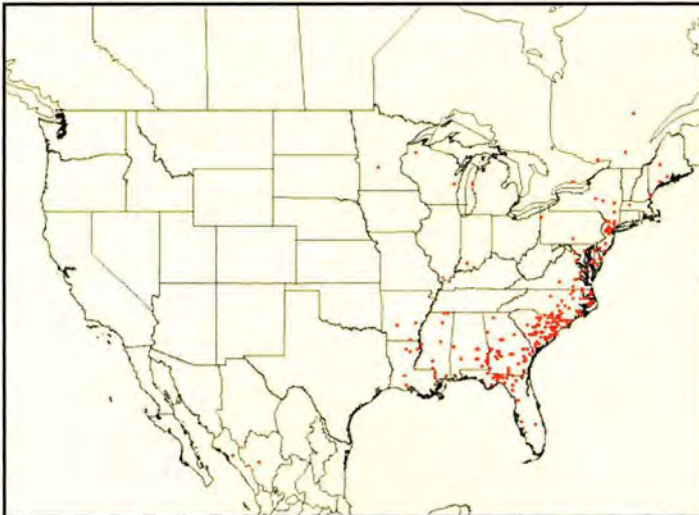
MALLARDS ARE ABUNDANT THROUGHOUT THE YEAR

Mallards are common year round residents of the Refuge. The map below shows where the bands were recovered. Over 67% of the mallard bands were recovered in New Jersey and the nearby states of New York, Pennsylvania, Delaware and Maryland. Dispersal of mallards out of this area is not concentrated in any particular direction. About 11% were recovered in the southeastern states and 8% in Canadian provinces. The remaining 14% of the recoveries were primarily scattered across the midwestern states. Bands have been recovered from 20 states and 4 Canadian provinces. The most distant mallard band from the Refuge was recovered 1,750 miles away in central Saskatchewan Province in western Canada. Another band was recovered from the shores of Hudson Bay in northern Ontario. The mallard longevity record based on a recovered band is 26 years and 4 months. One Refuge duck band was recovered 10 years and 5 months after it was banded in 1993. Several other bands were recovered from mallards that were banded over 9 years previously at the Great Swamp National Wildlife Refuge.

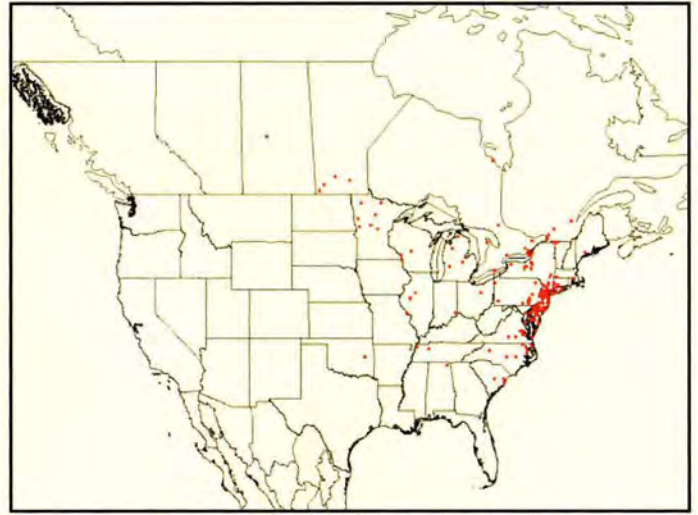


Hen mallard ready for banding (Photo by Leo Hollein)

1. Ehrlich, Paul R. *The Birder's Handbook*, Simon & Schuster, 1988.



Red dots mark location of recovered wood duck bands



Red dots mark location of recovered mallard bands

2009-2010 FEDERAL DUCK STAMP ON SALE JUNE 26, 2009

You can help buy land for national wildlife refuges with every duck stamp that you purchase. This is a great way to help fund new refuge habitat for wildlife, waterfowl, and other migratory birds. Ninety-eight cents of every dollar generated by the sale of duck stamps specifically targets breeding habitat within the National Wildlife Refuge System. Last year funds were approved to add more than 3,500 acres to the National Wildlife Refuge System.

This year's winning artist is Joshua Spies from Watertown, South Dakota with a painting of a male long-tailed duck floating with a decoy. Some duck stamp trivia: 1967 was the last time this waterfowl species appeared on the Federal Duck Stamp, when Leslie Kouba won with a pair of old squaws. Since that time the species has been reclassified as long-tailed ducks—the first time in the history of the duck stamp that a waterfowl species has won under two names!

If you enjoy the refuge, do your part to help—stop by the Friends Bookstore or Refuge Headquarters and buy *your* Federal Duck Stamp. By the way, as an added bonus, the current year's Federal Duck Stamp serves as an entrance pass to any National Wildlife Refuge that charges a fee.



JUNIOR REFUGE MANAGER PROGRAM LAUNCHED BY FRIENDS OF GREAT SWAMP (continued from page 1)

In response to the many calls to involve our children in more outdoor activities, the Friends have developed a Junior Refuge Manager Program. This new program was officially launched on Saturday April 25 at the Wildlife Observation Center where twenty-eight children signed up to get started earning their Junior Refuge Manager badge—and learning about wildlife, habitat, and the Great Swamp National Wildlife Refuge in the process.



Northern water snakes are a main attraction for Guides, parents, and kids alike!

The Junior Refuge Manager Program is being funded by a \$6,000 Challenge Cost Share Grant awarded by U.S. Fish & Wildlife Service to Great Swamp National Wildlife Refuge. This grant must be matched by the Friends of Great Swamp through donations of volunteer hours or funds. The current valuation for volunteer hours is \$20.25 per hour, so volunteers will need to donate almost 300 hours to this program—but we're well on our way!

For the past few months, the Friends have been developing an Activity Book for kids to complete in order to earn their Junior Refuge Manager badge. Volunteer Judy Schmidt and her team identified a variety of pertinent topics including frogs, snakes, turtles, invertebrates, birds, and optics. Then they developed a series of questions and exercises for each topic. During visits to the Wildlife Observation Center, children work to complete each page which is then "certified" by a volunteer or Refuge employee. One of the main objectives of the program is to help children take time and observe wildlife and nature, noting field marks, behavior, and habitat. The Activity Book has nine activity pages which require certification before the child can earn a badge.



A successful day! Swamp Nature Guides on Kickoff Day. Back row (left to right): Jack Higgins, Ruth Lloyd, Candy Paska, Betsy Coyne, Neil Klingenburg, Judy Schmidt, Nancy Schenck, Lillian O'Brien, John Wilmot, Georgia Eisenhart. Front row (left to right): George Coyne, Karen English, Dorothy Smullen, Sandra Prusansky, Greg Henderson. Behind the camera: Laurel Gould

Refuge Biological Technician Colin Osborn who provided a wealth of information accompanied by fabulous slides and photos. It was a full house with 35 participants for the day with very positive feedback on the quality of the presentation, the relevance of the content, and Colin's in-depth knowledge and contagious enthusiasm. The Friends plan to continue this program of advanced workshops with other topics.

Let's Go Outside!

Junior Refuge Manager
Great Swamp National Wildlife Refuge

Observing... Invertebrates

Insects make up the largest percentage of invertebrates. Insects generally have three pairs of legs and three main body parts—the head, thorax, and abdomen. What field marks to look for...

- Habitat:
- Color:
- Shape:
- With or without wings:
- Number of legs:

Can you identify these insects? Write the number above the picture.

1. Butterfly

2. Grasshopper

3. Mosquito

4. Dragonfly

5. Ant

6. Praying mantis

Draw some insects that you observed today in the boxes below. Can you identify them?

Certified by:

Date:



To assist aspiring Junior Refuge Managers in completing their Activity Books, volunteers will be available at the Wildlife Observation Center on weekends through early June. These volunteers, called Swamp Nature Guides, are armed with scopes, binoculars, magnifying glasses, field guides, and other tools to help children get a close-up look at wildlife and answer questions. Once all of the pages have been completed and certified, the child is awarded an official Junior Refuge Manager badge, a Junior Refuge Manager certificate, and a \$5.00 coupon to be used toward the purchase of a field guide from the Friends Bookstore. The program is geared to children between the ages of 5 and 13 and completing the Activity Book requires at least two visits to the Refuge. This is an ongoing program and Activity Books will be available for \$2.00 at the Friends Bookstore & Gift Shop as well as at the Wildlife Observation Center. Swamp Nature Guides will be also be scheduled at the Wildlife Observation Center during the Fall migration season.

REPTILES & AMPHIBIANS WORKSHOP HELPS PREPARE VOLUNTEERS

To help volunteers prepare for this new program, the Friends held their first Advanced Volunteer Training Workshop in February. The day-long workshop on reptiles and amphibians was conducted by

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE MEMBERSHIP APPLICATION

The Friends of Great Swamp is an independent, non-profit organization organized in 1999. Our operations and activities are managed by an all-volunteer Board of Directors. As our mission statement indicates, our focus is Refuge-centric — we support the goals, projects, and mission of the Great Swamp National Wildlife Refuge.

To become a member of the Friends of Great Swamp, fill out the information on this form, and mail with your check to:

Friends of Great Swamp National Wildlife Refuge
241 Pleasant Plains Road, Basking Ridge, New Jersey 07920
Ask about our school or group memberships.

Annual Membership

Membership Type	<input type="checkbox"/> Family - \$25	<input type="checkbox"/> Individual—\$15
Gift	<input type="checkbox"/> Family - \$25	<input type="checkbox"/> Individual—\$15
Renewal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Donation—Thank You! \$ _____

Name _____

Address _____

City _____

State, Zip Code _____

Phone Number _____

E-Mail Address _____

Gift Membership From: _____

(If this is a gift, please include your full name on the line above so we may notify the recipient)

We need more friends . . .



Members are important!
Give a gift of membership
to a friend.

Memberships help support the mission and projects at Great Swamp.

Members also receive the following benefits:

- Quarterly Newsletter
- 10% discount in Bookstore & Gift Shop
- Notification of coming events
- Feeling of accomplishment in supporting the Great Swamp National Wildlife Refuge.

Gift Memberships will include a coupon redeemable at the Friends Bookstore & Gift Shop for a 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.