

FRIENDS OF BOMBAY HOOK

Newsletter



Credit: Karen Dever



Vol. 26, No. 4
September 1, 2016

Our Mission Statement:

The Friends of Bombay Hook is a not-for-profit corporation working in conjunction with Bombay Hook NWR and the U. S. Fish and Wildlife Service. 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.

We need Friends volunteers to operate our Blue Heron Gift Shoppe and to assist with other events at the Refuge for the Fall season.

If you are interested, please come to our Volunteer Orientation on Saturday September 3, 2016 at 10:00 a.m. where we will discuss volunteer opportunities at the Refuge. Training will be provided.

If you are unable to attend and want to volunteer, please contact us either on Facebook or our phone number listed below.

2016 Newsletter Schedule

<u>Newsletter Release</u>	<u>Articles Due</u>
November 1	October 7

The next release date of the Friends of Bombay Hook Newsletter is November 1, 2016.

Articles are due on or before October 7, 2016.

Published Quarterly by
Friends of Bombay Hook, Inc.
2591 Whitehall Neck Road
Smyrna, DE 19977
(302) 653-8322

<http://www.friendsofbombayhook.org>



The President's Corner

Hello Friends,

I just wanted to take a moment to introduce myself and to update you on the Friends group. My name is Mark Dever and I have volunteered for several years and served on the board for the past 2 years most recently as Vice President. On August 8th the board voted for me to serve as President for the remainder of Linda Osiecki's term. I will continue until June 2017 at which time nominations and elections will take place for President, Vice President, and a few at-large board positions.

Our primary purpose, as always, is to support and enhance the educational and recreational programs at Bombay Hook, provide volunteer services and financial support, and to serve as a link between the public and the Refuge.

A few Friends highlights from the past year include the opening of the Blue Heron Gift Shoppe, supporting the new Junior Ranger and Junior Refuge Manager programs, instituting a program to help fund transportation for school field trips to the Refuge, and purchasing new chairs and a large screen-smart TV for enhanced presentations and as a connection to programs and webinars online. We are in the initial stages of developing a movie program where you can learn about various aspects of nature and wildlife through film or documentary and enjoy the Refuge before or after the showing. We are also looking into programs where you can tour the Refuge with an expert in various fields of study by utilizing the new tour bus that the Refuge recently acquired. A perennial favorite (pun intended) at the Refuge is the Native Plant Symposium which will be back for the twelfth year on October 22nd!

As you can see a lot has been done but there is so much more to do! All of these activities require volunteers as well as financial support. Our main source of income is the Gift Shoppe which is run solely by volunteers. Thank you to all who have helped to make this a very good sales year to date. Many refuges across the country are beginning to rely more and more on volunteers as they face budget constraints. Bombay Hook is a gem on the East Coast and needs the continued support of volunteers from our Friends members and the community to move forward and make your experience better on each and every visit.

Thank you for your continuous support of Friends of Bombay Hook!

BIRD NOTES

By Franklin Smith

April 1, 2016 through July 31, 2016

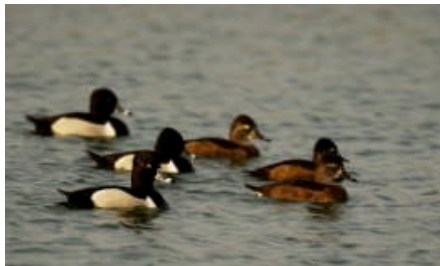
Weather for the report period included cool, wet conditions through May with no prolonged drought periods. Extreme temperatures varied from below freezing on April 10 to a prolonged heat wave during mid- and late-July. Thunderstorms

generally provided enough precipitation to maintain moist soil conditions within Refuge impoundments which were ideal for shorebirds.

The last small flock of Snow Geese (12 birds) was recorded on April 12 prior to the arrival of most shorebirds. Ruff/Reeve were observed on several occasions during April and May in Raymond and Shearneck Pools. Marbled Godwits were frequent visitors to the impoundments during April and May and began showing up later during their southern migration in July. Both Wilson's and Red-necked Phalaropes were recorded during April and May. Flocks of up to 250 Avocets, 400 Dowitchers, 700 Black-bellied Plovers (with a few Golden) were also noted. Black-necked Stilts produced young from several nests in Bear Swamp.



Wilson's Phalarope
Credit: Tom Koerner/USFWS



Ring-Necked Ducks
Credit: Ryan Hagerty/USFWS

Large numbers of spawning Carp in the Spring and expiring Carp during late July provided easy access to Bald Eagles looking for a meal. Nineteen birds were sighted during one memorable day in July. Although most migrating waterfowl had vacated the premises by mid-April, significant numbers of Shovelers, Ring-necked Ducks, Ruddy Ducks, and a smattering of Pintails and Wigeon could be seen well into May. A Gadwall brood was observed in Shearneck Pool on June 13. Hooded Mergansers were seen into June which could indicate possible Refuge nesting by this species. Resident Canada Geese continue to thrive.

A front page article in the *News Journal* described impacts of this Spring's weather on nesting Purple Martin colonies within the state. Refuge volunteer Ray Gingrich described how he and Joel Martin monitor the nest boxes and compile detailed records for each nesting year at Bombay Hook. This year's nesting activities were apparently delayed by the cool spring weather. Biologist Greg Breese (Delaware Bay Estuary Project) credits the cool weather conditions as the likely cause in the delay of Horseshoe Crab spawning along the Delaware Bay shore. Mr. Breese stated that the shorebirds, which feed on Horseshoe Crab eggs, appeared to have made adequate weight gains during their stay on the Delaware Bay to continue their journey to their nesting grounds.

Refuge Biologist Dan Stotts reported pairs of Bobolinks in two different places on the Refuge in breeding plumage during early July. Nesting records for Bobolinks in Delaware are very rare, although large numbers of the birds pass through the area during migration. Hopefully, a few birds will find the fallow fields of Bombay Hook attractive as nesting habitat in future years.

Friends of
BOMBAY
Hook
Newsletter

is published quarterly by "Friends of Bombay Hook, Inc. (FOBH)", a non-profit 501(c)(3) organization working in conjunction with Bombay Hook NWR and U.S. Fish and Wildlife Service. FOBH provides financial and developmental support for Environmental Education programs at the Refuge and in communities throughout the region.

Our readers are encouraged to share comments, provide articles for publication and/or suggestions regarding the Refuge as well as notifying us of address changes.

Please direct communications to:

Friends of Bombay Hook, Inc.
2591 Whitehall Neck Road
Smyrna, DE 19977
Phone: (302) 653-8322
Fax: (302) 653-0684
email: fobhmembership@idv.net
<http://www.friendsofbombayhook.org>



Hello Friends!

Hope everyone had a great sizzling summer! We are back to having the Blue Heron Gift Shoppe open starting September, through the middle of December, on most days M-F 10:00 a.m. - 2:00 p.m. and on weekends from 9:00 a.m. - 4:30 p.m. Hours are subject to change upon volunteer availability.

We still have 2015 America the Beautiful Quarter merchandise on hand...get yours before inventory runs out! Once it's gone, it's gone! We have plenty of our beautiful Salt Marsh T-shirts to finish out your summer's end wardrobe. Our shirts are designed by Marsha Holler of Great Graphics and we are quite proud of having a one of

a kind T-shirt to offer to our visitors.

I have spent the summer stocking up on books and other favorite items. We have also added more of those ever so popular folding guides that snuggle right into your pocket, field bag or glove compartment.

Looking forward to serving you this fall in the Blue Heron Gift Shoppe!

The Blue Heron Gift Shoppe is operated by Friends of Bombay Hook and is staffed by our wonderful volunteers. We need more volunteers! Please consider us as your volunteer opportunity and come out to the next Volunteer Orientation to find out more:

September 3, 2016 Volunteer Orientation (10:00 a.m. – 12:30 p.m.) - A meeting about volunteer opportunities will be held in the auditorium. The meeting will describe the different types of volunteer opportunities, upcoming activities, and the latter part of the session will be a tour of the Refuge. Individuals are needed to staff the Visitor Center on weekends and weekdays from September through November. Volunteers are also needed to provide Environmental Education programs for school groups, conduct Refuge tours, provide trail and landscaping maintenance, and help with highway cleanups. Training is provided.

Happy Shopping!

Karen Dever
Store Manager

Bird Walks with the Friends



If you are interested in birds, please attend the Friends bird walks. These outings are open to all adults and teens from new beginners to highly experienced birders and are led by the Friends Bird Club. This is not a typical "club". There are no dues or program meetings; we just go birding! Some

people go regularly, others go out only once or twice a year.

This is a great opportunity to learn from veteran birders or to share your knowledge with others. You do not have to be a member of the Friends to participate.

September marks the beginning of the Friends birding season. Fifteen outings are planned, with some on the Refuge and others throughout the region. We will kick off the season on Sunday morning, September 25, with a trip to our sister refuge, Prime Hook in Milton, DE.

We will be back at Bombay Hook October 9 for late migrants and early waterfowl. On November 13, the outing starts at Bombay Hook and weaves its way south to the Little Creek Wildlife Area looking for sparrows.

There are two trips in December: to Blackwater National Wildlife Refuge near Cambridge, MD on December 3 and back at Bombay Hook for an afternoon walk on December 18 to look at waterfowl.

January 1 is the Bird Club's traditional trip to the Indian River inlet and nearby areas. What a wonderful way to kick off the New Year!

Please join us! Dress for the weather and wet paths. Bring binoculars, water, snacks and bug spray depending on the time of year. A birding field guide can be very helpful.

If you are a beginner, we can show you how to use binoculars correctly, help you learn to spot and identify birds, and answer your questions. We are casual group and easy to be with.

Details about the bird walks, including where to meet, at what time and important last minute changes, are sent out via the Friends Bird Club email list. To be added to this list (used only for the Bird Club) or if you have any questions, please contact Hannah McLennan at hmclennan@comcast.net.

We hope to see you!





**Migratory Bird Treaty Centennial
1916-2016
Celebrating 100 Years of Bird Conservation
Conserving Today's Birds for Tomorrow**

Migratory birds are a common thread that connects the United States, Canada, and many other countries. The United States is proud of the successful conservation of its wild birds, especially through the four migratory bird treaties (or conventions) we hold with Canada, Mexico, Japan, and Russia that protect populations of shared bird species. There is perhaps no better example of international collaboration than our efforts to support healthy and sustainable migratory bird populations beyond our borders.

In 1916, the world was in the midst of World War I. Conflict between nations was the headline of the day. Overuse of natural resources was the norm, whether it was unsustainable hunting, habitat destruction, or feathers for millinery trade. On May 25, 1900, U.S. President William McKinley signed the Lacey Act into law. Among other things, this made it a federal crime to poach game in one state with the purpose of selling it in another or to transport illegally captured animals across state lines. On March 14, 1903, U.S. President Teddy Roosevelt signed an executive order establishing Pelican Island in Florida as the first federal bird reservation. In 1911, Roosevelt established a network of 55 bird reservations and national game preserves for wildlife, the forerunner to the National Wildlife Refuge System.

The 1913 passage of the Weeks-McLean Act established federal regulation of migratory bird hunting and prohibited importation of wild bird feathers for women's fashion. This was the first U.S. law ever passed to regulate the shooting of migratory birds—a tremendous milestone.

Then, on September 1, 1914, the last known Passenger Pigeon, Martha, died in the Cincinnati Zoo. This is a bird that was once the most abundant land bird in North America, with an estimated 3-5 billion individuals (that means that at one time approximately one out of every four birds in the United States and Canada was a Passenger Pigeon). But habitat loss and human disturbance of virtually every nesting colony drove it to extinction in about 30 years.

Amidst this conflict and extinction, partners in both countries saw the overwhelming need and created an international agreement to cooperatively manage and protect birds that migrate internationally. It started in 1916, when the U.S. and Great Britain (on behalf of Canada) entered into the Migratory Bird Treaty – known in Canada as a Convention – to protect our shared resources. The Treaty for the Protection of Migratory Birds was signed in Washington, D.C. on August 16, 1916.

The Treaty unites the efforts in the United States and Canada to protect birds that cross our international boundaries. It connects our two countries with Federal, State, private, non-government, tribal, and international partners, who share our long, successful history of conserving, protecting, and managing migratory bird populations and habitats. And importantly, the treaty was the foundation for significant achievements in bird conservation since then. In 1917, Canadian Parliament passed the Migratory Bird Convention Act. In 1918 the U.S. Congress followed suit, passing the Migratory Bird Treaty Act. In subsequent years, the United States signed similar treaties with Mexico (1936), Japan (1972), and Russia (1976).

The 2016 Centennial Celebration of the Migratory Bird Treaty provides us an opportunity to learn and educate about migratory birds and to understand the importance of migratory bird conservation. As the celebration continues you may want to get involved with citizen science projects, some of them are: eBird, Celebrate Urban Birds, Project FeederWatch, Great Backyard Bird Count, Nest-Watch, and YardMap. Attached is a sheet with more information about the citizen science programs.

For more information about the Migratory Bird Treaty and the celebration, check out the website: www.fws.gov/birds/MBTreaty100.

Citizen Science Projects

eBird



Susan Spear/Cornell Lab

www.ebird.org

eBird offers innovative online tools for birders to keep track of their own lists and contribute their bird sightings for use in science and conservation. Birders, scientists, and conservationists can collect, manage, and store their observations in eBird's globally accessible database—or use graphing, mapping, and analysis tools to better understand patterns of bird

occurrence and the environmental and human factors that influence them. This real-time data resource produces millions of observations per year from across the hemisphere. eBird is a joint project of the Cornell Lab of Ornithology and National Audubon Society.

Celebrate Urban Birds



Aspira

www.celebrateurbanbirds.org

Celebrate Urban Birds is a bilingual project focused on engaging underserved urban and rural residents in science, environmental education, and community activities related to birds. Participants observe a small, defined bird-watching area for 10 minutes and report on the presence or absence of 16 species of birds. The project assesses the value of green spaces for birds, ranging in

size from a potted plant to half a basketball court. Launched in 2007, Celebrate Urban Birds has partnered with more than 10,000 community organizations and distributed more than 300,000 educational kits in English and Spanish. The project offers mini-grants once a year to support community events involving birds, habitat improvement, and the arts. Seasonal Challenges, including the annual Funky Nests in Funky Places Challenge, offer participants opportunities to share their photos, art, videos, stories, and poems, and win prizes.

Project FeederWatch



Maria Corcacas/PFW

www.feederwatch.org

Each year, 15,000 people count birds at their feeders for Project FeederWatch. With more than 1.5 million checklists submitted since 1987, FeederWatchers have contributed valuable data enabling scientists to monitor changes in the distribution and abundance of birds. Using FeederWatch data, scientists have studied the influence of

nonnative species on native bird communities, examined the association between birds and habitats, and tracked unpredictable movements in winter bird populations. Participants gain from the rewarding experience of watching birds at their feeders and contributing their own observations to reveal larger patterns in bird populations across the continent.

Great Backyard Bird Count www.gbcb.birdcount.org



Carlin Tedesco/GBBC

Begun in 1998, the four-day Great Backyard Bird Count was the first citizen-science program to collect and display bird observation data online on a large scale. Today, the Great Backyard Bird Count is one of the most popular annual events among bird watchers. It has been merged with the eBird online checklist program to make the information gathered even more useful to science and to allow people to take part anywhere in the world with an Internet connection. The Great

Backyard Bird Count is a joint project of the Cornell Lab of Ornithology and National Audubon Society with Canadian partner Bird Studies Canada.

NestWatch



Charles Eldermire/Cornell Lab

www.nestwatch.org

By finding and monitoring bird nests, NestWatch participants help scientists track the breeding success of birds across North America. Participants witness fascinating behaviors of birds at the nest and collect information on the location, habitat, bird species, number of eggs, and number of young. Scientists use these data to

track the reproductive success of North American breeding birds across the continent. Launched in 2007 with funding from the National Science Foundation, NestWatch has collected more than 150,000 nesting records. Combined with historic data, this information will help scientists address how birds are affected by large-scale changes such as global climate change, urbanization, and land use.

YardMap



www.yardmap.org

The YardMap Network is an NSF-funded project that builds online communities to investigate the impacts of bird-friendly and carbon-neutral practices in backyards, community gardens, and parks. Participants will locate their yards or parks on a Google maps interface, then document their sustainable practices using simple point n'

click digital tools to create data maps. People document practices such as adding native plants, putting up bird feeders, installing a solar panel, or reducing lawn size. By providing access to rich media resources for learning about sustainable practices and enabling people share their maps and practices with each other, YardMap strives to create online conservation communities engaged in real life sustainable practices. The YardMap Network works closely with the National Audubon Society, U.S. Fish and Wildlife Service, Roger Tory Peterson Institute, Empire State College's online alumni program, and the American Community Gardening Association, as well as a team of advisors including Doug Tallamy, Steve Kress, Justin Dillon, and Simon St. Laurent.

Spring Bird Roundup at Bombay Hook NWR 2016

SPECIES	Bear Swamp	Finis & Allee House	Sheariness Pool	Raymond Pool Loop & Trail	Total
	A1	A2	A3	A4	
Canada Goose	46	4	17		67
Wood Duck		2			2
Mallard	3	1	20	5	29
Double-crested Cormorant			7	3	10
Great Blue Heron	9	4	5	12	30
Great Egret	8	3	11	36	58
Snowy Egret			1	4	5
Little Blue Heron		1			1
Green Heron	1	2	2	3	8
Black-crowned Night-Heron	5				5
Black Vulture		1			1
Turkey Vulture	1	11	10	5	27
Osprey	3	2	1	2	8
Bald Eagle		4	9	22	35
Red-tailed hawk		1		1	2
Northern Bobwhite	3	4			7
Clapper Rail	2			2	4
American Coot		1			1
Black-bellied Plover	5		38		43
Semipalmated Plover	60			1	61
Killdeer	3			2	5
Black-necked Stilt	8		4	7	19
American Avocet			21		21
Greater Yellowlegs				1	1
Yellowlegs			21		21
Solitary sandpiper			1		1
Willet	20				20
Semipalmated Sandpiper	200		1	6	207
Least Sandpiper	15		1		16
Dunlin	15		20	6	41
Dowitcher			10		10
Short-billed Dowitcher	90			19	109
Laughing Gull			3	2	5
Ring-billed Gull	6		1		7
Herring Gull			2		2
Forster's Tern			4	2	6
Mourning Dove	6	1		1	8
Yellow-billed Cuckoo	1	2	2	2	7
Barred Owl		1			1
Ruby-throated Hummingbird		3		1	4
Belted Kingfisher	2				2
Red-headed Woodpecker	11				11
Red-bellied Woodpecker		3	1		4
Downy Woodpecker	1	1	1	1	4
Pileated Woodpecker		1			1
Eastern Wood-Pewee	7	4	3	4	18
Acadian Flycatcher		5			5
Willow Flycatcher				1	1
Eastern Phoebe	2				2
Great Crested Flycatcher	3	5	3	3	14
Eastern Kingbird	12	4	1	2	19
Tree Swallow	40	30	35	43	148
Barn Swallow		8		2	10
Blue Jay	7	2	3	1	13
American Crow		1			1
Fish Crow		1	2	2	5
Carolina Chickadee	2			1	3
Tufted Titmouse	6	3	1		10
White-breasted Nuthatch		1	1		2
Carolina Wren		6		2	8
House Wren	1	9		9	19
Marsh Wren	40		5	18	63
Blue-gray Gnatcatcher		5			5
Eastern Bluebird		2	2	1	5
Veery		1			1
Wood Thrush		9	2	1	12
American Robin	4	7	4	2	17
Gray Catbird	35	20	25	57	137
Northern Mockingbird	1	1			2

SPECIES	Bear Swamp	Finis & Allee House	Sheariness Pool	Raymond Pool Loop & Trail	Total
	A1	A2	A3	A4	
Brown Thrasher	7	3	1	2	13
Cedar Waxwing		12			12
European Starling	1	5	1	7	14
White-eyed Vireo	1	15	1	5	22
Yellow-throated Vireo	1				1
Blue-headed Vireo	1				1
Red-eyed Vireo	2	8	5	3	18
Northern Parula	2	3	2	1	8
Yellow Warbler	3	5	15	37	60
Chestnut-sided Warbler		1			1
Magnolia Warbler	1	2		2	5
Black-throated Blue Warbler		20			20
Yellow-rumped Warbler		6	3	1	10
Black-throated Green Warbler		1			1
Prairie Warbler			1		1
Blackpoll Warbler		15	2	2	19
Black-and-white Warbler	1	4	2	3	10
American Redstart	2	20	2	4	28
Ovenbird	2	3	1		6
Common Yellowthroat	40	30	20	48	138
Yellow-breasted Chat		3		2	5
Scarlet Tanager		3			3
Northern Cardinal	3	7	4		14
Blue Grosbeak	1		5	6	12
Indigo Bunting	8	30	5	4	47
Eastern Towhee	5	3	4	4	16
Field Sparrow	8	7		7	22
Savannah Sparrow		1			1
Grasshopper Sparrow	2	1			3
Seaside Sparrow				5	5
Song Sparrow		1		2	3
Swamp Sparrow		1			1
White-throated Sparrow		3		1	4
Red-winged Blackbird	125	35	30	73	263
Common Grackle	17	20	4	8	49
Brown-headed Cowbird	2	3	5	3	13
Orchard Oriole	2	1	2	4	9
Baltimore Oriole		3			3
American Goldfinch	12	10	10	17	49
House Sparrow				4	4
Total Individuals	933	462	426	550	2371

Total Species	62	75	61	66	109
Common					
Exclusive					
Observers	2	2	2	3	
Parties	1	1	1	1	
Party Miles					
On Foot	0.5	4.6	4.7	3.2	
By Car	2.8				
Party Hours					
On Foot	1	5	4	4	
By Car	2				
Owling					

Participants (Alphabetically):

John Dunn	John Hargrove
Andy Dunn	Rod Murray
Barbara Estep	Marcia Poling
Brian Feyock	Joyce Wade
Becky Hargrove	

FOBH Helping Bombay Hook's Purple Martins

In the Northeastern region, the Purple Martin (PUMA) population is in decline. Bombay Hook's colony though, has actually grown.

Volunteer Joel Martin started to monitor our site in 2001. At that time we had 24 pairs producing 109 eggs, some 99 hatched of which 95 fledged. In 2007 and 2008, Friends of Bombay Hook bought PUMA bands for the Refuge helping in monitoring the fledglings' dispersion. Several bands were reported over the years and this year a female banded in 2008 was reported in a colony on North Little Creek Road in Dover.



Two Purple Martins outside one of the gourds.



Purple Martin gourds and gourd racks.

In recent years, Joel was joined by Ray Gingerich, another volunteer. Since then, FOBH have added two new gourd rack systems and this year, purchased the equipment to retrofit all the natural gourds with starling-resistant entrances and caps to make nest checks and cleaning easier.

We are happy to announce that all but 1 of the 90 cavities were occupied this year resulting in 413 eggs, 317 babies and 299 fledglings!

Joel Martin reports it's quite a feeling to hold a bird that went to Brazil and back eight times. There is nothing more rewarding than to hear the comments of the people visiting the Refuge during a nest check, adults taking pictures of the nests and babies, looking at the children's faces full of apprehension at first and then speechless while holding a young bird.



Visitors learning about Purple Martins from Joel at one of our nest checks.

Congratulations to Joel and Ray for all their hard work and dedication to the Purple Martins at Bombay Hook.

Friends of Bombay Hook is proud to be a part of this program. With the support of our Friends memberships, we have been able to supply what is needed to keep the program going strong.



Bombay Hook's Junior Ranger and Junior Refuge Manager 2016-2017 Programs



The Junior Ranger & Junior Refuge Manager Program is for children ages 7 to 11+ years old. This series of programs will connect children with nature teaching them about the importance of protecting land for wildlife. Fun, hands-on activities provide Rangers the opportunity to get outside and to explore nature.

Programs are held from 9:30 a.m. to 11:30 a.m. unless noted. Call to register, (302) 653-9345.

September 17, 2016: MONARCH BUTTERFLIES

Explore the Monarch's life cycle, learn about the food they eat, where they migrate to, and how people can help them survive.

October 15, 2016: WHY DO LEAVES CHANGE COLORS?

Discover different types of trees and how they prepare for their winter rest. Learn how people and different animals use trees, and what role they play in the forest ecosystem.

November 19, 2016: THE EASTERN WILD TURKEY

Did you know that a Wild Turkey can run up to 25 miles per hour? Learn many interesting facts about turkeys, their behaviors, and how and where they live in Delaware.

December 28, 2016: FOWL PLAY

Swans, Ducks and Geese...see how they use the Refuge for their wintering grounds! Identify different species, and learn about their food sources.

January 16, 2017: EASTERN BLUEBIRDS

Make it, take it, and give it back to wildlife! After learning about all the insects they eat and how they raise their young, build a Bluebird box to take home.

February 18, 2017: BIRDS OF PREY

Is it an Owl, Hawk, Osprey, or Vulture? Join us to learn about some amazing birds, where they live, what they eat, and how they raise their young.

March 18, 2017: A FROG AND TOAD ORCHESTRA

Make it, take it, and give it back to wildlife! Let's explore the life cycle of a Frog, learn about Toads, and make a Toad house to take home and place in your yard.

April 15, 2017: SALT MARSH SAFARI

What causes tides and why are salt marshes important? We'll use dip nets to learn who lives in the water, and what animals feed upon them.

May 20, 2017: HORSESHOE CRABS AND SHOREBIRDS

Hooray for Horseshoe Crabs...They help people, and migratory shorebirds! Discover the how and the why as we take you on an amazing journey into the world of two animals that come together each spring.

June 17, 2017: WILD BABIES

Bunnies, Possums, Skunks, and Fawns...to name a few. Learn about young wildlife, how they survive, and how you can help them.

August 19, 2017: BEAUTIFUL BATS

That's right, they're not scary, they're beneficial! Discover what makes a Bat unique, how they live and what they eat. This is an evening program from 7:00 p.m. to 8:30 p.m..

Materials Provided by:

Friends of
BOMBAY
Hook



Bombay Hook NWR

2591 Whitehall Neck Road, Smyrna, DE 19977

(302) 653-9345

http://www.fws.gov/refuge/Bombay_Hook/

Bombay Hook Visitor Center is open Monday through Friday from 8:00 a.m. to 4:00 p.m. The Visitor Center is also open on weekends from 9:00 a.m. to 5:00 p.m. starting September 3, 2016. **The Wildlife Drive is open daily from ½ hour before sunrise to ½ hour after sunset. The Allee House is in need of repairs and is closed until further notice.** For more information about programs contact Tina Watson at (302) 653-9345 or check the website above for additions or changes.

Fall 2016 Calendar of Events

Saturday September 3, 2016 **Volunteer Orientation (10:00 a.m. – 12:30 p.m.)** - A meeting about volunteer opportunities will be held in the auditorium. The meeting will describe the different types of volunteer opportunities, upcoming activities, and the latter part of the session will be a tour of the Refuge. Individuals are needed to staff the Visitor Center on weekends and weekdays from September through November. Volunteers are also needed to provide Environmental Education programs for school groups, conduct Refuge tours, provide trail and landscaping maintenance, and help with highway cleanups. Training is provided.

Saturday, September 17, 2016



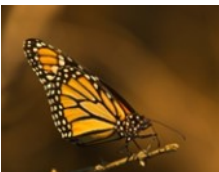
- **Junior Rangers Learn about Monarch Butterflies (9:30 a.m. – 11:30 a.m.)** - New and returning children from 7-11 years old are welcome to attend. Explore the Monarch's life cycle, learn about the food they eat, where they migrate to, and how people help them survive. **Call to register at (302) 653-9345 or email: tina_watson@fws.gov.**



- **Monarch Presentation (2:00 p.m. – 3:30 p.m.)** - Terry Willis will conduct a classroom presentation in the Refuge auditorium on the Monarch butterfly life cycle and conservation, in preparation for the Monarch tagging event on September 24, 2016. Weather permitting, the field opposite Refuge headquarters will be visited after the presentation to look for evidence of Monarchs.

Tuesday, September 20, 2016 **Toddlers/preschoolers (1 year old to 5 years old) and their family is FREE (9:00 a.m. - 2:00 p.m.)** - Bombay Hook will be free for toddlers and their families on the 3rd Tuesday of September. Children from 1 to 5 years old are developing cognitive skills and being in nature can expose them to sights and sounds that might go unnoticed in their everyday setting. Take your child on the Wildlife Drive, walk a trail, climb a tower, and look at wildlife exhibits in the Visitor Center. You are never too young to explore and learn. This is a self-study activity for families. You can come anytime between 9:00 a.m. and 2:00 p.m.

Saturday, September 24, 2016



- **FREE ENTRANCE FEE** - Celebrating National Public Lands Day! and Bike Your Park Day! Record your Monarch sightings in the Visitor Center.

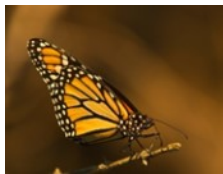
- **Monarch Tagging (2:00 p.m. – 4:00 p.m.)** - Terry Willis will be tagging monarchs on the Refuge. Meet at the Visitor Center.

Sunday, September 25, 2016 **Tour of the Refuge (11:00 a.m. – 12:30 p.m. & 1:30 p.m. – 3:00 p.m.)** - Join

(Continued on next page)

volunteer, Ray Cullom, for a tour of the Refuge. Find out how the Refuge is managed for wildlife, visit different habitats, and walk a trail. Meet at the Visitor Center.

Saturday October 1, 2016 *Environmental Education Workshop (9:00 a.m. – 12:30 p.m.)* - This hands-on workshop will help people understand, and experience, the Environmental Education field trips that can take place at Bombay Hook. You will learn about the Refuge's habitats, explore the tidal salt marsh, dip net in the brackish and fresh water, identify birds, explore the forest, and learn about wildlife management techniques. This is an excellent opportunity for teachers, scout leaders, Refuge volunteers, and interested visitors to get outside and explore the Refuge. **Call to register at (302) 653-9345 or email: tina_watson@fws.gov.**



Saturday October 8, 2016 *Managing the Landscape for Monarch Butterflies and other Pollinators (10:00 a.m. – 11:30 a.m.)* - Join Jim White, from the Delaware Nature Society, as he discusses the many ways that we can help maintain Monarch and other pollinator populations in our yard and natural areas. In recent years many of our most familiar insects such as the Monarch Butterfly have suffered population declines due to human-caused changes to the landscape. Modern large scale agricultural practices and residential and commercial development often drastically reduce the diversity of plants that these insects need to survive. In addition, the overuse of pesticides can also negatively affect our native insects. However it is not too late to stop or even reverse this trend. The program will be in the auditorium with a short walk in the meadow after the talk.

Sunday, October 9, 2016 *FREE ENTRANCE FEE - Celebrate National Wildlife Refuge Week!* - The Refuge is open from ½ hour before sunrise to ½ hour after sunset and visitors can tour the 12-mile Wildlife Drive, explore the 5 walking trails, and look at the exhibits in the Visitor Center.

Saturday, October 15, 2016

- *Highway Clean Up (9:00 a.m. - 12:00 noon)* – Volunteer to help clean up the roads leading to Bombay Hook. Meet at the Visitor Center. Wear shoes that can get wet and bring work gloves. Refreshments will be served after the clean-up.



- *Junior Rangers Learn Why Leaves Turn Color (9:30 a.m. - 11:30 a.m.)* - New and returning children from 7-11 years old are welcome to attend the Junior Ranger program. Discover different type of trees and how they prepare for their winter rest. Learn how people and different animals use trees, and what role they play in the forest ecosystem. **Call to register at (302) 653-9345 or email: tina_watson@fws.gov.**
- *Live Birds of Prey : Animal Behavior & Conservation Connections (1:00 p.m. - 2:00 p.m.)* – The program will present live birds of prey species that live locally or migrate through the region. Experience these raptors up close and in person. Learn about the uniqueness of this group of birds and why they have been admired for centuries. Participants will come eye to eye with a Red-tailed hawk, Red-shouldered hawk, Broad-winged hawk, Merlin, Screech Owl and Turkey Vulture. Expert trainer and educator Phung Luu and team will be on hand with the birds to answer your questions.
- *Beginning Birding: Birds of the Backyard (2:30 p.m. - 4:00 p.m.)* - Birds are a joy to watch, especially if you don't have to go far to enjoy and study them. Backyard birding is a popular activity for families. You will learn identification skills, bird feeding tips, and how to participate in citizen science projects right from your home and backyard.

Tuesday, October 18, 2016 *Toddlers/preschoolers (1 year old to 5 years old) and their family is FREE (9:00*

a.m. - 2:00 p.m.) - Bombay Hook will be free for toddlers and their families on the 3rd Tuesday of October. Children from 1 to 5 years old are developing cognitive skills and being in nature can expose them to sights and sounds that might go unnoticed in their everyday setting. Take your child on the Wildlife Drive, walk a trail, climb a tower, and look at wildlife exhibits in the Visitor Center. You are never too young to explore and learn. This is a self-study activity for families. You can come anytime between 9:00 a.m. and 2:00 p.m.

Saturday, October 22, 2016 *Annual Native Plant Symposium – Native Plants in Wildlife Habitats* (10:00 a.m. – 2:30 p.m.) – Native plants are essential in habitats for pollinators, birds and other wildlife that provide an ecosystem with food, water, cover and shelter. We will be viewing the Meadow Project’s “Hometown Habitat, Stories of Bringing Nature Home” - a documentary focused on showing how and why native plants are critical to the survival and vitality of local ecosystems. “Hometown Habitat” features entomologist Dr. Douglas Tallamy, whose research, books and lectures on the use of non-native plants in landscaping, sound the alarm about habitat and species loss. The message: All of us have the power to support habitat for wildlife and bring natural beauty to our patch of the earth. Building on the documentary will be: Alice Mohrman of the Delaware Nature Society, a state affiliate of the National Wildlife Federation (NWF), who will present "Gardening for Wildlife and Water" - landscaping your outdoor space with Delaware native plants, to attract birds and butterflies and support local water quality, exploring sustainable practices, and establishing a NWF Certified Wildlife Habitat; and a presentation about the Habitat Network (formerly YardMap), a citizen science project and online resource under the Cornell Lab of Ornithology and The Nature Conservancy. **The symposium is free, but registration is required and space is limited; contact Eric Wahl at EWahl@elementdg.com or (302) 645-0777.** Lunch will be provided.

Sunday, October 23, 2016

- ***Tour of the Refuge*** (11:00 a.m. – 12:30 p.m. & 1:30 p.m. – 3:00 p.m.) - Join volunteer, Ray Cullom, for a tour of the Refuge. Find out how the Refuge is managed for wildlife, visit different habitats, and walk a trail. Meet at the Visitor Center.
- ***Bird Identification Station*** (12:00 noon - 5:00 p.m.) - Get a close look at the different bird species in the impoundments. Randy Murphy will be set up on the Wildlife Drive with scopes and binoculars to help you identify waterfowl, passing raptors, and whatever else flies by. Look for the blue ID Station sign along the auto tour route.

Saturday, October 29, 2016 *Tour and Explore the Refuge* (10:00 a.m. - 12:30 p.m.) - We will explore the Refuge: walk a trail, learn about the history of the Refuge, discuss wildlife management techniques, and identify the birds along the Wildlife Drive. Space is limited. **Call to register at (302) 653-9345 or email: tina_watson@fws.gov.**

Sunday, October 30, 2016 *Tour of the Refuge* (11:00 a.m. – 12:30 p.m. & 1:30 p.m. – 3:00 p.m.) - Join volunteer, Ray Cullom, for a tour of the Refuge. Find out how the Refuge is managed for wildlife, visit different habitats, and walk a trail. Meet at the Visitor Center.

Saturday, November 5, 2016 *Exploring the Bluebird Box Trail* (9:00 a.m. - 11:00 a.m.) - The program will cover the plight of the Eastern Bluebird and how conservation activities can benefit the species. The group will walk a 1-1/2 mile section of the Refuge, exploring the bluebird nest boxes and the different kinds of wildlife that use them. The program is a hands-on experience for both youth and adults. Bring a bag lunch and picnic at the Visitor Center pavilion after the program.

Friday - Sunday, November 11, 12, & 13, 2016 *FREE ENTRANCE FEE for Veteran’s Weekend* (½ hour before Sunrise to ½ hour after Sunset) - Honoring veterans, the National Wildlife Refuge System is providing free entrance to Bombay Hook National Wildlife and all the refuges throughout the U.S. This is a good time of the

(Continued on next page)

year to see hawks, eagles, ducks, and geese. Take time out to remember our veterans and to enjoy nature.

Saturday, November 12, 2016 *Winter Waterfowl Identification Workshop (9:30 a.m. - 11:30 a.m.)* - Winter Waterfowl Identification Workshop is a joint program with the Delaware Museum of Natural History (DMNH) and the Delmarva Ornithological Society (DOS). The program will offer participants the opportunity to examine closely, study and discuss the skins of a variety of waterfowl common to Delmarva in the winter. Birds for study will include both the expected and the unusual species. This program will introduce new birders to many commonly seen waterfowl, while offering plumage challenges for our more advanced birders. Dr. Jean Woods, Curator of Birds at DMNH, will be on hand to guide us through the museum's selected collections.

The workshop is free and will be at the Bombay Hook NWR Visitors' Center. Space is limited and registration is required. (Age 16 and over unless accompanied by a parent) If you're interested in attending the Winter Waterfowl Workshop, **please contact Jean Woods at jwoods@delmnh.org or (302) 658-9111 x314.**

Tuesday, November 15, 2016 *Toddlers/preschoolers (1 year old to 5 years old) and their family is free (9:00 a.m. - 2:00 p.m.)* - Bombay Hook will be free for toddlers and their families on the 3rd Tuesday of October. Children from 1 to 5 years old are developing cognitive skills and being in nature can expose them to sights and sounds that might go unnoticed in their everyday setting. Take your child on the Wildlife Drive, walk a trail, climb up a tower, and look at wildlife exhibits in the Visitor Center. You are never too young to explore and learn. This is a self-study activity for families. You can come anytime between 9:00 a.m. and 2:00 p.m.

Saturday, November 19, 2016



Junior Rangers Learn About The Eastern Wild Turkey (9:30 a.m. - 11:30 a.m.) - New and returning children from 7-11 years old are welcome to attend the Junior Ranger program. Did you know that a wild turkey can run up to 25 miles per hour? Learn many interesting facts about wild turkeys, their behaviors, and how and where they live in Delaware. **Call to register at (302) 653-9345 or email: tina_watson@fws.gov.**

Bike Ride on the Refuge (2:00 p.m. - 4:00 p.m.) - Join Tina Watson for an eight-mile bike ride on the Refuge. The group will make several stops for bird identification and to discuss wildlife management techniques. Bicycle should have hybrid tires. Don't forget your helmet and check the air in your tires! Meet at the Visitor Center. Important- Delaware State law states, ***"a person under sixteen years of age shall not operate, ride upon, or ride as a passenger any bicycle, unless that person is wearing a properly fitted and fastened bicycle helmet which meets or exceeds the ANSI Z90.4 bicycle helmet standard."***

Sunday, November 20, 2016 *Beginning Bird Watching: Duck, Duck, Goose (9:30 a.m. - 11:00 a.m.)* - What are all those ducks and geese around the Refuge? Come and learn how to tell one duck from another at this beginning birders' class. We'll meet at the Visitor Center at 9:30 a.m. for a talk and then practice our identification skills on the Wildlife Drive.

Friday, November 25, 2016

- *Bird Identification Station (12:00 noon - 5:00 p.m.)* - Get a close look at the different bird species in the impoundments. Randy Murphy will be set up on the Wildlife Drive with scopes and binoculars to help you identify waterfowl, passing raptors, and whatever else flies by. Look for the blue ID Station sign along the auto tour route.
- *Tour of the Refuge (1:00 p.m. - 3:00 p.m.)* - We will explore the Refuge and learn about the history of the Refuge, how we manage for wildlife, and identify the birds along the Wildlife Drive. Space is limited. **Call to register at (302) 653-9345 or email: tina_watson@fws.gov.**

Sunday, November 27, 2016 *Tour of the Refuge* (11:00 a.m. – 12:30 p.m. & 1:30 p.m. – 3:00 p.m.) - Join volunteer, Ray Cullom, for a tour of the Refuge. Find out how the Refuge is managed for wildlife, visit different habitats, and walk a trail. Meet at the Visitor Center.

Saturday, December 3, 2016 *Sunset Tour of the Refuge* (3:00 p.m. – 5:00 p.m.) - The tour will begin early enough to make a couple stops along the way. The group will discuss wildlife management practices, bird watch, and will end with the sunset over Shearneck Pool. Space is limited. **Call to register at (302) 653-9345 or email: tina_watson@fws.gov.**

Sunday, December 4, 2016 *Bird Identification Station* (12:00 noon - 5:00 p.m.) - Get a close look at the different bird species in the impoundments. Randy Murphy will be set up on the Wildlife Drive with scopes and binoculars to help you identify waterfowl, passing raptors, and whatever else flies by. Look for the blue ID Station sign along the auto tour route.



Wednesday, December 28, 2016 *Junior Rangers Learn about FOWL PLAY* (9:30 a.m. - 11:30 a.m.) – Swans, ducks and geese...see how they use the Refuge for their wintering grounds! Identify different species and learn about their food sources.

**Bombay Hook National Wildlife Refuge
Dates Refuge Closed for Hunting
September 2016 to January 2017 Season**

Back Section of the Refuge CLOSED

Wildlife Drive closed from north end of Shearneck to Finis and Allee House
September 2 & 9, 2016 until 1:00 p.m. for Archery
October 10, 12, and 14, 2016 all day for Muzzleloader
November 11, 12, and 16, 2016 all day for Shotgun
December 12 & 15, 2016 all day for Shotgun
January 20, 2017 all day for Shotgun

Front Section of the Refuge CLOSED

Wildlife Drive closed from Visitor Center to Shearneck Parking Lot
Enter the Refuge from Dutch Neck Road on Route 9 north
November 14 & 18, 2016 all day for Shotgun
December 14, 2016 all day for Shotgun

Closed dates for Young Waterfowlers and Wheelin' Sportsmen Hunts unknown at this time



<http://facebook.com/bombayhookwildliferefuge>

IMPORTANT REMINDER TO REFUGE VISITORS....

To protect wildlife and their habitat and to provide the best opportunities in wildlife observation and photography, it is important not to disturb, injure, or damage plants and animals of the Refuge. In fact, it is a prohibited act as stated in 50 CFR27.51. This disturbance includes flushing birds and other wildlife or using electronic calls (taping) to lure birds closer for observation or photography. Please remember to take only memories and photographs and leave only footprints.

ARE YOU INTERESTED IN JOINING FRIENDS???

FRIENDS OF BOMBAY HOOK is a cooperating association formed with the Bombay Hook National Wildlife Refuge and the U.S. Fish and Wildlife Service. It is a private, non-profit corporation which was founded to promote conservation, Environmental Education, and better understanding of and appreciation for Bombay Hook National Wildlife Refuge.

Each year more than 3,000 students visit Bombay Hook. They use equipment to study habitats, watch videos about endangered species, and are taught from field guides - all provided by **FRIENDS OF BOMBAY HOOK!**

If you used an Auto Tour Brochure or the Bird or Mammal List, these too have been funded by **FRIENDS OF BOMBAY HOOK!**

Your Membership Dues will make it possible for Friends of Bombay Hook to continue its support of educational and recreational programs at Bombay Hook.

Proceeds from the Blue Heron Gift Shoppe in the Visitor Center at Bombay Hook also help support the Friends program and activities. Make this your place to buy field guides, books, T-shirts, posters, and souvenirs!

OUR MEMBERSHIP BENEFITS INCLUDE:

- 10% Discount on all items sold at the Blue Heron Gift Shoppe
- Participation in special wildlife education programs and field trips
- Participation in the Birding Club
- Attendance at the Annual Meeting in June
- Eligibility in the Dover Federal Credit Union (DFCU)
- Opportunity to meet others with similar interests in birds, other wildlife, wetlands, and the environment

And perhaps best of all, the chance to say, *"Thank you Bombay Hook, for all the great times I've had here !"*

MEMBERSHIP APPLICATION

Submit completed application at the Visitor Center
(payment by cash, check or credit card) or Mail (with check) to:

*Friends of Bombay Hook
2591 Whitehall Neck Road
Smyrna, DE 19977*

Or you can go to www.friendsofbombayhook.org/membership.html
and follow the instructions in applying or renewing your membership

Renewal New Member

Date: _____

Name

Address

City, State, Zip

E-mail

Newsletter Preference:

Print E-mail (require E-mail address)

Membership Plan (Check One)

	Annual
<input type="checkbox"/> Student (under 18)*	\$5.00
<input type="checkbox"/> Individual	\$15.00
<input type="checkbox"/> Family	\$20.00
<input type="checkbox"/> Sponsor***	\$25.00
<input type="checkbox"/> Sustaining	\$50.00
<input type="checkbox"/> Corporate**	\$100.00
<input type="checkbox"/> Life***	\$200.00

*Student membership: under age 18.

**Corporate sponsorship includes link to FOBH website;
no voting privileges or store discount.

***Sponsor and Life memberships includes family .

Method of Payment

- Cash (payment at Visitor Center only)
 Check (payment by mail or at Visitor Center)
 Credit/ Debit Card (payment at Visitor Center only)

How Do You Support Friends???

(It's a fact: The National Wildlife Refuge system is underfunded and understaffed)

D - O - N - A - T - E !!!

Every year as funding is reduced, job vacancies are not filled and refuges operate without a budget. To cut costs, many refuges have been consolidated to share staff and resources.

Without the financial and volunteer support of Friends, many of the programs and activities at Bombay Hook would be either cancelled or nonexistent. Friends of Bombay Hook pays for or subsidizes many of the most popular Refuge programs, services, and improvements. Within the last several years, Friends paid for the construction of the new store, the *Blue Heron Gift Shoppe*; purchased new chairs and a screen-smart TV for the Refuge auditorium for enhanced presentations as well as viewing programs, webinars and movies to educate visitors; instituted a program to assist schools in funding transportation for field trips to the Refuge; and many other expenditures. Working with Refuge staff, Friends members and volunteers helped to launch the Junior Ranger and Junior Refuge Manager programs and the "Every Kid in a Park" pass program to 4th Grade teachers at local schools; planned, organized and staffed the "Connecting Families with Nature" and the Bombay Hook Quarter Ceremony events; organized the Native Plant Symposiums for the Garden Keepers; and many other activities.

As a 501(c)(3) corporation, we receive no Federal or State funding. We rely on the membership dues and donations we collect and the profits from the Blue Heron Gift Shoppe to provide financial support for the Refuge. Your donations are tax-deductible.

There are several ways you can donate to Friends:

- You can make a donation to Friends by check made out to "*Friends of Bombay Hook Inc.*" and send to: **Friends of Bombay Hook, 2591 Whitehall Neck Road, Smyrna DE 19977** (make sure to indicate on the Memo line of the check that it is a donation) with the enclosed form provided below.
- You can go online at www.friendsofbombayhook.org/support.html and donate thru PayPal.
- You can stop in at the Visitor Center during Gift Shoppe hours (will vary in the Fall and Spring months) and make a donation (by either check, cash or credit/debit card)

We urge you to help us continue to improve the visitor experience at Bombay Hook National Wildlife Refuge simply by making a contribution to the Friends of Bombay Hook.



DONATION FORM

Date: _____

Name

Donation Amount: \$ _____

Address

Method of Payment

City, State, Zip

Check (payment by mail or at Visitor Center)

Cash (payment at Visitor Center only)

Credit/ Debit Card (payment at Visitor Center only)

E-mail (optional)