



the Swamp Scene

friends of great swamp national wildlife refuge

ISSUE SIXTY THREE
JULY 2020

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HUMMINGBIRDS ARE DOING FINE AT GREAT SWAMP NWR

Story and photos (June 15, 2020) by Dave Katz, Volunteer & Friends Board Member

With the Visitor Center closed due to the pandemic, I was recently asked how the hummingbirds are doing at the Swamp. As you know, we have not been able to put out hummingbird feeders this year, and the lovely hummingbird garden that we planted last year has gone to weeds. However, I am pleased to report that they are thriving without any help from us. Great Swamp provides many flowers for nectar, including hummingbird favorites honeysuckle and trumpet vine. It also provides a large variety of insects that contain all the protein hummingbirds need.



How do we know they are doing well?

There are many hummingbird nests throughout the refuge. Thanks to the dedication and keen observation skills of volunteer Matt Heiss, I have been able to photograph a few of them. This is a great indicator of a healthy population.

And if you have hummingbird feeders at home, now is the time to supplement them with flowers.

They can be planted, potted, or even hanging baskets of hummingbird favorites like salvia, fuchsia, lantana, or honeysuckle. The reason for this is that fledglings need to learn how to use feeders, but instinctively know to feed from flowers. Eventually, by observation and experimentation, they will figure out feeders, but if you want happy juveniles at your home, make sure to provide some flowers.



CORONAVIRUS OR NOT ... THE FRIENDS' WORK GOES ON ...

By Steve Herdman, President, Friends of Great Swamp National Wildlife Refuge



We hope you and your families are remaining safe and healthy during this Covid-19 pandemic. It was an abrupt change from “business as usual” to “stay-at-home orders” which affected us all. Despite the pandemic, the Board has continued to hold regularly scheduled monthly meetings, via Zoom—and getting proficient at it. We have received regular briefings from staff about the situation at the refuge and we have been working on procedures and protocols for resuming volunteer activities safely. In May, we reviewed our

FY2020 budget analyzing the potential impacts of the pandemic, specifically noting project expenses that will not be incurred as the refuge has been closed, as well as loss of income due to the Nature Shop closure on March 17. However, letters have been mailed as memberships expired and our members have been generous in their renewal donations. Thank you all.

In December, a Project Team was formed to review our procedures, particularly as they related to board nominations, recruitment, and succession. The team managed to meet twice in person, then, with stay-at-home orders in place, unabated, they continued their work using video/conference calls. Their report was presented at the May 2020 board meeting and was accepted unanimously. The new procedures provide a documented process and timeline as well as ensuring collaboration and transparency.

All of our planned projects were halted in mid-stream or had not yet begun when we were told to stop all volunteer activities at the refuge. With the exception of some staff deemed essential, the rest of the staff have been working

from home. They are now beginning to resume field work on site, with lots of precautions and protocols in place, but deskwork is still to be done from home. The Wildlife Observation Center was closed on March 30 for the safety of our visitors. It reopened on June 19 with several measures to encourage social distancing, including a reduction in the number of parking spaces as well as limiting space in blinds and platforms.

With great regret, we decided to cancel our annual Fall Festival, scheduled for September 26. It was just too hard to figure out how to ensure the safety of our volunteers, refuge staff, and the public.

When I assumed the position of Friends' President, I could not have imagined the impact of Covid-19 on the Friends, the refuge and all of our considerable plans, projects, and events. It's hard to know what the rest of this year will look like. But it's been a term to remember. I can honestly say it has been a year unlike any I can remember at the refuge. We will enthusiastically adapt and carry on.



FRIENDS BOARD OF DIRECTORS SEEKING CANDIDATES

As you can see from our mission on the back cover, Friends is an independent, non-profit organization dedicated to the support of Great Swamp National Wildlife Refuge and the National Wildlife Refuge System.

Our organization is made up entirely of volunteers, including our Board of Directors.

We are seeking candidates who would be interested in serving on the Board to assist in a number of areas.

If you are interested, please check out our website for more details and information.

It's one more way to make a positive impact at Great Swamp National Wildlife Refuge.



A FOND FAREWELL TO DEPUTY REFUGE MANAGER LIA McLAUGHLIN

Deputy Refuge Manager Lia McLaughlin is leaving Great Swamp NWR in July. She has accepted a new position with the U.S. Fish and Wildlife Service in Portland, Oregon.

It doesn't seem possible that it was only four years ago Lia arrived. She fit in so easily, becoming an integral part of the daily operations of the refuge and quickly developed a close and productive working relationship with the Friends.

One of her goals when she arrived in 2016, was to “work on expanding our focus on urban outreach and building those connections with residents of nearby urban areas.” She certainly has been successful in accomplishing that goal. She forged a strong association with Groundwork Elizabeth driving the critical objective to involve urban communities, particularly urban youth, in nature and conservation and helped develop new initiatives in the Elizabeth community, as well as bringing young people to the refuge for field experience.

Lia has always focused on collaboration and developing partnerships. She helped establish the Great Swamp Partners—a collaboration of non-profit and governmental organizations within the Great Swamp Watershed. This group meets regularly to share information, resources and communications and has already realized many benefits including a joint Partners brochure and map.

And then there are the Friends. Lia has involved and inspired our volunteers. Her enthusiasm has been contagious and we were excited to join in and to help in new and different ways. She was generous with her time, whether sharing her vast knowledge about eels at a Second Sunday program or planning Fall Festival. She was readily available for volunteer and visitor questions, comments—or complaints.

She puts a high priority on open communications and sharing information—even when it isn't good news.

Friends Board Member Kathy Woodward summed it up: “You have provided such wonderful leadership during challenging times. Your range of experiences is amazing and we haven't tapped all of them yet!”

Lia's new position involves managing wildlife grant programs for U.S. Fish and Wildlife Service, working with states, tribes, and other partners across the region. Based on all she has done here at Great Swamp, it sounds like a perfect job. We wish Lia and her family all the best in her new position and new home.



Lia (third from left) with the Groundwork Elizabeth Green Team working on invasive species control at the refuge. Yes! That's water up to their knees. And, they are all smiling!



*“We need the tonic of wildness —
to wade sometimes in marshes where the bittern and the
meadow-hen lurk,
and hear the booming of the snipe...”*

-- Henry David Thoreau

TENTH YEAR OF HEADSTARTING WOOD TURTLES—DESPITE COVID-19

By Laurel Gould, Volunteer and Friends Board Member (with a lot of editing assistance from Dr. Kurt Buhlmann)

Each year we look forward to Endangered Species Day, celebrated in May or early June. It is at this event that we welcome the previous summer's head-start wood turtles back from their "winter spa" in Massachusetts before they are released on the refuge.

This year, due to the Covid-19 pandemic, our scheduled Endangered Species Day program was cancelled. However, we are pleased to report that the head-start turtle program itself will continue this year.

The head-start turtle program began in 2011 with the goal of restoring a self-sustaining, viable population of the state-endangered wood turtle on the Great Swamp NWR. One of the means to accomplish this has been to watch adult females nest in June, protect the nests from predators, and then capture hatchlings as they emerge from their nests in late summer. Then, instead of hibernating, they are taken to the Bristol County Agricultural High School in Massachusetts where they are fed, cared for, and allowed to grow all winter long. In the spring, they come back to Great Swamp much larger in size, with a stronger shell, and a better chance of survival compared to their siblings who spent the winter in hibernation.

So, despite Covid-19, Refuge Manager Mike Horne brought 19 head-start wood turtles from the 2019 cohort back to New Jersey on May 31. During the following week, Dr. Kurt Buhlmann, who drove up from South Carolina, and summer biotech Ryan Rimple worked to weigh, measure and mark the 19 hatchlings—while practicing social distancing and following safety protocols. Although the 2019 cohort



Practicing social distancing and safety protocols while marking head-start turtles

headstarts did not receive radio transmitters, all were released back to their refuge home before Kurt left to return to his home. Kurt and Ryan also managed to replace radio-transmitters on all long-term monitored 2011, 2012, 2013, and 2014 headstart wood turtles as the batteries only last a year. Over the summer, Ryan will monitor the nest mounds and continue radio-tracking and data collection, with help from Marilyn Kitchell and Jim Angley.

To quote Dr. Buhlmann: "as you know the wood turtle work has been both a mix of continued exciting results but smattered with some heartbreak."

Because, on a sad note, F464, a young female turtle from the very first year of this program (2011), who was carrying 13 eggs, died from injuries suffered from a raccoon attack, despite the efforts of Woodlands Wildlife Refuge (rehabilitation center). Also devastating was the loss of M472, a male wood

turtle from the 2011 cohort, which was hit and killed by a car.

On the exciting side. One of the 19 head-starts brought back from Massachusetts on May 31 was the first offspring of a head-started turtle, F464 from the 2011 cohort (yes, the one who died). So, we have a headstart of a headstart!



HS3590—Headstart of a headstart (Sept. 2019)

After spending the winter in Massachusetts, it was released into refuge habitat in June. (continued on page 5)

HEAD-START TURTLES *(continued from page 4)*



HS3590—Head-start of a head-start—June 2020

This hatchling was smaller than the others, but spunky. Because all of the wood turtle hatchlings receive unique markings, this special hatchling can be specifically identified at any time that it is recaptured.

More positive news. According to Kurt and Ryan, two additional head-start turtles from the 2011 cohort are now mature females and have deposited eggs in the protected nesting area on the refuge—and the latest breaking

news is that one of the females from the 2012 cohort (F535) has nested for us this summer!

The Friends have been supporting this exciting and innovative research since 2011. It is a really neat partnership between the Friends, the Refuge staff, a high school and a university. The results so far are encouraging and very exciting. The numbers of wood turtles are increasing, but vigilance is required. Lawnmowers/tractors, automobiles, and raccoons align against us.

We are very grateful to Refuge staff, specifically, Marilyn Kitchell, Lia McLaughlin, and Mike Horne, as well as Dr. Buhlmann (University of Georgia) for making the effort to ensure the continuity of this research program in 2020, despite the Covid-19 pandemic. Watch for an update in the November issue of *Swamp Scene*.

Note: For an overview of this research project, check Swamp Scene, July 2019, available on the Friends website.

DO YOUR PART FOR REFUGES AND FOR CONSERVATION—BUY A FEDERAL DUCK STAMP

It's not about hunting. It's actually about buying habitat for waterfowl—and for the songbirds and other wildlife that benefit. Stamp sales, which are used to buy land for refuges, have declined over the past 30 years, a loss of more than \$10 million annually.

Less habitat ... fewer birds and other wildlife.

Through the required purchase of duck stamps, hunters have long funded one of the most successful conservation programs ever created. But those of us who visit refuges just to enjoy nature, hike, bird, or take photos are not required to purchase a stamp. Yet we all enjoy the benefits of wetlands and refuge lands.

It's really simple. If wetlands become housing developments, shopping malls, and agricultural fields, there are fewer birds or wildlife of any kind. We all must do our share to help sustain wetlands and wetland species for the future.

As you can see from the article on the exciting and highly successful head-start research program, refuges are for all species. Without refuges like Great Swamp NWR, wood turtles might move from the State threatened list to the endangered list. You can help!

Unfortunately, the Helen C. Fenske Visitor Center is closed at this time due to Covid-19. However, you can still do your part and purchase a duck stamp.



Send a stamped, self-addressed envelope with a check for \$25 (for each stamp) to Friends of GSNWR, 32 Pleasant Plains Road, Basking Ridge NJ 07920. We will mail you the 2020-2021 Federal Duck Stamp.

Thank you so much for your support.

VOLUNTEER RECOGNITION AND APPRECIATION EVENT—COVID-19 VERSION

Due to the Covid-19 pandemic this year, the annual Volunteer Recognition Event was cancelled—but not our appreciation and gratitude for all the time and effort donated by volunteers. 194 individual and 124 volunteers from nine corporate/school groups contributed 19,524.5 hours—a new record! As we could not thank volunteers in person, Refuge staff and Board members prepared a short congratulatory video. Take a look: <<https://www.youtube.com/watch?v=PHKIf4TmsCk>>

Refuge Manager Mike Horne sent the following message to volunteers.

Dear Friends and Volunteers,
As you all have heard, with much regret, we have cancelled our Annual Volunteer Appreciation and Recognition Event this year. This decision weighed heavily upon us, since this event is one of the highlights of our year. It is a time when we can all get together and take the time to celebrate you, our volunteers, and all that you accomplish. In the end, for the health and safety of all concerned, we

believe this is the best decision. While we may not be able to be together in person, we can be together in spirit celebrating all of your volunteer hours and accomplishments.

Great Swamp NWR volunteers continue to astound with their contributions, efforts, and love for the refuge—contributions that cannot be fully measured in hours and numbers, but also include effort and sweat, scratches, poison ivy and bug bites.



Photo: 2019 Awards by Peter Lebovitz

Just looking at numbers, we would have to recognize the almost 20,000 volunteer hours given to the refuge in the past year. Simply amazing!

And volunteers continue to make significant contributions across every refuge program area including: visitor services, construction projects, maintenance, wildlife, and habitat. In particular, congratulations to the many volunteers who reached milestones this year!



VOLUNTEER MILESTONE AWARDS

Awards include a Blue Goose Name Tag (100 hours), Milestone hour pins, perpetual plates on the 500 hour Honor Board and a "blue goose" for every 1,000 hours on the Blue Goose Honor Board.

100 HOUR CLUB

Lee Brush, Tom Cartwright, Richard Fiedler, Bob Muska, Philip Round, Robert Schwaneberg

150 HOURS

Lee Brush, Tom Cartwright, Patricia Dreikorn, Peter Lebovitz, Bryan Mathis, Betty Mills, Robert Schwaneberg, Tom Smith

250 HOURS

Tom Cartwright, Rena Craine, Allen Dreikorn, May Duttenhoeffer, Matt Heiss, Richard Hiserodt, Lynne Marquis, Gail Petrillo, Robert Schwaneberg, Tom Smith, Bill Smullen, Sharon Sperduto, Janet Stadelmeier

500 HOURS

Barry Bowman, Tom Cartwright, Bill Craine, Lucille Dwyer, Corinne Errico, Tom Gula, Lois Harold, Matt Heiss, Richard Hiserodt, Lorraine Novinski, Tom Smith, Ed Sullivan

1,000 HOURS

Judi DiMaio, Greg Henderson, Terry Kulmane, Jim Mulvey

1,500 HOURS

John Berry, Steve Gruber

2,000 HOURS

Walter Willwerth

3,000 HOURS

Nancy Schenck

4,000 HOURS

George Solovay

7,000 & 8,000 HOURS

Randi Emmer

9,000 HOURS

Kathy Woodward

10,000 HOURS

Laurel Gould

CUMULATIVE VOLUNTEER HOURS—THANK YOU ALL!

Listed below are the active volunteers from April 1, 2019 through March 31, 2020 with their cumulative hours, which is the total number of hours contributed since first becoming a volunteer, through March 31, 2020.

Jim Angley (727)	Susan Garretson Friedman (2,657.5)	Robert Lin (298.5)	Jean Schumer (2)
George Apgar (54)	Pat Garvin (1,591)	Daria Lisco (92)	Robert Schwaneberg (254.5)
Joann Apgar (427)	Jim Gilbert (31.5)	Randy Little (25.5)	Ginnie Scott (110.5)
Doug Arbesfeld (11)	Val Giraldo (10)	Sean Lyons (58.5)	Elaine Seckler (1,494.5)
John Ashenfelter (60)	Lynda Goldschein (134.5)	Victoria Maroldi (4)	Andrew Shen (31)
Pete Axelrod (541)	Charles Gould (259.5)	Jim Marquis (559.5)	Peter Shen (69)
Joseph Balwierczak (1,938.5)	Laurel Gould (10,183.5)	Lynne Marquis (272.5)	Christine Shoengold (67.5)
Kate Bartley (48)	Ellen Greenhorn (417)	Judy Marsh (66.5)	Mark Shoengold (56.5)
Meghan Bartley (2.5)	Anne Grote (15)	Bryan Mathis (172.5)	Gina Smith (278.5)
John Becht (81)	Steve Gruber (1,579.5)	Ernie Mazzarisi (223.5)	Tom Smith (507.5)
Jane Bell (601.5)	John Guibert (89)	Tom McFadden (14)	Bill Smullen (256)
Steve Bell (22)	Rita Guibert (33)	Kiera McLaughlin (50)	Dorothy Smullen (3,890)
John Berry (1,814.5)	Tom Gula (895)	Robert McLaughlin (3.5)	George Solovay (4,328.5)
George Biava (9)	Jim Halsey (717)	Conor McNally (17)	Margaret Southwell (210.5)
Betsy Boles (931)	Mary Beth Hansbury (354)	Andrew Meyer (2)	Sharon Spurduto (279.5)
Brenda Bourassa (343.5)	Margo Happer (6)	Jack Meyer (4.5)	Janet Stadelmeier (283)
Barry Bowman (612)	Liz Harding (3)	Betty Mills (231.5)	Kent Stevens (357)
John Breault (654)	Lois Harold (640)	Evelyn Morton (130)	Cindee Still (RV Volunteer (110.5)
Lee Brush (158.5)	Anne Hebenstreit (589)	Bridget Mracek (751)	Ed Sullivan (613.5)
Elena Caravela (6.5)	Norann Hein (7)	Jim Mulvey (1,026.5)	Florence Swanstrom (35.5)
Tom Cartwright (635)	John Heinlin (24.5)	Kate Murphy (50)	Caesar Sweitzer (4.5)
Teri Catalano (670)	Matt Heiss (769)	Kevin Murphy (56.5)	Elaine Taub (729)
Kevin Catlin (49)	Greg Henderson (1,289)	Patrick Murphy (10)	Beth Van Brunt (2.5)
Ann Chuba (5.5)	Stephen Herdman (1, 380.5)	Robert Muska (134)	Chris Venter (35.5)
Rebecca Chuba (2.5)	Maryann Higgins (136)	Ruth Nahm (243.5)	Delaney Vinaixa (8.5)
Zachery Chuba (5.5)	Richard Hiserodt (568)	Laura Nally (4,172)	Mir Vyas (14)
Peter Clark (98.5)	Lori Hoak (14)	Joe Nooger (3.5)	Shyam Vyas (14)
Tamah Conover (5.5)	Helen Hoffman (749.5)	Lorraine Novinski (536.5)	Mary Jane Walsh (594)
Angelo Cousoule (4.5)	Bob Hofmann (636)	Melinda Nye (305)	Kevin Ward (96)
Bill Craine (RV Volunteer) (889)	Leo Hollein (6,962)	Amanda O'Connor (8)	Esther Warner (834.5)
Rena Craine (RV Volunteer) (476.5)	Mike Hollein (4)	Arlene O'Connor (19.5)	Larry West (398.5)
Richard Derosier (241)	Mary Hollein (4)	Bonnie O'Connor (58)	Elaine Weyuker (202)
Jim DeTizio (1,674.5)	Beverly Kaltnecker (7.5)	John O'Connor (53)	Barbara Whitmore (615.5)
Judi DiMaio (1,083.5)	Stan Kaltnecker (7.5)	David Ogens (5.5)	Chuck Whitmore (1,061.5)
Lori Doughty (68.5)	Dave Katz (730.5)	Brian Osborn (174)	Jill Williams (6)
Allen Dreikorn (349.5)	Susan Katz (140.5)	Claudia Osborn (230)	Kathleen Willwerth (487.5)
Patricia Dreikorn (207)	Jane Kendall (1,333.5)	Peter Osborn (243.5)	Walter Willwerth (2,063.5)
May Duttenhoeffer (335.5)	Sarah King (12)	Tom Ostrand (231.5)	John Wilmot (2,425)
Corey Dwyer (2)	Neil Klingenburg (900.5)	Candace Paska (928)	Carl Woodward (712)
Lucille Dwyer (517)	Bill Koch (643.5)	Bernie Peckman (10.5)	Kathy Woodward (9,470.5)
Jan Dzwinczak (20.5)	Murali Krishna (71)	Gail Petrillo (262.5)	Kenneth Yetman (RV Volunteer) (643.5)
Mike Dzwinczak (36)	Melene Kubat (33.5)	Christine Pirog (48)	Les Young (RV Volunteer) (145)
Randi Emmer (8,909.5)	Peter Kubat (38)	Peg Ponzio (41)	Susan Young (RV Volunteer) (120)
Corinne Errico (585.5)	Terry Kulmane (1,471)	Fernanda Reisinger (42.5)	Mary Ann Zimmerman (RV Volunteer) (457)
Nancy Felicito (1,163)	Lorrie Lane (405)	Roberto Reisinger (447)	
Donna Fenske (73)	Bonnie Langdon (278)	Philip Round (125)	
Paul Fenske (1,162.5)	Paul Lauber (19.5)	Carolyn Rubinfeld (129.5)	
Richard Fiedler (144)	Peter Lebovitz (198.5)	Michael Rubinfeld (86)	
Brittany Forslind (6.5)	Denise Lenhart (8)	John Rushman (3.5)	
	Marc Levine (3)	Nancy Schenck (3,181)	
		Judy Schmidt (7,667.5)	



BLUEBIRD NEST BOX MONITORING LIMITED IN 2020

By Leo Hollein, Refuge Volunteer

All volunteer activities in the Refuge were suspended from the middle of March to the middle of June to reduce the risk of transmitting the Covid-19 virus. This eliminated monitoring the nest boxes during the most pleasant and productive time of the nesting season: the vegetation in the fields is minimal, temperatures are cooler, insects are less numerous and migrating birds are arriving or passing through. By monitoring on a weekly basis, the nesting history from the number of eggs to the outcome of the nesting attempt is available. The lack of weekly visits eliminates an accurate count of nesting activities. Regular visits also create paths from the roads to the boxes. This year, when volunteer activities resumed in mid-June, there were no paths; the brush was waist-high, requiring bushwhacking to reach the nest box.

Normal Preseason Activities Curtailed

During a “normal” year, the nest boxes are inspected during late March and early April prior to the start of nesting season. Minor maintenance is performed. Any material and wasp nests (paper and mud dauber) in the boxes are removed. Brush around the support post is trimmed. Odorants to discourage bear predation are

spread around vulnerable boxes. This year, few preseason inspection visits were conducted. The following observations were made.

- ⇒ Bears did not take down any nest boxes and their support poles during the shutdown. No odorants were spread around vulnerable box posts this season to deter bears. The absence of bear predation could be due to a few things including increased food supply, fewer bears, or lasting effect of the odorants.
- ⇒ Four mice nests were removed from the bluebird boxes in late June. White footed mice will nest in bluebird boxes if they can gain access. However, the taller vegetation did not result in a much larger than normal number of mice nests.
- ⇒ House sparrows were seen at several locations from public roads and trails during the volunteer lockout. Only one house sparrow nesting was reported when monitoring restarted. Hopefully none of these introduced, invasive sparrows fledged from earlier nestings. No house sparrows have fledged from refuge boxes in this century.

36 Nesting Pairs in 2020

An accurate count of bluebird eggs and fledglings will not be possible this season. Many bluebird clutches fledged before the first nest box monitoring visits started on June 13. We estimate there were at least 36 (39 is average for last 6 years) bluebird pairs nesting in the refuge nest boxes this season. This is based on active bluebird nests after June 15 and on empty nests used by bluebirds. This indicates an average bluebird nesting year.

The photo below shows a clean bluebird nest after a

bird nest how many eggs were laid and if the clutch was successful in fledging young.

Tree swallows begin laying eggs about a month after bluebirds start their first clutch. Tree swallows will nest right on top of a used bluebird nest and add feathers. In one box, tree swallows laid eggs in a nest with an unhatched bluebird egg. A tree swallow nest might conceal that a bluebird had previously nested in the box.

Tree Swallow Nesting Data

Nearly all the tree swallow hatchlings will fledge after



clutch of five bluebirds had fledged. Bluebird adults keep their nests clean by removing white fecal sacks from the nest. Bluebird nests are made of straw or pine needles if available and may have a leaf. It is not possible to know from an empty blue-

the monitoring restart and we will have more complete tree swallow data as a result. However, tree swallow hatchlings are difficult to count due to their number and all the feathers in the nest.

(continued on page 9)

BLUEBIRD NEST BOX MONITORING *(continued from previous page)*



Tree swallow nest with bluebird egg (Photo by Jim Mulvey)

Counting the number of tree swallow eggs and recording any dead hatchlings and unhatched eggs is the method used to get an accurate

count of tree swallow fledglings. Most tree swallow eggs hatched before monitoring began.

Tree swallows nested in 84% of the nest box pairs versus 88% in 2019. Tree swallow nests have a lot of fecal material post fledging making it easy to tell if swallows fledged from a used nest.

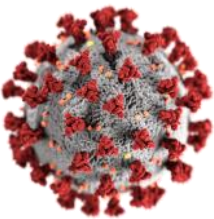
House Wren Nesting

House wren nestings in 2020 continued their decline for the second consecutive year. Over one hundred house wrens fledged from refuge nest boxes from 2016 through 2018. This exceeded by far the house wren fledglings experienced in the past. In 2019, house wrens fledged 53 young from 14 nestings. Only 6 active house

wren nestings have been reported to date. House wrens will fledge fewer young in 2020 than in 2019.

Five Volunteers This Season

Four veteran nest box monitors were joined by a newcomer this season. Nancy Felicito, Tom Gula, Jim Mulvey and I have monitored the boxes for a number of years. Christine Pirog joined us this season. She is enthusiastic about the volunteer activity and hopefully will continue for many years.



COVID-19 AND ITS IMPACT ON GREAT SWAMP NATIONAL WILDLIFE REFUGE

On Saturday, March 21 Governor Phil Murphy issued his “stay at home” order. The Friends Nature Shop closed on March 17 and has not reopened. The Visitor Center has been closed since March 19 and remains open by appointment only. The Wildlife Observation Center closed on March 30, reopening on June 19—the day before summer. During this time, refuge trails have remained open as well as Pleasant Plains Road. Staff have been working from home, except for a few essential workers, and continue to do so except for on-site field work. Volunteers were not allowed to spend any time working at the refuge in any capacity. Volunteers slowly returned in mid-June with many safety protocols in place. We are really behind in our work this season and will be catching up for a long time. Much anticipated events, such as Fall Festival, have been cancelled.

Despite the pandemic, visitation to the refuge was double the normal numbers, even with our most popular destination, the Wildlife Observation Center, closed. And it wasn't just the refuge that experienced an influx of visitors seeking time

outdoors. This shut-down really reinforced the value and importance of public lands. The refuge, and other public lands, were sought after for recreation, solace and sanity, fresh air, exercise, entertainment (birdwatching, photography, dog walking). Hopefully, one of the take-aways from this pandemic will be a renewed appreciation for the necessity of open space and public lands. Ironically, the theme of our September 26 Fall Festival, now cancelled, was “Celebrating Public Lands”!

Volunteers kept busy. They reported more exercise, gardening, birdwatching, online yoga—and many closets and drawers were cleaned. Many used the time to learn new skills and “Zoom” became a household word as everyone struggled to find ways to keep in touch with family, hold meetings, go to church, attend class. Some of our volunteers were on the front lines or assisting the front line workers in important ways.

To quote Lia McLaughlin: “At times it is difficult to remember what “normal” life was like, and we still do not know what the new “normal” will be. What we do know is that, through all of this and whatever is to come, we will get through it together.”

TARDIGRADES, AKA WATER BEARS

By Peter Lebovitz, *Friends Volunteer*

If you're not in the mood, just now, for another endangered species story, here's something you may find a little more inspiring.

Water bears, found throughout the Great Swamp NWR, are not endangered. Not even threatened. In fact, they are almost indestructible. They can survive temperatures as high as 304° F and as low as -458° F. Extremely high or low pressure, radiation or dehydration? No problem. They have been brought back to life after being frozen in ice for 2,000 years. They have been launched into outer space. Water bears have survived all five of Earth's mass extinctions.

You may never see a water bear (also called a moss piglet, but technically known as a Tardigrade, derived from the Italian for "slow walker") but they are everywhere. They can be found on mountaintops, deep in the ocean, tropical rain forests and the Antarctic. Their most common habitats around here are moss and lichen, tree bark, leaf litter, or the sediment in any of the numerous bodies of water at Great Swamp NWR. They are, however, quite small, growing to no more than 1.5 mm in length, so a chance encounter is unlikely.

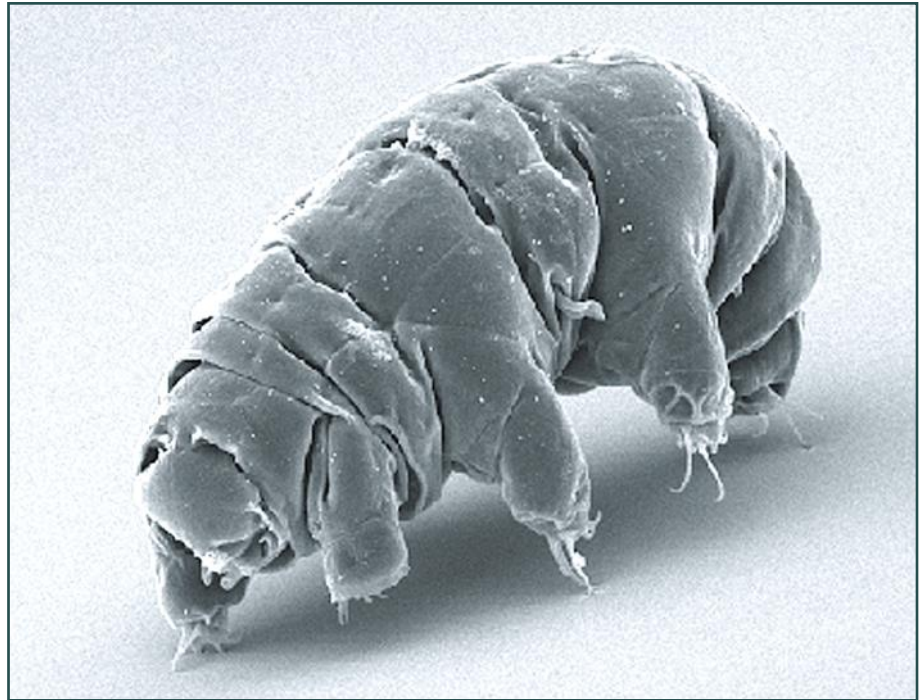


Photo Credit: Schokraie E, Warnken U, Hotz-Wagenblatt A, Grohme MA, Hengherr S, et al. (2012) / CC BY 2.5

Despite their ability to endure extreme conditions, tardigrades are not immortal. Their normal life cycle is quite short, a few months on average. And being low on the food chain, they are prey for a number of other small creatures including earthworms, spiders, insect larvae and springtails. As such, they fill an important role in developing ecosystems by supporting emerging populations.

Unlike creatures such as the phosphorescent fish that live only in the ocean's depths, tardigrades are not considered true extremophiles. For although they can tolerate extremes, they are not physically adapted to them. And while they can be found in almost any environment on earth, they are quite at home right here in Great Swamp NWR. And it is likely they will be here for some time.

The past few months have been difficult for everyone—things are so different and the future uncertain.

But we wanted to say **Thank You**—to all of you—our members and donors who have continued your strong support for Friends of Great Swamp National Wildlife Refuge.

It is so important for our organization—and for the Refuge—and it means a lot to us.

So ... **thank you!**

thank
you!

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?**

TOTAL ENCLOSED \$ _____

You may also join online at www.friendsofgreatswamp.org

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(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
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THE SWAMP SCENE JULY 2020

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.