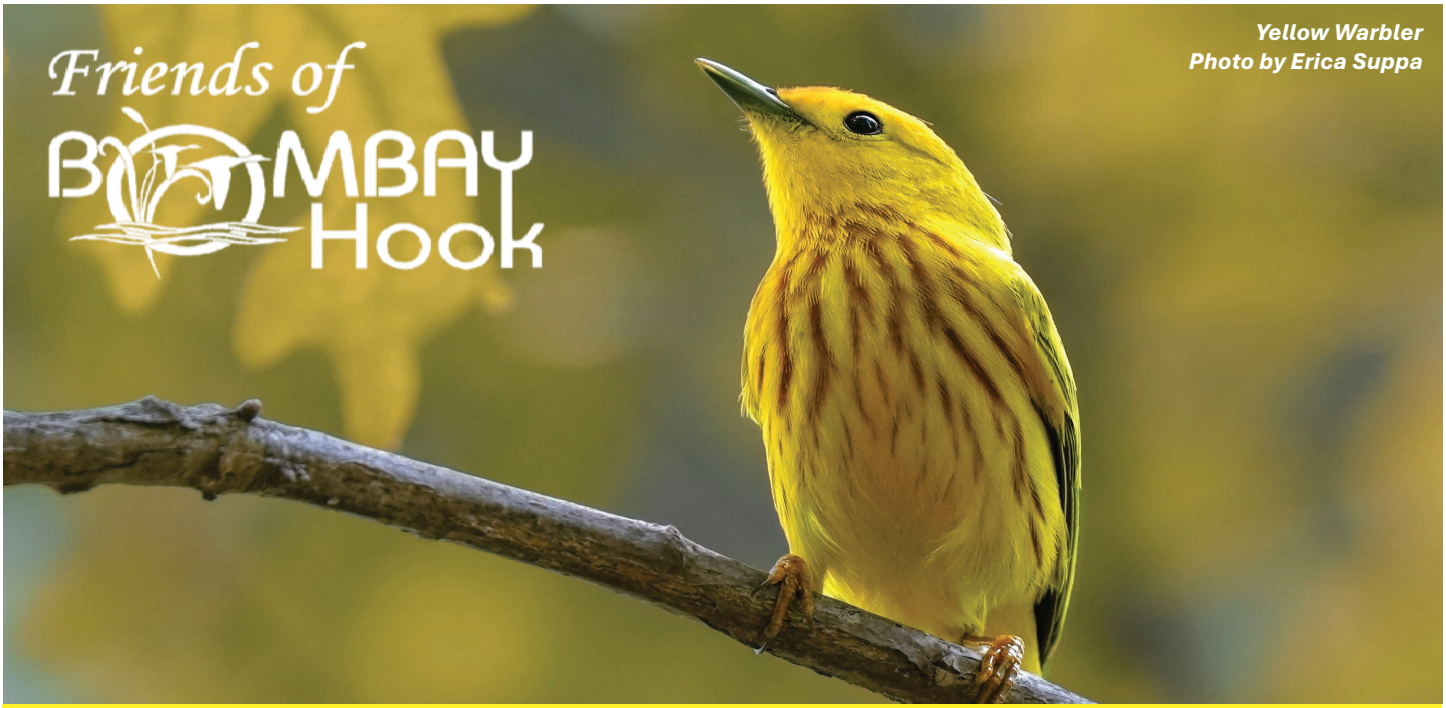


Yellow Warbler
Photo by Erica Suppa

Vol. 34, No. 4 **Newsletter** **Fall 2026**

What Will I See at Bombay Hook Today? by Mark Dever

While volunteering at the Visitor Services desk or the Blue Heron Gift Shoppe, you are sure to hear plenty of questions: W*hat are you seeing today? Why are there so few birds? I saw these on my last visit, why aren't they here today? Weren't there thousands more a year or two ago?* Let's explore some possible answers.

If you have been visiting Bombay Hook NWR for years, it is quite possible that some birds, mammals, or other wildlife that once seemed common are now much harder to find. There is no single explanation. One important distinction is whether a species has truly declined or has simply shifted to where and when it occurs.

Bombay Hook is a particularly dynamic refuge where about four-fifths of the landscape consists of tidal marsh, alongside freshwater impoundments, forests, fields, ponds, and mudflats. Sea-level rise, erosion, marsh subsidence, increased flooding, and saltwater intrusion are changing the marsh's vegetation and structure. These changes can disrupt the combination of nesting habitat, feed areas, and cover that some species need. The U.S. Fish and Wildlife Service specifically identifies sea-level rise and saltwater intrusion as threats to tidal-marsh habitat. Conditions in the freshwater impoundments also change as they are carefully managed, which is especially important for ducks, shorebirds, and wading birds. Refuge staff draw water levels down in spring to create mudflats for migrating shorebirds, then flood the impoundments in fall to provide food for ducks. Consequently, a location that was spectacular for one group of birds several years ago may look very different in another year or season.

Migratory bird populations are not necessarily declining at Bombay Hook just because there are fewer sightings. Bombay Hook is an important stopover rather than a place where birds live year-round. The timing of migration, weather, food availability, water levels, and conditions elsewhere along the Atlantic Flyway can all influence what you see on a particular visit. Wildlife may move to another part of the refuge, or beyond it, as changing marsh conditions can redistribute animals to nearby wetlands. Some species have genuinely changed in abundance or distribution, but that is different from simply not seeing them on a given day. To better understand those patterns, Bombay Hook monitors its wildlife, including migratory and wintering waterbirds, and conducts research on marsh conditions and wildlife status.

Your memory of Bombay Hook may be comparing different ecological periods. Current refuge materials describe Bombay Hook as increasingly important because high-quality habitat elsewhere along the Atlantic Flyway has been lost. In other words, the refuge remains highly valuable, and may even support more wildlife overall, while the mix of species you personally encounter can change substantially.

Taken together, these shifting habitats, migration patterns, and long-term ecological changes are just a few reasons you may encounter different wildlife from one visit to the next. So, what will you see at Bombay Hook today? When you review your notes, share memories with friends, or look through your photos, the answer may be many wonderful things, some familiar and some new. That is what makes Bombay Hook special. After your visit, stop by the Visitor Center and tell us what you found. Be sure to add your observations to the sightings board, too. We love hearing about your discoveries. See you next time!



This past year, Friends lost a dear friend with the passing of Barbara Estep Spangler. A steadfast volunteer at the Blue Heron Gift Shop and throughout the visitor center, Barb brought a warm smile and a strong work ethic to everything she did. She will be deeply missed by all who had the privilege of working with her and knowing her. Two years ago, I interviewed Barb for the Artist Spotlight column in the FOBH Newsletter. In her honor, we are reprinting that column below.

Artist Spotlight
Barbara Estep Spangler

Our "Artist Spotlight" series celebrates Bombay Hook NWR's beauty through the eyes of our local artists. We are delighted to feature Barbara Estep Spangler, a talented amateur wildlife artist, in this newsletter.

Barbara, or Barb as she is fondly known, is not just an artist but also a valued member of the Bombay Hook NWR community. You might have seen her volunteering in the Friends of Bombay Hook store, assisting customers, stocking shelves, and managing inventory. Her artistic talents shine when she's out on the refuge, capturing the beauty of wildlife in oils inspired by the vibrant colors of Bombay Hook NWR.

Barb grew up on an Eastern Shore farm in Maryland. She went to school for Nursing and started painting in the 1970s. Sherry Nelson, a talented artist and skilled birder, was a significant inspiration in Barb's early painting years. Barb recalled the hours spent birding in the field, studying species, and then in the studio painting with Sherry. This routine helped her develop her painting skills and knowledge of resident and migratory avian species. Additionally, Barb attended many art classes and workshops, such as painting and learning about birds. Later, Barb taught painting classes, even at her home in Townsend, DE. She recently commented that you always learn from your students' styles and mistakes when you're teaching.



Barb paints primarily birds but has also painted animals. Typically, she works from photographs taken of her subject or a background to be used in a painting. She then returns to the refuge to check that a particular field mark color in her subject is correct. Barb starts with the bird's eye, and then the painting develops. She commented that after the day's painting and you set your work aside, it always looks better the next day.

Barb said Bombay Hook has fantastic lighting. Painting makes her appreciate the range of colors outdoors. Fall at Bombay Hook is one of her favorite seasons, but she also enjoys painting the arriving spring warblers in their colorful breeding plumage.

Barb suggests that beginner artists know the bird species you're painting. She has traveled to many places to study birds she likes to paint, like tanagers in the tropics. She explained that you must be in nature to see everything. Barb encourages other artists to take classes and talk to other artists.

After talking to Barb about the refuge, you can feel her passion for Bombay Hook. She feels its importance as more and more people visit the refuge each year with their children who are interested in nature.

Bombay Hook 2026 Fall Projects

This fall, the Refuge will focus on four main project areas: habitat management, infrastructure improvements, public safety, and seasonal operations.

- **Controlled Burns** — This fall, prescribed burns are planned for the Fisher Tract in coordination with the Delaware Forest Service and the U.S. Fish and Wildlife Service fire crew. These burns will limit woody plant succession in field and meadow habitats and improve conditions for Northern Bobwhite.

- **Sluice Gate Upgrades** — The joint Ducks Unlimited and U.S. Fish and Wildlife Service sluice gate upgrade project is now expected to begin in late fall, following changes to funding and the construction schedule.

- **Allee House Barn Removal** — The barn behind the historic Allee House has deteriorated and now poses a safety concern, so it is scheduled for removal this fall. The barn is a more recent addition to the older colonial farmhouse.

- **Demolition Work** —The Refuge is planning this fall to bring in the demo crew to demolish the shed at Fisher Tract and buildings at Steamboat Landing.

- **Winter Christmas Tree Drop-Offs** — The Refuge does not plan to collect Christmas trees for recycling this winter, as it did last year. Any changes will be announced through official Refuge communications.

Bombay Hook NWR

2591 Whitehall Neck Rd., Smyrna, DE 19977
(302) 653-9345
https://www.fws.gov/refuge/bombay-hook

The Wildlife Drive is open daily from ½ hour before sunrise to ½ hour after sunset.
The Bombay Hook Visitor Center is open during the week from 8:00 am to 4:00 pm.
The Blue Heron Gift Shoppe (operated by Friends of Bombay Hook) is open M - F,
Saturday & Sunday from 9:00 am to 4:00 pm, depending on volunteer availability.
The Allee House remains closed until further notice.

Programs are free and no registration is necessary unless otherwise specified.
To request a reasonable accommodation please call the Refuge office at
(302) 653-9345 two weeks before the event.

Fall 2026 Calendar of Events

Saturday 10/31/2026 - Secrets of the Bombay Hook Forests (1:00pm)
Kesha Brauskill and Bruce Lantz will share some of the natural secrets of the forests of Bombay Hook NWR. Come learn what surprising secrets the forest has to offer. (Costumes are optional).

Saturday 11/14/2026 - Tri State Bird Rescue, Program Research Presentation (1:00pm)
Maria Maiura of Tri State Bird Rescue, will share with us some of the important research gathered on the bird species brought to them. In addition, she will explain the important techniques they have developed by working with birds affected by oil spills.

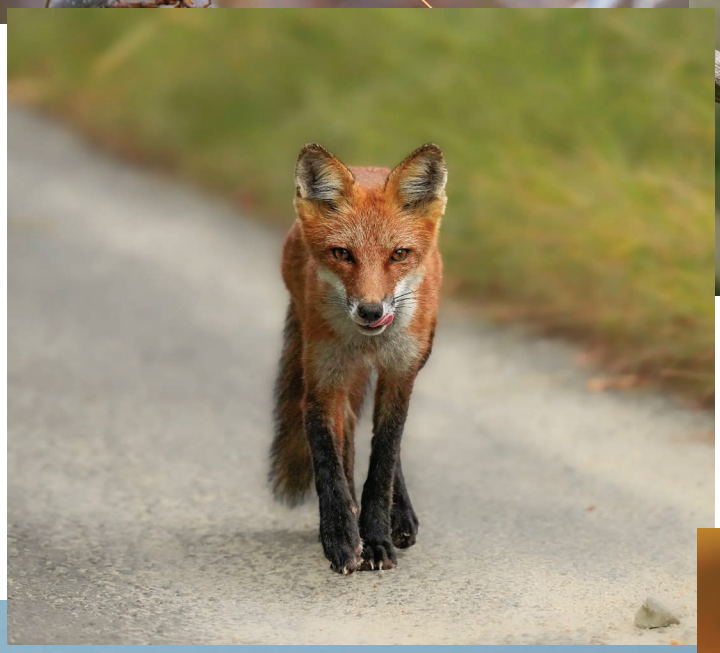
Saturday 11/21/2026 - Delmarva Fox Squirrel Program (1:00pm)
Danielle Minter, Non-game Mammal Biologist for Delaware Fish & Wildlife, will present a program on the history and current status of this very special Delmarva squirrel species.

WATCH FOR PROGRAM UPDATES ON OUR FOBH WEBSITE AND FACEBOOK THROUGHOUT THIS FALL!



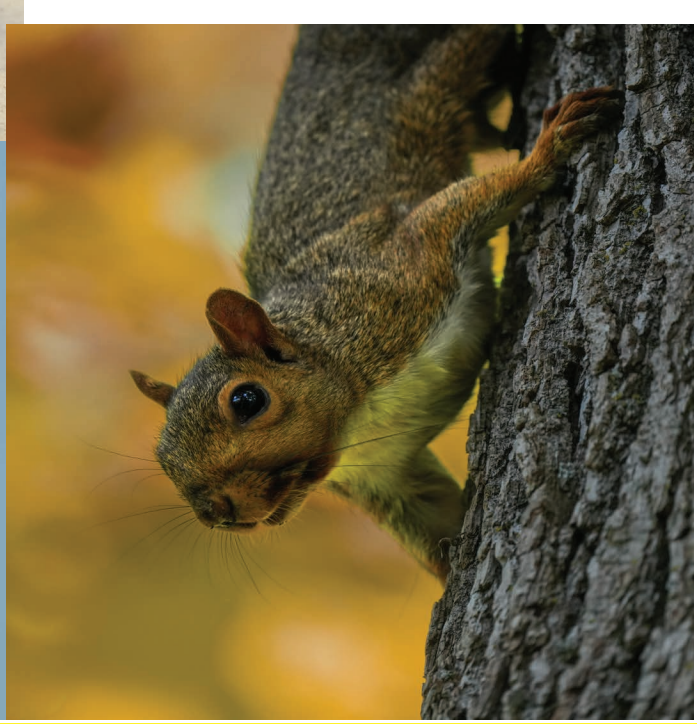
Bombay Hook NWR in the Fall





Photos by Erica Suppa





Bombay Hook's Keystone Plant: Goldenrod (*Solidago spp.*)

Goldenrod is a vital native perennial at Bombay Hook NWR. Blooming late in the growing season, it provides nectar and pollen when many other plants have finished flowering, while also supporting wildlife, stabilizing soils, and helping connect habitat across the landscape.



Overview and Delaware Species

- Goldenrod is a native North American perennial and one of the Refuge's most valuable late-season plants for wildlife, especially pollinators.
- Its flowering period typically runs from July until frost, extending food availability well into fall.
- Three native Solidago species are consistently documented in Delaware: Common Goldenrod (*Solidago altissima*), Early Goldenrod (*Solidago gigantea*), and Canada Goldenrod (*Solidago canadensis*).

Pollinator and Wildlife Value

- Goldenrod is a critical food source for more than 115 species of butterflies and moths.
- It also serves as a host plant for over 100 moth and butterfly species.
- More than a dozen native bee species rely on goldenrod nectar, and some depend on both its pollen and nectar.
- The rare Banded-hairy Mining Bee, a goldenrod specialist, has been found at Bombay Hook NWR.

Growing Conditions and Physical Traits

- Goldenrod grows best in full sun and prefers well-drained soil.
- It tolerates poor soil, making it well suited to meadows, roadsides, and other open habitats.
- Depending on the species and site conditions, plants may range from about 1 to 6 feet tall.

Environmental Benefits

- Goldenrod contributes to environmental stability by helping maintain healthy soils and resilient plant communities.
- Its deep, fibrous root system helps reduce erosion, preserve soil structure, and limit runoff.
- Because it thrives in meadows, roadsides, and other open areas, it helps link habitats across the Refuge landscape.
- Established goldenrod can also compete successfully with many invasive plant species.

Natural Resistance

- Goldenrod is generally pest-free under typical growing conditions.
- It is also commonly resistant to browsing by deer and rabbits.

Concluding Takeaway

Goldenrod is far more than a familiar late-season wildflower. At Bombay Hook NWR, it functions as a keystone native plant by sustaining pollinators, supporting wildlife, strengthening habitat connections, protecting soil, and contributing to the Refuge's long-term ecological resilience.



All Photos by BL

Jordan Carter Joins the Staff at Bombay Hook NWR



Have you met Jordan Carter? We're delighted to welcome her to Bombay Hook NWR as our new Volunteer Coordinator and Education Outreach Specialist. Jordan will share her time between Bombay Hook and Prime Hook NWR, helping connect volunteers, students, families, and visitors with the places and programs that make our refuges so special.

Jordan's connection to the outdoors began close to home on a Kent County farm, and her path has taken her from college in Maine to fisheries work in Alaska, Maine, and Delaware. Here in Delaware, she worked with DNREC at Kent County wildlife management areas and has also shared her knowledge with young people as an environmental educator and substitute teacher for Delaware Fish and Wildlife and local public schools. She brings curiosity, energy, and a welcoming spirit to her new role, along with plenty of ideas for helping visitors of all ages feel more connected to the Refuge.

Among the programs Jordan hopes to support or bring back are:

- The Junior Ranger Program and the Refuge's popular bus tours.
- More opportunities for homeschool groups and local public schools to visit the Refuge.
- Toddler Time programs with crafts, scavenger hunts, and story time.
- Community service opportunities for older students working toward school requirements.
- A youth archery program using equipment already available at the Refuge.

If you'd like to lend a hand with youth programs or share your experience with Refuge visitors, Jordan would be delighted to hear from you. Please contact her at (302) 555-2525.

2026 Bombay Hook NWR Headquarters Deer Hunts

This fall the Refuge will be closed on three dates for a headquarters deer hunt.

The Visitor Center will remain accessible; however, the Refuge will be closed to the public for visits, including all trails and the Auto Tour route, on the dates listed below.

Those dates are the following:

- Friday, October 9 — Muzzleloader
- Friday, November 13 — Shotgun
- Wednesday, December 16 — Antlerless

For visitor safety, please note that the South Upland, Fisher Tract, Steamboat Landing, and other designated Refuge areas will have active small game and archery deer hunting activities throughout the fall and winter. Hunting brochures are available at the Visitor Center, and the Refuge website provides hunting dates, regulations, and important hunter information.

The Refuge is not open to hunting on Sundays.



LOVE BOMBAY HOOK? ENJOY WORKING WITH PEOPLE?

BE A FRONT DESK VOLUNTEER!

- Bombay Hook National Wildlife Refuge is looking for volunteers to spend a few hours a week staffing our front desk, providing information to visitors, and selling passes. Orientation and training are provided!
- Please contact Project Leader Kate Toniolo at Kate_Toniolo@fws.gov or (302) 222-6309 if you are interested.
- The Friends of Bombay Hook (FOBH) is also seeking Blue Heron Gift Shoppe volunteers. Please contact gift shop manager Karen Dever at **fobh@comcast.net**.



Bombay Hook and Prime Hook NWR Intern Summary Report

This past year, Friends of Bombay Hook (FOBH) and Friends of Prime Hook (FOPH) made two biological summer internships possible by covering housing costs for Clare Crenshaw and Jaclyn Reifeiss. FOBH also supported Lauren Meyer, a volunteer intern who worked with field data. This report summarizes the work Clare and Jaclyn completed at Bombay Hook and Prime Hook NWR.

Jaclyn and Clare began working as piping plover field technicians on Fowler Beach in March. Their primary duties included monitoring beach-nesting birds such as Piping Plovers, Least Terns, and American Oystercatchers, as well as supporting habitat management. They helped construct the tern fence, build nest enclosures, and modify fencing to reduce nest predation. On a typical day at Fowler Beach, they resighted banded Piping Plovers and American Oystercatchers, counted Least Terns, and surveyed for eggs and chicks. These data help estimate productivity and track population changes among beach-nesting birds in Delaware.



Overall, the internship support strengthened beach-nesting bird monitoring, expanded Refuge field capacity, and helped advance habitat management, outreach, invasive species work, and horseshoe crab survey efforts across Bombay Hook and Prime Hook.

Volunteer Spotlight: Joël Martin



For more than 25 years, Joël Martin has dedicated himself to helping Bombay Hook NWR better understand, protect, and share its wildlife through hands-on fieldwork, careful monitoring, and public education.

Much of Joël's volunteer time has been spent in the field working with species-specific nest boxes. Over the years, he has cleaned Wood Duck and Bluebird boxes, documented nest records, and provided valuable data to Refuge biologists.

Joël also worked with the late DNREC biologist Wayne Lehman to band Barn Owl chicks each season at Bombay Hook NWR.

Since 2001, Joël has monitored and managed the Refuge's Purple Martin colony at its current location. Under his guidance and with improvements to nest structures, the colony has grown in both size and productivity: in Joël's first year, the colony offered 51 nest units; by the 2026 season, it offered 115 nest units.

Joël's Purple Martin colony summaries appear each fall in the FOBH Newsletter. As time allows, he has taught spring programs at the Refuge on managing Purple Martin colonies and invited the public to join his weekly Purple Martin nest checks.

Through decades of steady service, careful observation, and generous public outreach, Joël has become one of Bombay Hook NWR's truly special volunteers.

Managing Impoundment Water Levels at Bombay Hook HWR

As volunteers, we are often asked why the impoundment's water levels are so low or what the Refuge staff is trying to accomplish. Much has been written on this topic, and science continues to evolve week to week and year to year. Management priorities and strategies have changed since 1937 and will continue to change. This short article describes several factors currently involved in the difficult task of managing the impoundments at Bombay Hook.



Refuge staff manage the impoundments to provide "opportunity" for resident and migratory wildlife use. Their challenge is navigating weather, tides, and other factors that can impact their efforts.

A typical yearly management cycle begins with the Refuge impoundment full of water during the winter months. These freshwater impoundments contain abundant submerged plant material. In spring, Refuge staff begin lowering water levels. Changes first appear around the impoundment edges, and shallow flats open and expand as the weeks progress. By early summer, many previously exposed mudflats are covered with a carpet of green plant growth. The once-full impoundments are reduced to isolated pools and winding channels that direct water out through the sluice gates. Through the summer months, Refuge staff work to keep water levels low so the natural seed bed can germinate and grow in the rich sediment soils. In August, Refuge staff adjust the water control structures to allow impoundment water levels to rise again. Shallow water flats return as water collects through the fall and into winter. The annual cycle of drawdown and replenishment is managed to provide habitat opportunities for waterfowl, shorebirds, wading birds, and many other forms of wildlife that use the Refuge impoundments.

To understand how staff manages those water levels, it helps to review the hydrology of each impoundment at the Refuge:

- **Finis Pool** – collects rainwater from the surrounding farm fields, the forest watershed, and Finis Branch west of Route 1.
- **Shearness Pool** – collects water from open fields and the narrow Refuge forest watershed surrounding this impoundment, as well as from a managed spillway from Finis Pool.
- **Raymond Pool** – collects water from the fields and meadows to the west, as well as from a narrow ditch that feeds a small amount of water from Shearness Pool.
- **Bear Swamp** – collects water only from the surrounding fields and forest habitat.

Only Shearness Pool, Raymond Pool, and Bear Swamp drain into the surrounding tidal salt marshes. Water control structures in their dike walls manipulate this drainage.

If all works according to the management plan, migrating fall waterfowl find opportunities to forage and rest as they pass down the Atlantic Flyway. Some will stay through the winter, while others will stop briefly and then continue farther south. In late winter, waterfowl use the Refuge impoundments as gathering or staging areas as they move north to Arctic breeding grounds. In late spring, the northbound shorebird migration begins, with many birds feeding on important horseshoe crab eggs along the Delaware Bay shoreline. Some of these birds also use the shallow Bombay Hook NWR impoundment edges and mudflats for roosting and feeding, particularly at high tide. Through the spring, the Refuge impoundments provide opportunities for a variety of resident wildlife to breed and forage in the shallow pools, flats, and channels. In August and early September, these bodies of water again provide opportunities for southbound shorebirds to roost and forage. As the impoundments begin collecting water in the fall for migrating waterfowl, the yearly cycle starts again.

(Continued on Page 10)

Managing Impoundment Water Levels at Bombay Hook NWR (*Continued from Page 9*)

Of the many challenges Refuge staff face in managing impoundment water levels, weather can have some of the greatest impacts. In June 2015, Bombay Hook NWR received 10 inches of rain, almost a quarter of its annual average of 45.3 inches. Weekly summer thunderstorms and seasonal hurricanes can make it challenging to draw down impoundment water levels. Conversely, fall weather events can accelerate the filling of these same impoundments. The Refuge does not feel the impact of hurricanes every year. When it does, as with Hurricane Sandy in October 2012, storms can pass very close to the Refuge, bringing winds of up to 70 mph. An even more extreme example occurred in 2004, when four major hurricanes—Ivan, Gaston, Charley, and Jeanne—affected Kent County between August and September.



All Photos by BL

More recently, from 2024 to the present, the Refuge has had little hurricane activity during the summer months. Without those summer rains, there is less standing water in the Refuge heading into winter.

Fall is typically the wettest season, when the Refuge receives 27% of its annual rainfall. This usually supports the rising impoundment of water levels. However, an abnormally dry summer or fall season, including abnormally dry periods (D0) or a moderate drought (D1), can make raising water levels very challenging. In 2002 and 2012, Kent County experienced severe drought conditions (D2) that affected Refuge habitat beyond the impoundments.

Wind direction and tides can complicate or help manipulate impoundment water levels. Refuge staff use these natural elements to their advantage when managing the impoundments.

In the winter months, the Refuge impoundments may provide waterfowl opportunities, but a December cold snap can freeze over the freshwater impoundments. These weather conditions force many waterfowl species further south or to the tidal bays for more open water.

Seasonal timing alone cannot manage water levels. The physical infrastructure that holds, drains, and directs the water must also be kept in working condition.

Each impoundment has embankments and water control structures that must be maintained to contain and regulate water levels. All require periodic maintenance, repair, or replacement:

- Beaver activity around water control structures can block the water flow. Yearly maintenance is typically needed to clear the stick debris from intake grates.
- Woody plant growth along the impoundment dikes is controlled to maintain structural stability.
- In spring, spawning fish species like carp try to enter the freshwater impoundments through the water control structures. If left unchecked, these fish will destroy the aquatic vegetation that is important for wintering waterfowl. Maintaining the grate screens can be challenging for Refuge staff, but it keeps much of the carp problem out.
- Over time, sediment buildup can prevent a uniform draining of the impoundment. Staff periodically clear this sediment, and they must maintain the channels. These clear channels also allow problem fish to flush out and minimize the death of trapped fish.

Finally, Refuge staff must plan for future changes. Rising salt marsh elevations throughout Bombay Hook NWR will present new challenges for draining the impoundments each season. Refuge staff must also consider the uncertain impacts of cyclical and long-term climate warming in long-term impoundment planning. In summary, while managing all of these moving parts, Refuge staff do an incredible job providing habitat opportunities for wildlife at the Refuge impoundments.

Insect Spotlight: Return of the Bees

By Kate Toniolo



Swamp Rose Hibiscus in Bloom at Shearness Pool

During my first summer at Bombay Hook National Wildlife Refuge in 2022, I was taken aback by the bloom of Swamp Rose Hibiscus (aka Swamp Rose Mallow) in the freshwater impoundments. Having just moved from Hawaii, I didn't expect to see such a familiar flower, even if it wasn't quite the same as the Tropical Hibiscus that dot the islands. Since that time, the White And Pink Hibiscus have become one of my favorite sights on the refuge in July and August, a welcome visual respite during a time of extreme heat and biting insects. Even more exciting to me, though, was discovering the Hibiscus Turret Bee (*Ptilothrix bombiformis*), the pollinator of the Swamp Rose Hibiscus. When our new Visitor Center was being built, the bees set up shop in the bare, packed dirt around the building. They are solitary bees, meaning they don't nest in a hive like honeybees. But they do like to nest near each other, with many of them building nest holes in close proximity.



Swamp Rose Hibiscus at Finis Pool



Several Hibiscus Turret Bee Nest Holes (and piles of excavated mud) Next to a Visitor Center Walkway

Their nest-hole construction is fascinating, with females collecting water to soften the ground and create the hole. At the bottom of the hole, she will deposit an egg and hibiscus pollen for the larva to eat after hatching. She will then either seal the nest hole off or add another "cell" for an additional egg/larva before sealing it off with a cap of mud. The edges of these holes often stick up, resembling dirt turrets or chimneys, which is why they are also referred to as Chimney bees.

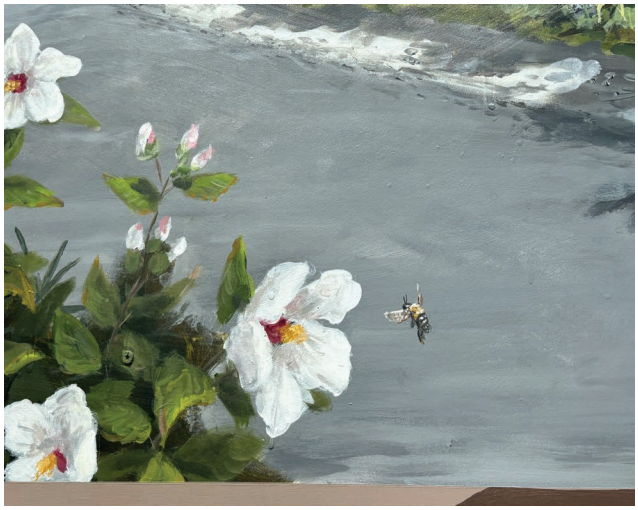


Female Hibiscus Turret Bee Excavating a Nest Hole

In the years I've been here since, it's become a question of which I will see first, the bees or the open blooms. (*This year it was the bees*) They still like to nest around the Visitor Center even though there's a lot more grass cover than a few years ago. They especially like to collect their water in the drain hole by the staff parking lot, raising the blood pressure of staff with bee phobia. However, like

(Continued on Page 12)

Insect Spotlight: Return of the Bees *(Continued from Page 11)*



similar bumblebees, the Hibiscus Turret Bee is not aggressive, and stings are extremely rare.

I hope during your next visit in the months of July and August--while safely in your air-conditioned car away from the deer-flies, greenheads, and mosquitoes--you will take some time to enjoy the beauty of the Swamp Rose Mallow and its fuzzy and exciting pollinator. If you miss it in the summer, you can always visit the Bombay Hook mural in the Town of Smyrna (at the intersection of Commerce and Main Street) and see where artist Michael Rosato included the blooms and the bees in the visual story of the Refuge.

Hibiscus and Bee in the Bombay Hook Mural by Michael Rosato.

Purple Martins at Bombay Hook NWR 2026

Joël Martin reports that the Refuge Purple Martin colony was nearly at capacity in 2026, with 113 pairs using nearly all of the 116 nest spots available. The birds produced 550 eggs, with 450 chicks hatching, matching the 81% hatching average for the past 25 years. However, the colony yielded only 324 fledged birds, which is below our historic average of 70% of hatched birds fledging. In mid-July, chicks are growing fast and approaching their time to fledge the nest. Near-record daytime temperatures at the Refuge during this time may have contributed to the season's higher loss. High temperatures put additional stress on large nest clutch sizes (5-6 chicks), as the chicks try to stay cool in an ever-shrinking nest space. Small, undersized nestlings will quickly perish if larger nest mates don't fledge quickly. Every breeding season has its own set of challenges.





Joël has offered Purple Martin workshop programs at Bombay Hook NWR; watch for them in the future. He is also a great resource for advice on starting your own colony or attracting Purple Martins to an existing house.

This season marked Joël's 26th year documenting and managing the Refuge Purple Martin colony, while also providing valuable research data. The Friends of Bombay Hook support the colony and deeply appreciate Joël's hard work and dedication. The colony remains an important Refuge success story, connecting long-term stewardship, public education, and practical conservation for one of the region's most distinctive nesting birds.





J.N. "Ding" Darling NWR
By Julie Memmelo

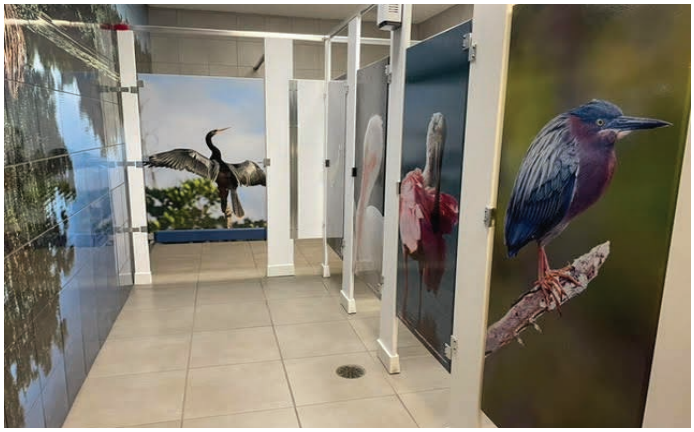
One of my favorite places in the world is Sanibel Island and one of my favorite spots on Sanibel is J.N. "Ding" Darling NWR. The refuge is sub-tropical and part of the largest undeveloped mangrove ecosystem in the US. It is a fantastic spot for migratory birds.

The refuge property was set aside in 1945 and renamed in 1967 for the man responsible for protecting it from development, Jay Norwood Darling. Their Visitor Center is a must stop with lots of information, displays, a gift shop, and the coolest bathroom ever! The ladies room stall doors are all birds including my favorite - Green Heron!

The refuge is closed on Fridays. The four-mile Wildlife Drive includes trails, overlooks, pull-off areas and an observation tower.



All Photos by Julie Memmelo

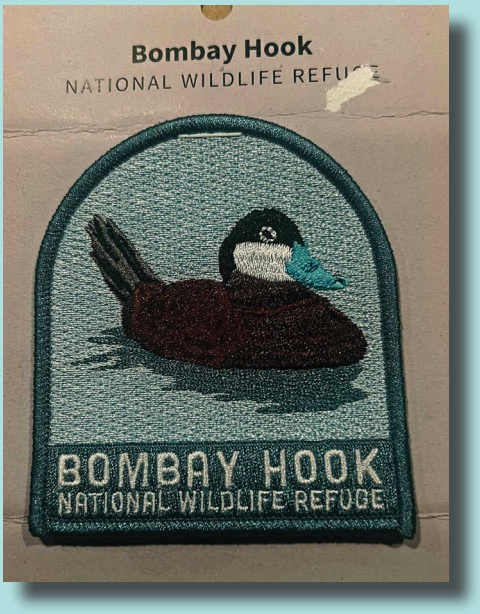


A New Refuge Patch

A new Bombay Hook NWR patch is now available for patch collectors and visitors looking for a fresh Bombay Hook look.

The 2023 Hooded Merganser BHNWR patch has sold out and will not be produced again.

The new patch design features a sporty Ruddy Duck drake. The Blue Heron gift shop reports ample stock for the fast approaching holiday season.





Hello Friends!

Cooler temperatures are on the way, and we are getting the store ready for fall!

We are selling down our summer merchandise so we can bring our fall products onto the floor. At the same time, we are onboarding new volunteers and working hard to keep the store covered. Last year, we lost several volunteers, and although we were able to fill a few spots, we still need more help in the store and at the front desk. If you can volunteer, please email Karen at **fobh@comcast.net**.

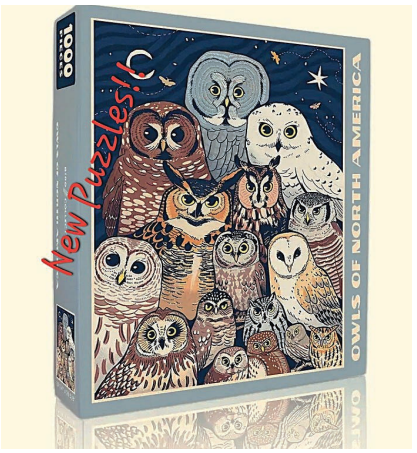
When you visit, remember: **SHOP SMALL...SHOP LOCAL...SHOP NON-PROFIT**



I would also like to give a special shout-out to our new store volunteers, Theresa, Gina, and Samantha. We are happy to have Rachel back helping us, too!

We are looking forward to a wonderful fall season and hope to see you in the store soon!

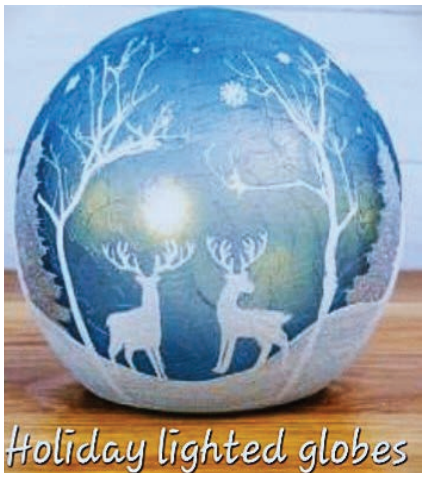
Karen Dever, Store Manager



Friends of Bombay Hook













HOW CAN YOU SUPPORT FRIENDS???
Donate or Become a Member!

Since 1990, the **FRIENDS OF BOMBAY HOOK (FOBH)** have been working with Bombay Hook NWR in supporting the message of conservation! Without memberships, donations, and proceeds from the Blue Heron Gift Shoppe, we surely would not exist today. Throughout the years, we have been able to aid the Refuge by supporting environmental education programs, fund transportation for field trips to Bombay Hook for school children, purchase audio/visual equipment, secure grants, paid for internships, purchased new chairs for the auditorium and for outside programs to name a few. Because of our supporters, we continue with our mission!

To donate or become a member, please fill out the form on the right and mail your check or money order to **FRIENDS OF BOMBAY HOOK, 2591 Whitehall Neck Rd., Smyrna, DE 19977**.

Or go to **https://www.friendsofbombayhook.org** and follow the prompts to either donate or obtain/renew membership. And you can always stop by the Visitor Center during gift shop hours to do it in person! We would love to see you! **The Blue Heron Gift Shoppe** is operated by volunteers and is only open when the volunteers are present . If you are uncertain of days and hours, please call ahead .

FOBH Membership Benefits include voting privileges at the FOBH Annual Meeting; 10% discount on merchandise sold at Blue Heron Gift Shoppe; and eligibility to join the Dover Federal Credit Union **(https://www.doverfcu.org).**

FOBH Memberships and **Donations** help support and finance Refuge programs, and are tax deductible.

Our Mission Statement

The **Friends of Bombay Hook (FOBH)** is a non-profit corporation (501c3) working in conjunction with **Bombay Hook NWR** and the **U.S. Fish & Wildlife Service (USFWS)**. It supports and enhances educational and recreational programs at Bombay Hook, provides volunteer services and financial assistance and serves as a link between the Refuge and the public.

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www.friendsofbombayhook.org

FOBH MEMBERSHIP / DONATION APPLICATION

Submit completed application at the Visitor Center (payment by cash, check/money order, or credit/debit card), or by mail (with a check/money order) to *Friends of Bombay Hook; 2591 Whitehall Neck Rd.; Smyrna, DE 19977,* or go to https://www.friendsofbombayhook.org and follow the prompts to either apply/renew membership or make a donation online.

☐ **Membership** ☐ **Donation**

Date _____

Name _____

Address _____

City, State, Zip _____

E-mail _____

Newsletter Preference:
☐ **Print** ☐ **E-mail (require E-mail address)**

Membership Plan (Check One)	**Amount**
☐ **Student (must be under 18)**	**$ 5.00**
☐ **Individual**	**$ 15.00**
☐ **Family**	**$ 20.00**
☐ **Sponsor****	**$ 25.00**
☐ **Sustaining**	**$ 50.00**
☐ **Corporate***	**$ 100.00**
☐ **Lifetime****	**$ 200.00**

***Corporate sponsorship includes link to FOBH website; no voting privileges or store discount.**
****Sponsor and Lifetime memberships include family.**

Donation (Check One)	**Amount**
☐ **Miscellaneous/General**	**$**_____
☐ **Allee House**	**$**_____
☐ **Memorial for:**	**$**_____

_____

Method of Payment

☐ **Cash (payment at Visitor Center only)**
☐ **Check/Money Order (payment by mail or at Visitor Center)**
☐ **Credit/ Debit Card (payment at Visitor Center only)**