

ISSUE SIXTY FIVE Spring 2021

Highlights

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Mike Horne Project Leader Lenape National Wildlife Refuge Complex

> Deadline for Summer 2021 Issue July 15, 2021 Submissions Welcome



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"YOUR ADVENTURE IS ABOUT TO BEGIN"

An exciting new nature activity comes to Great Swamp National Wildlife Refuge



i there! I'm Agent ▲ Painted Turtle and I am inviting you to join me on an exciting new nature adventure at Great Swamp National Wildlife Refuge. It's called Agents of Discovery-a free smartphone app with exciting challenges to help you discover more about the great outdoors. And it's been designed specifically to help you learn about the wildlife and habitat at Great Swamp's Wildlife Observation Center.

Interested in being an agent? Here's how.

First, download the free app from any online app store.

When you are at the Wildlife Observation Center, select the Mission–Great Swamp National Wildlife Refuge. Now you are a Secret Agent on a mission to solve challenges. I'll be your guide on this adventure through swamp habitat looking for plants and animals and learning more about our environment. As you complete the challenges, you'll earn "points"-so you can compete with your friends and your family.

Agents of Discovery is an augmented reality mobile game. Well that's a mouthful isn't it? In other words, it's like a scavenger hunt on your smartphone. It is primarily designed for children in elementary through middle school-but your parents and other adults are welcome to test their knowledge! The Agents of Discovery app is free to download. It's recommended that you do this at home as wifi service can be spotty at the Wildlife Observation Center. Once you have downloaded the app you do not need wifi to play.

Agents of Discovery has been funded by Friends of Great Swamp National Wildlife Refuge with support from U.S. Fish and Wildlife Service. The first mission, from the Wildlife Observation Center entrance to the Sportsman's Blind, is now ready for you! Our Project Team will be adding more missions and making seasonal changes. The Agents of Discovery app is also used at many other parks and national wildlife refuges, so when you travel you can find their missions too.

And don't worry! You can still play our popular Boardwalk Bingo or become a Junior Refuge Manager by completing the Activity Guide. Agents of Discovery is just one more way to enjoy, and learn, at Great Swamp National Wildlife Refuge.

See you soon!



ALL ABOUT FRIENDS: A summary of recent actions and activities

ANNUAL BUSINESS MEETING

The Friends Annual Business Meeting was held on December 5, 2020 via Zoom with 78 members in attendance. Laurel Gould presented the Treasurer's Report

highlighting major expenditures and sources of income. There was a net income of \$16,695 for the Fiscal Year 2020 (October 1, 2019–September 30, 2020). Kathy Woodward presented the slate of nominees for Directors: Incumbents standing for re-election: Jane Bell, Randi Emmer, Steve Herdman, Dave Katz; new members: Judi DiMaio, Tom Gula, Bob Muska (see biographies of the new members on pages 8 – 9). All were elected for two year terms. Retiring board members Ellen Greenhorn, George Solovay and Janet

Stadelmeier were thanked for their years of service and their many contributions to the Friends. They all promised to remain as volunteers.

President Steve Herdman thanked everyone for attending the Annual Meeting. He reviewed the projects and activities that were completed during this unusual and difficult year. In 2021, in addition to working on projects that we could not do in 2020 because of Covid-19, new budgeted activities are being planned.

At the December 9 board meeting, the following officers were elected for a one-year term: President, Steve Herdman; Vice President, Allen Dreikorn; Secretary, Walter Willwerth; Treasurer, Laurel Gould.



BUDGET UPDATE

In addition to the FY2021 projects listed in the November 2020 issue of Swamp Scene, the following two new projects were approved by the Board.

- Wood Duck Box Construction Materials: The Board received a request to fund the repair and replacement of wood duck boxes that have deteriorated in recent years. The request for \$2,000 was approved for wood and supplies.
- Kiosks at the Wildlife Observation Center: A request was made to approve funding for the renovation and expansion of the kiosks at the Wildlife Observation Center. This is part of a larger project to create new interpretive signs for the kiosks and trails which is being spearheaded by the Refuge. The request for \$6,000 was approved. This funding will come from donations made by visitors to the Wildlife Observation Center over the winter.

VIRTUAL SECOND SUNDAY PROGRAMS

A fter many months of shut-down, the Friends resumed the popular Second Sunday programs in January 2021—via Zoom. The first program was on dragonflies and damselflies presented by Friends naturalist Dorothy Smullen. In February, we were treated to a tour of The Raptor Trust's bird rehabilitation facilities and followed the story of an injured eagle from capture to successful release. In March, a team from USDA and NJ Department of Agriculture got us ready to combat the spotted lanternfly—a new invasive species. With each Zoom program, we learned more about Zoom, its capabilities and tools, as well as hosting and managing virtual meetings.

Kathy Woodward and the Programs Committee have planned several exciting programs for the remainder of the year, including native plants and butterflies, a program on nature sketching, the perils of bird migration, weather, and hummingbirds. A special treat will be a talk by Mary Bruno, author of *An American River*—a story of adventure, geography and history of the Passaic River. One of the benefits of having virtual programs is that speakers do not have to be local. Mary Bruno, a New Jersey native, now lives in Oregon, but with Zoom, it's easy! It also means that all of our members, regardless of where you live, are invited to participate in a Second Sunday program. The dates, times, and Zoom logon information are on our website.

It is uncertain when in-person programs will resume, so we are remaining flexible. Looking ahead, we are exploring ways to host future programs, both virtual and in-person, simultaneously. This will open up a greater range of speakers as physical presence will not be required, as well as more options to attend either physically or virtually.

Second Sunday programs are sponsored by Friends of Great Swamp NWR with generous support from the Marta Heflin Foundation.



FRIENDS BOARD MEMBERS TOUR NEW PRIMROSE BROOK PROPERTY By Dave Katz, Friends Board Member

On March 20, Refuge Manager Mike Horne led members of the Friend's Board of Directors and Construction Team Leader, George Solovay, on a tour of the new Primrose Brook Property.

This property is an 88-acre parcel that is now part of the Great Swamp National Wildlife Refuge. We walked out the right-hand side of the White Oak Trail, and crossed a very muddy field to get to the property. Knee high rubber boots were an absolute necessity to take the tour.

Once on the property, Mike explained a bit about its history, the ecology, and possible future management of the site. On the way back we walked to the other side of the White Oak Trail to explore possibilities for a connecting loop trail in the future. It was a very educational and informative day.



Photo by Jane Bell

THANK YOU SO MUCH!

We gratefully acknowledge donations made to Friends of Great Swamp NWR between November 1, 2020 and March 31, 2021. Your Donations are used to fund a variety of projects and programs which benefit Great Swamp National Wildlife Refuge, its wildlife, and its visitors.

MEMORIAL GIFTS

In Memory of Janis Cole

- Joanna and William Storrar
- R. Scott McClester

In Memory of David Dietz

Mary Jane Walsh

In Memory of Rudolph Ward Kluiber

- Catherine Kluiber Fahy
- Laureen Fiola
- Frank Zlatnik
- Frieder Jaekle
- Sarah Richards
- Cindy Bares
- Marie Attia
- Eleanor Marsh
- Zlatnik Kluiber Charitable Gift Fund

In Memory of Sanford Vogel

• Elizabeth and Edward Dmochowski

In Memory of Frank Walker

- Kyra and John Hoffmann
- Melanie A. Matthews

TRIBUTE GIFTS In Honor of Betsy Boles

David Boles

In Honor of the Great Swamp Strike Team

Chris Soucy

In honor of Mark Pettus

• Daria Pettus

INDIVIDUAL DONATIONS

- Janis K. Cole Revocable Trust
- Tom McFadden
- Will and Mary Leland
- Laurel and Charles Gould
- Bob and Linda Loveland
- Tom Gula
- Christopher Drew
- Roberto Reisinger
- April Dunleavy
- Anonymous

CORPORATE & FOUNDATION DONATIONS

- AmazonSmile
- Marta Heflin Foundation
- Prudential
- Johnson & Johnson
- Active Citizens for Responsible Sustainability (ACRES)

WELCOME ANNA HARRIS-NEW DEPUTY REFUGE MANAGER-LENAPE NWR COMPLEX

Editor's Note: In December 2020 Anna Harris joined the staff at the Lenape National Wildlife Refuge Complex as Deputy Refuge Manager. Since then she has been busy learning about Great Swamp and the other refuges in the Complex. In her own words: *'I'm working to have a presence at Great Swamp and get out on the Refuge as much as possible so that I can understand the land-scape, people and partners that make this place so special.* "Due to Covid-19 restrictions, Anna has conducted her own interview. Thank you and Welcome Anna!

WHAT INSPIRED YOU TO WORK FOR THE U.S. FISH AND WILDLIFE SERVICE?

I grew up spending much of my childhood outside, camping and biking with my two sisters. My parent's idea of a family vacation was loading all five of us into a Volvo station wagon and driving to some remote campground along the east coast. I know now that we camped on national wildlife refuges, but at the time I could not tell the difference between the various public land management systems. This upbringing was my foundation for wanting to work in a profession that protects wild places, the animals that call those places home, and offers amazing outdoor experiences.

I started working for the U.S. Fish and Wildlife Service in the Headquarters office right out of graduate school. I gained a deep appreciation for the mission, working with others to protect wildlife and their habitats for the American

people, and I knew this was the kind of work I could see myself being passionate about for my entire career.

WHAT HAS YOUR CAREER BEEN LIKE BEFORE COMING TO THE LENAPE NWR COMPLEX?

describe my career as a "career jungle-gym" as opposed L to any type of career ladder. I started as an economist with the Service working on the National Survey of Fishing, Hunting and Wildlife Associated Recreation. I really enjoyed working on the National Survey and the close relationship with our state partnerships that the program fosters. From there, I spent a few months in Fort Collins, CO helping to build a fledgling program within the refuge system known as the Natural Resource Program Center. It was this experience that led me to the Conserving the Future Refuge Vision Conference in Madison, WI. That conference was life-changing. Getting to meet and interact with over 300 of the premier wildlife conservationists within the refuge system and throughout the world inspired me to do more for our agency and when I came back to Headquarters, I wanted to participate in something new. The position of coordinator for the refuge system Conserving the Future vision came open, and I seized the opportunity. After a few rewarding years working



Anna Harris (left) at Great Swamp looking at bog turtle habitat with our partners from EcolSciences

on the refuge vision, my husband and I moved to the west coast where I joined a team working on the largest Endangered Species Act listing decision our agency has ever faced, the greater sage grouse. Conserving greater sage grouse involved sitting down with ranchers, private landowners, municipalities and our federal, state and Tribal partners to find solutions that were "good for the bird, and good for the herd." This experience taught me how the Endangered Species Act can serve as a partnership tool and not a regulatory burden. Yearning to return closer to family, we moved to Maine where I assumed the role of the Ecological Services Project Leader for the State of Maine. In this challenging role I provided leadership to a small but talented team of wildlife biologists focused on permitting and recovery for Maine's federally threatened and endangered species.

WHAT ATTRACTED YOU TO THIS POSITION?

Managing a National Wildlife Refuge is something I have worked toward for the past 10 years. I spent two months at a crown jewel of a refuge, Bosque Del Apache NWR in Socorro, New Mexico as the deputy manager and knew this is what I wanted to do. *(continued on page 5)*

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WELCOME ANNA HARRIS (continued from page 4)

It's taken me a while to finally find my place, but I feel certain that I have found it within the Lenape NWR Complex. I enjoy working with people and building partnerships. I also truly believe that the refuge system as a whole is on an incredible path with the blueprint provided by the *Conserving the Future* Vision document.

WHAT WILL BE YOUR MAJOR FOCUS THIS YEAR?

I think a lot of this year will be spent getting acquainted with the people, places and partnerships associated with the Complex. It is a challenge during Covid to make the personal connections that I find so valuable. I have heard great stories about the accomplishments of the Great Swamp Friends group and I look forward to learning more, finding ways to support colleagues, and working together on mutually beneficial goals.

WHAT ARE YOUR PRIORITIES FOR THE COMING YEAR ... OR LONGER TERM AT GREAT SWAMP NWR?

This coming year is focused on building capacity back into the Lenape Complex. There are a lot of vacancies throughout the Complex. Without the passionate employees to get the work done, all the refuges in the Complex, including Great Swamp, have had to scale back. One of my top priorities is building back the team. I've begun with the biologist position as well as two term positions that will help expedite the invasive species work currently needed throughout the Complex. Longer term, I hope to build on the efforts that Refuge Manager Mike Horne has put into place.

WHAT DO YOU ENJOY DOING IN YOUR SPARE TIME?

N ot only was this move apt for my career goals, it also offers a great fit for my family. My husband Kyle grew up in Bucks County, Pennsylvania and I grew up in southwest New Hampshire. We met through a mutual love of fly fishing, but with a toddler and another baby due this May, we haven't been fishing as much as we used to. We love spending time teaching our son about nature: bird watching, looking at insects, trees, digging in the dirt and going on short hikes in the area. I especially appreciate that Great Swamp, Wallkill River, Cherry Valley and Shawangunk Grasslands refuges are all accessible via trails and stroller friendly nature walks.

For more information about Conserving the Future: <u>https://www.fws.gov/refuges/about/strategic-vision/index.html</u>

THE STORY OF AN ALBATROSS AND A SCIENTIST

hat do a 70 year old Laysan albatross and Great Swamp National Wildlife Refuge have in common?

A man named CHANDLER S. ROBBINS.

"Wisdom, the oldest known banded bird in the wild, is a female Laysan albatross that nests within the world's largest albatross colony on Midway Atoll National Wildlife Refuge. She is at least 69-years old and a world renowned symbol of hope for all species that depend upon the health of the ocean to survive.

The story of a Laysan albatross named Wisdom began to unfold in 2002 when bird biologist Chandler Robbins attempted to replace a numbered band on Wisdom's leg. The band was part of a study of albatross population and life cycle. The U.S. bird



Wisdom with her new chick hatched February 1, 2021

banding program has a meticulous tracking process, and they were able to determine that Wisdom had first been banded on Midway, December 10, 1956. The data sheet indicated Chandler Robbins (40 years-old at the time) gave Wisdom her first band in 1956. When Robbins returned to Midway in 2002 he had re-sighted the same bird he banded 46 years earlier!" Now to Great Swamp National Wildlife Refuge. In October, 2019, the Chandler S. Robbins Memorial Viewing Platform was dedicated. Designed and built by the Friends Construction Team, the twolevel, ADA compliant platform transformed the Wildlife Observation Center, providing an expansive view of wetlands, open water, waterfowl and our resident eagle. The platform was made possible by a generous grant from the Robbins family in memory of Chandler S. Robbins, who died in 2017, and today, is the most popular viewing area at the Refuge.

The Friends are honored to have received this donation in memory of such a preeminent ornithologist and scientist. For more information on Wisdom, check out the website below.

Wisdom story from: U.S. Fish and Wildlife Service: https://www.fws.gov/refuge/Midway_Atoll/News/

THE GREAT SWAMP TALE OF THE TIRE

By Brian Davies, Long-time Great Swamp NWR Visitor

iking through the Great Swamp Wilderness Area on the Green Trail sometime in September, my wife and I came across a hollow a short distance from the trail. In the middle of the hollow—of all things— an old tire!

How did it get there—almost a mile from the trail head, and how? The hollow had a slightly eerie feel to it. Could the tire have been the site of some ritual, in which the tire played a part? Feeling slightly unsettled, we continued on our way.

Some weeks later, on the Orange Trail, we saw an odd object in the distance. Walking closer we suddenly realized it was the same tire! *Imagine our alarm*. We had already speculated that this tire was associated with something unsavory. Then our alarm turned to surprised relief when we saw what was taped to the tire.

PLEASE HELP us remove this ugly, old tire from Great Swamp! Tire tale @ Meyersville Rd Green Village ends / If every passer-by could move it just 10 ft toward the Orange Trailhead , (Meyersville Road, Green Village parking area),ultimately this natural area will be tirefree! To be sure we're all going in the same direction on the trail, please move it ... Northwest on the Green trail and then, right after the little bridge, turn right, which is Northeast on the Orange trail. Thanks in advance for your help. We will find it a new 5 home!!! R&A For your interest, it will require 370 10ft moves to complete the 0.7-mile journey. Tire first

FIELD NOTES

Also with the tire—a notebook detailing the tire's journey.

10/15/20 Tire Journey Regins ! Removed from low area + placed on trail. Thanks in edvonce to all ? R+A 30-40FT FURTHER DOWN THE TRAIL GOOD LUCK! - GREG K. 10/15/20 (4:30 pm) Nice working with every body Nang + Marcy 50ft

Wow, R+ & you state Brought it over the bridge to Drange K tomothan ains Headed IOF pun danze tra

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE — WWW.FRIENDSOFGREATSWAMP.ORG



Well this trail is not very well travelled -370 trips of 10 feet each would take months, yet the tire had travelled half the distance to the trail head in just 3 days! Such great collaboration among strangers.

Of course we had to help!



A few days later-

The tire had taken just 6 days to reach its destination.

Great idea! We had noticed the tre MOVED ACROSS THE FINAL BRIDGE BOARDWALK ALMOST THERE a ten printhing and wondered how it had got so for in. Moved 100 ft Nanay & Brion Loday Nanay and Brian Mored another 200 yds bolay Nonay and Bran 10/19 Fat jonction w area: lunn'+ Dec 10/20 I CAUE IT ANOTHER FEW HUNDRED. BON DON RECKLIES

Kudos to R. and A. for this great idea, and putting it in motion!

MEET NEW FRIENDS BOARD MEMBERS-JUDI DIMAIO, TOM GULA, BOB MUSKA



JUDI DIMAIO

I spent many summers on my Aunt's farms, learning about getting up early, hard work and caring for various animals. My first love is the outdoors and I

spend as much time as possible wandering, always learning something new. Nature has much to teach if only we are quiet and listen.

My formal education includes fire science, engineering technology and chemistry undergraduate degrees with a B.S. from Rutgers in neuropsychopharmacology and a M.S. from John Jay in protection management. I assisted in conducting an aggression study of fluoxetine, an anti-depressant, while at Rutgers.

Jobs include repairing cars to engineering at GM, research labs in the pharmaceutical industry, making catalysts for an oil company and finally to chemistry labs and health and safety at a county college.

Several part time "jobs" have included being an auxiliary police officer (Lt. ret.), working with the U.S. Coast Guard on pollution responses, air and boat crew with the Coast Guard auxiliary and several years in the engine room on a

tugboat. My favorite "job" is training, which I have done for the police, Coast Guard, college and includes teaching at a police academy. My "specialty" is environmental outreach that has allowed me to travel from New Jersey, New York, and Connecticut to Washington and Oregon through the Coast Guard. I strongly believe in the power of education and the more people are aware of how things affect the environment and what they can do to help, the more positive effects there can be.

My hobbies include anything mechanical (if you take something apart and put it back together enough times, you will have enough parts left over to make another one), organic gardening, fishing, motorcycling, reading, drawing, crocheting, taking pictures and learning new things. I found the Swamp through Larry West who suggested I "just visit once and see what you think". I have come to love Great Swamp and really enjoy the time that I get to volunteer and interact with the public, especially the children, to show them just how "cool" nature is.





TOM GULA

I was raised in Morris County, in the small town of Rockaway. My father first took me and my sisters to the Great Swamp in the 1960s—by then I had already developed an interest in science, especially biology. I attended Rutgers College, majoring in biological sciences, and particularly enjoyed courses in zoology and ecology-environmental studies. While attending graduate school at Rutgers as an ecology major, I was reintroduced to the natural beauty of the Great Swamp during several field trips. I developed a particular interest in studying birds, and completed a research project in the Pine Barrens of New Jersey. But I always kept coming back to the Great Swamp over the years.

I volunteered for the Peace Corps after graduate school, and studied bird populations in northeast Brazil for three years. I eventually returned to New Jersey in 1985, and began teaching science, primarily biology, at the high school in Springfield. During a 32 year career as a teacher and supervisor, I took several of my classes on memorable field trips to the Great Swamp. I settled in nearby Basking Ridge in 2000.

Continued on page 9)

TOM GULA (continued)

After retiring from education in 2016, I learned from my sister, Barbara Whitmore, about the Friends organization and the opportunity to volunteer in the Refuge. It's been my pleasure to have participated in a number of volunteer activities since then, working as a bluebird box monitor, on annual wood duck box inspections and maintenance, the ongoing duck banding project in late summer, guided walks at the Wildlife Observation Center, outreach activities, and several construction projects. The sights and sounds of the Refuge have always been an attraction: walking the trails of the Wilderness Area, enjoying the changing seasons at the Wildlife Observation Center, and just driving through the swamp, never knowing what interesting animal or plant I might encounter on that particular day. I hope to continue working with the Friends, now as a Board member, and making a positive impact on this special place.





BOB MUSKA

I have had a lifetime of interest and pursuit of environmental issues beginning with the Youth Conservation Corp where I did conservation work at Great Swamp NWR.

I graduated from Columbia College in New York City with a BA in Economics. I was a business programmer/systems analyst for almost twenty years. I worked for several large corporations: Prudential, Chubb, Novartis and National Starch and Chemical.

Recently, I found a niche in the IT field which could combine my interest in the

environment with IT. It's called GIS (Geographic Information Systems) which entails creating computerized maps in order to display "big picture" data in an easily understandable way. I interned at the FEMA regional office in New York City and worked at the NJDEP Bureau of GIS for a year and a half. I have been doing volunteer work with various environmental groups. I recently completed a map for the Passaic **River Coalition which identifies** land that could potentially be purchased by the Blue Acres program.

I have been a constant environmental volunteer and activist

throughout my adult life. I joined the Passaic River Canoe Club and got interested in water quality and

development issues. I have been a member of the Sierra Club for many years, including as an outings leader, outings chair and engaging in political activism. I am active again with the Empower organization which opposes the construction of new fossil fuel projects and advocates for renewable energy sources.

I was a member of the Berkeley Heights environmental commission for about ten years and the chair for one year. We reported to the Planning Board as we reviewed new construction project proposals during a very busy period in Berkeley Heights. I took a leadership role in opposition to the Green Brook Flood Control Project, promotion of recycling and tree planting and, probably most importantly, identifying past asbestos dumping that resulted in a major site cleanup.

I am a volunteer at the Watchung Reservation. I have done a great deal of trail maintenance. For the past two years, I have been working on invasive plant removal with the Watchung Reservation Invasive Plant team (WRIP). When the deer hunt was first proposed for the Watchung Reservation, I was a member of the Deer Management subcommittee which reviewed the damage being caused by the deer and helped to select from various options for reducing the population.

Also, for the past two years, I have been volunteering with the Friends of Great Swamp. I worked on invasive plant removal near the Visitor Center with the Pervasive Invasives Team led by Kathy Woodward. I participate on the Great Swamp Strike Team and have enjoyed working with John Berry and the other team members. I find the work rewarding. We are making an important contribution to the Great Swamp National Wildlife Refuge.



ACORN YIELDS HAVE BOOM AND BUST YEARS

Story and photo by volunteer Leo Hollein

aks are estimated to produce more nuts annually than all other kinds of nut trees combined including hickory, beech and walnut. Acorns from oak trees are a major food source for wildlife during the fall and winter. However acorn yields have boom and bust cycles. In the fall of 2019, the ground beneath oaks was littered with acorns. At times it was like walking on marbles. In 2020 it was difficult to locate an acorn on the ground.

During the fall/winter inspection of wood duck boxes in the 2020/21 season, no flying squirrels or gray squirrels were found roosting in the boxes. Flying squirrels are more commonly found because they can glide from distant trees to the box. Gray squirrels need the help of a missing predator guard, fallen tree branch or nearby shrub to gain access to a box. In addition, no boxes had acorns or other nuts stored by flying squirrels for the winter. Volunteers usually find some squirrels and their nut caches during the annual nest box inspections.



Red oak acorns stashed for the winter by flying squirrels

Weather does not appear to be the main influence on acorn yields. Bumper crop years are not always associated with favorable weather conditions, e.g. no late spring frost or summer drought. Poor yields occur even when conditions are ideal for acorn growth.

Oaks are not helpless in dealing with adversity such as an overabundance of wildlife that consumes essentially all the acorns. The theory is the acorn boom and bust yield cycle is an evolutionary adaptation by oaks and other nut trees to ensure their reproductive survival. If oaks produced a consistent yield of acorns every year, populations of nutloving animals could rise to the point where all the acorns would be eaten no matter how numerous. None would remain to grow into mighty oaks.

During moderate to bust years, wildlife get by as best they can, often decreasing in



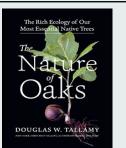
numbers. Then comes a boom year, when the oaks produce far more nuts than the animals can consume, no matter how fast they reproduce. Nuts are left to germinate and renew the forest. The trees, in effect, keep nut predators at bay.

The Refuge has oak species from both the red oak and white oak families. They are easy to distinguish. Red oaks (drawing above) have leaf lobes with pointed ends while white oaks have leaf lobes with rounded ends like fingers. The Northern red oak is the state tree of New Jersey.

White oak acorns mature in a single year. They are sweeter than the red acorns and sprout soon after dropping in the fall. Wildlife generally eat them as soon as they are available and before they lose nutrients from sprouting. The white oak acorns are critical for building energy reserves before cold weather strikes. Native Americans gathered and processed white oak acorns for food as do some people today.

Red oak acorns take two years to mature and are exceptionally high in fat. They do not sprout until the following spring, even when buried. As a result, they can be stored. Birds and animals rely primarily on red oak acorns for their winter stash.

The roles that oaks and their acorns play in nature are numerous and not yet fully understood. Consider an oak if you are adding a tree to your property. They have rich foliage, great form, and tolerance to climate and condition challenges. And they will attract a variety of wildlife.



I f Leo has piqued your interest in oaks, check out this new book by Doug Tallamy—The Nature of Oaks.

Tallamy shares the fascinating and complex web of wildlife supported by oak species highlighting the seasonal cycles of life, death and renewal occurring right in our back yards. He

shares practical advice on planting oaks, along with information about the best oak species for your area. E-Mail Address

Gift Membership From:

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 32 Pleasant Plains Road, Basking Ridge, New Jersey 07920

	ANNUAL MEMBERSHIP APPLICATION					
	EASTERN BLUEBIRD-\$15-\$49		PAINTED TURTLE-\$50-\$99		River Otter-\$100-\$249	
	Monarch Butterfly—\$250—\$499		Wood Duck-\$500 +		New Member?	
To	TAL ENCLOSED \$					
You may also join online at www.friendsofgreatswamp.org						
Name						
Address						
City						
State, Zip	Code				_	
Phone Nu	umber				_	

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

We need more Friends ...

Become a Friend Today—or,

Give a gift membership to a friend.

Thank you

Memberships help support the projects and programs at Great Swamp National Wildlife Refuge.

Membership Benefits

- The Swamp Scene Newsletter.
- A 10% discount in Friends Nature Shop .
- Notifications of upcoming events.
- Satisfaction in knowing you are helping protect wildlife and wild places while safeguarding a national treasure for future generations.

Gift Memberships will include a coupon redeemable at the Friends Nature Shop for a free Great Swamp pin or Great Swamp patch.



Friends of Great Swamp NWR 32 Pleasant Plains Road Basking Ridge NJ 07920 Non-Profit Org. PrSrt Std. US Postage Paid Permit No. 407 Chester NJ 07930



THE SWAMP SCENE SPRING 2021

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

Promoting stewardship of the natural resources of the Refuge,

Inspiring an appreciation of nature through education and outreach,

Engaging in partnership activities that support and enhance the Great Swamp National Wildlife Refuge and the National Wildlife Refuge System.