



Heading North on Route 13 from Dover, take Route 42 East to Route 9, Leipsic. Proceed North on Route 9 for 2 miles to Road 85 which ends at the refuge entrance. Heading South on Route 13 from Smyrna, take Route 12 East until it merges with Route 9 (5 miles), and take a left on Road 85 after 1/4-mile.

11/93

**U.S. Fish and Wildlife Service**

Bombay Hook is one of almost 500 refuges in the National Wildlife Refuge System administered by the U.S. Fish and Wildlife Service. The National Wildlife Refuge System is a network of lands and waters managed specifically for the protection of wildlife and wildlife habitat and represents the most comprehensive wildlife management program in the world. Units of the system stretch across the United States from northern Alaska to the Florida Keys and include small islands in the Caribbean and South Pacific. The character of the refuges is as diverse as the nation itself.

The Service also manages National Fish Hatcheries, and provides Federal leadership in habitat protection, fish and wildlife research, technical assistance and the conservation and protection of migratory birds, certain marine mammals and threatened and endangered species.

For further information, contact:

Refuge Manager  
 Bombay Hook National Wildlife Refuge  
 RD 1, Box 147  
 Smyrna, Delaware 19977  
 Telephone: (302) 653-9345

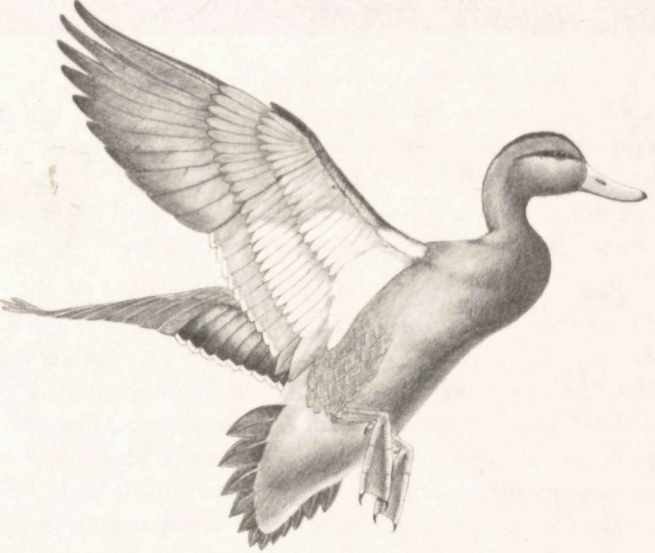
*This brochure is also available upon request in a large print version.*



DEPARTMENT OF THE INTERIOR  
 U.S. FISH AND WILDLIFE SERVICE

# Bombay Hook

## National Wildlife Refuge



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Smyrna, Delaware





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Canada goose

## Welcome

**B**ombay Hook National Wildlife Refuge comprises 15,978 acres, approximately three-quarters of which is tidal salt marsh. It also includes 1,100 acres of impounded fresh water pools, brushy and timbered swamps, 1,100 acres of agricultural lands, and timbered and grassy upland. The general terrain is flat and less than ten feet above sea level.

Bombay Hook was established in 1937 as a link in the chain of waterfowl refuges that extends from Canada to the Gulf of Mexico. It is primarily a refuge for migrating and wintering ducks and geese, but also offers haven for numerous other species of migratory birds. The value and importance of Bombay Hook for the protection and conservation of waterfowl has increased greatly in the past 25 years, primarily due to the loss of extensive surrounding marshland to urban and industrial development.

## Entrance Fee Options

**T**o help pay for the purchase of more wildlife habitat and for management of refuges, Congress passed the Emergency Wetlands Resources Act in 1986. The law authorized the Fish and Wildlife Service to charge entrance fees at national wildlife refuges such as Bombay Hook.

Visitors may pay the daily fee or purchase one of two annual passes - the Federal Duck Stamp and Golden Eagle Passport. Both are sold at the refuge. Anyone who is 62 years of age or older, or who is disabled, is eligible for a free pass that will admit you and your passengers or family. Children under 16 are admitted free. Educational and scientific groups may enter free with prior notice. Refuge staff will be happy to issue a pass and answer any questions.

## History

**T**he recorded history of the Bombay Hook area began in 1679 with the sale of marshland from Mechacksett, Chief of the Kahansink, to Peter Bayard of New York. Early Dutch settlers cut salt hay from the marsh, trapped muskrats, and hunted waterfowl. The tidal streams that interlace the marsh were plied for fish, crabs, and oysters.

Following establishment of the refuge and through the early 1940s Civilian Conservation Corps members based at Leipsic constructed dikes and buildings on the refuge. With the onset of World War II, the Army Air Corps based at Dover used parts of the refuge for experimentation and training in air-to-ground rockets.



© Julien Beauregard

Snow Goose

## Refuge Management and Objectives

**T**he refuge management programs are primarily aimed at developing and protecting desirable habitat for waterfowl and other migratory birds, including the endangered bald eagle. The refuge is located at a focal point for waterfowl migrating between their northern breeding grounds and various wintering areas. Large numbers of ducks and geese arrive each fall to either spend the winter or merely stopover on their way southward.



© Bob Jones

Black-necked stilt

Water levels in refuge impoundments are manipulated to produce desirable emergent and underwater plants for waterfowl. While pools are drawn down, excellent populations of shore and wading birds use the mudflats. Upland agricultural crops are produced on approximately 1,100 acres to provide a supplemental food supply to waterfowl and other migratory birds.

Tidal salt marsh is the most valuable wildlife habitat in the State of Delaware. Large portions of the refuge have been maintained in a near pristine state. The marsh, with its intersecting tidal streams and rivers, provides excellent natural habitat for the birds and mammals of the area and also serves as a nursery and breeding area for marine organisms, many of which are of sporting and commercial interest.

## Wildlife Calendar

**T**hough wildlife can be seen year round at Bombay Hook, fall and spring offer the best opportunity for observing peak concentrations of migratory birds.

The period from October 1 through November 30 is generally the most interesting to the refuge visitor as this is the season during which waterfowl populations are at their peak. Over 100,000 ducks and geese utilize the refuge at this time.

Spring is another preferred season for the visiting public. March is the second peak for waterfowl as they travel through on their return to northern breeding grounds. April brings early shorebird migrants and the emergence of reptiles and amphibians from winter hibernation. Shorebirds are at their highest concentrations during May and June, primarily due to the arrival of horseshoe crabs laying eggs along the bay shore and mud flats. These eggs provide the shorebirds with needed energy to complete their northward migration. Wading birds such as herons, egrets, and glossy ibis, reach their peak numbers during the summer months. Mammals can be seen year round, particularly in the early morning and evening hours. These include white-tail deer, beaver, muskrat, red fox, river otter, woodchuck and opossum.

## Public Use

**T**he public is welcome to visit the refuge for wildlife observation, nature study, and photography year round during daylight hours.

Visitor facilities include a visitor center, auto tour route, observation towers, and nature trails. Bear Swamp Trail and the Visitor Center are handicapped accessible. A cassette tape interpreting the auto tour is available.

The Visitor Center is normally open Monday-Friday from 8:00 a.m. to 4:00 p.m., and on weekends from 9:00 a.m. to 5:00 p.m. It is closed on summer and winter weekends. Tours, habitat studies, nature walks, and audiovisual programs are available to groups upon advance request. Volunteer, teacher, and leader workshops are offered in the spring and fall.

A 12-mile round-trip auto tour route and several nature trails (ranging from 1/4 to 1 mile in length) provide opportunities to observe and photograph wildlife. A photography blind is available by advance request. Three of the trails also have 30-foot observation towers.

Public hunting, primarily for waterfowl and deer, is permitted under special regulations on portions of the refuge during the Delaware state season.