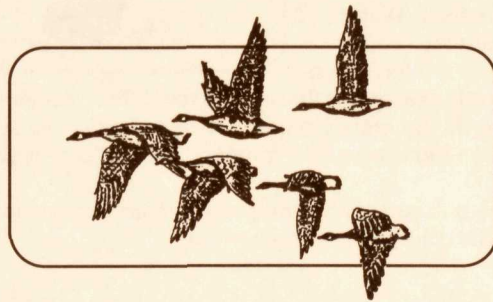


Bike Route - Biking is permitted along the entire length of the Wildlife Drive. Directions and regulations available at Visitor Center and Office Headquarters.

Fishing/Boating - Usually is permitted April 1 - October 1. Fishing ranges from poor to fair on the Refuge. No fishing is allowed from the shore. Boat launching is not permitted on the Refuge. For further information on fishing/boating areas and other regulations, contact the visitor center or the office headquarters.

Educational Opportunities - Organized school, civic and professional groups may reserve dates for slide talks, special movies, guided tours, and outdoor classroom activities. Write or call for additional information.



HOURS

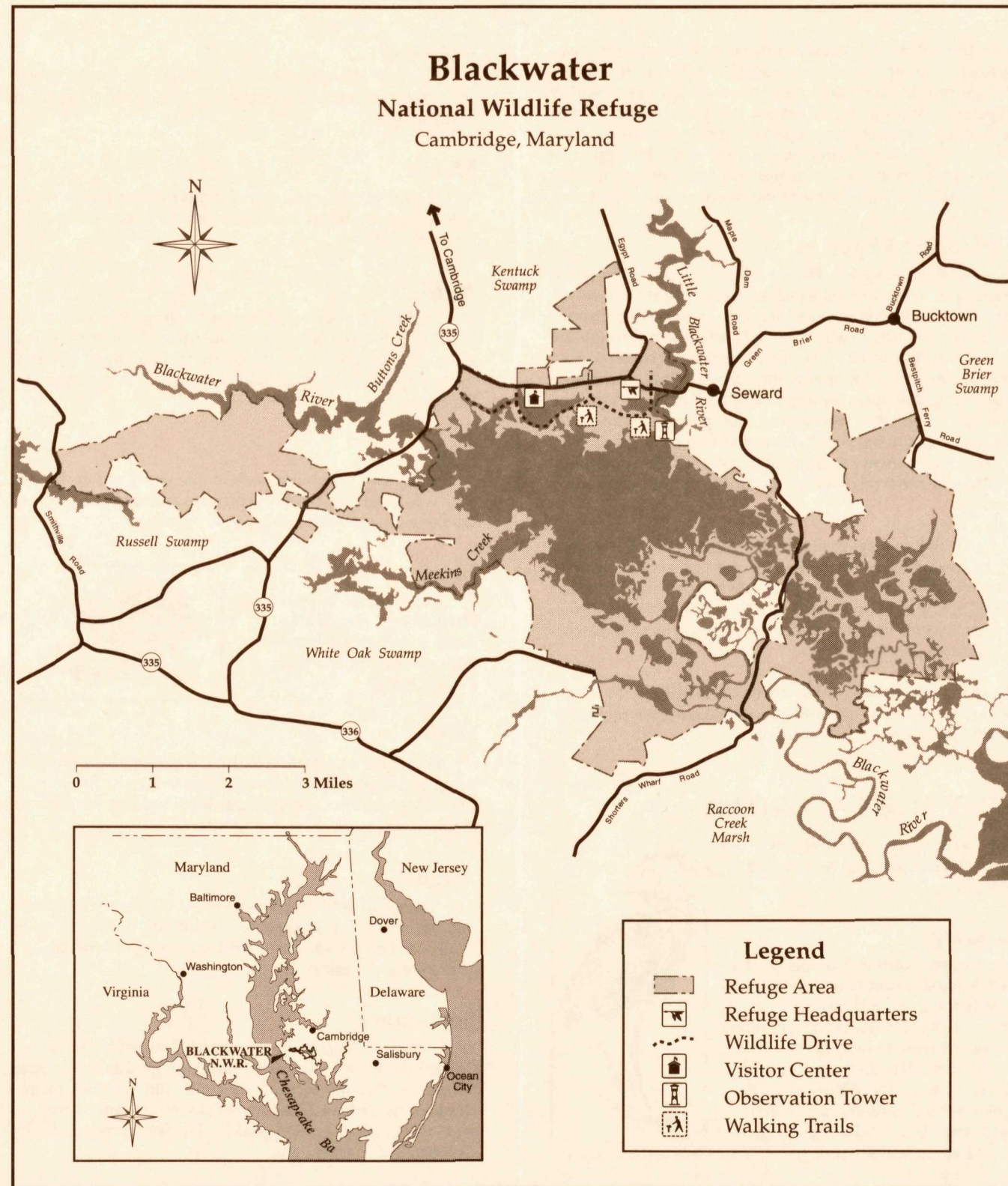
Visitor Center - Open 8:00 a.m. to 4:00 p.m., Monday-Friday; 9:00 a.m. to 5:00 p.m., Saturday-Sunday. Closed on all Federal holidays and on summer weekends (after Memorial Day through Labor Day).

Wildlife Drive and outdoor facilities - Open daily, dawn to dusk (year round). A permit is required.

Entrance Fees - A daily permit is required for all visitors to the Wildlife Drive unless they possess an annual pass or lifetime passport.

Private Vehicle	\$3.00
Pedestrian, Bicyclist	\$1.00
Commercial Van or Bus	
up to 20 passengers	\$15.00
21 or more passengers	\$25.00

Annual passes, either a Current Federal Duck Stamp valid July 1 to June 30 (\$15) or a Golden Eagle pass valid January 1 to December 31 (\$25), and free lifetime passports, either Golden Age passport for those 62 years or older or Golden Access passports for the permanently disabled, are available at the Visitor Center.



U.S. Fish and Wildlife Service

Blackwater is one of more than 470 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 please contact:

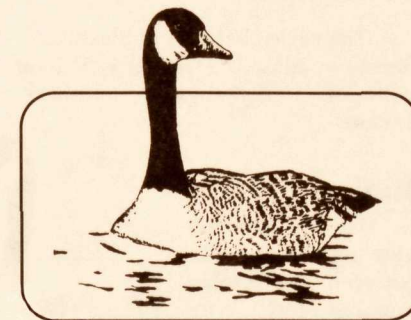
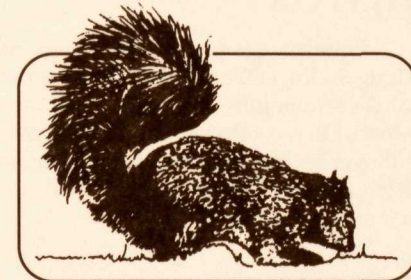
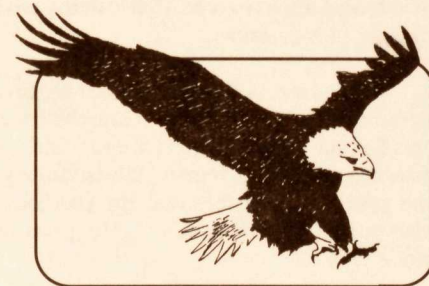
Refuge Manager
Blackwater National Wildlife Refuge
2145 Key Wallace Drive
Cambridge, Maryland 21613
Telephone (301) 228-2677



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

Blackwater

National Wildlife Refuge



Cambridge, Maryland

WELCOME

Blackwater National Wildlife Refuge, located 12 miles south of Cambridge, Maryland, was established in 1933 as a refuge for migratory waterfowl. Most of its 17,121 acres is composed of rich tidal marsh characterized by fluctuating water levels and variable salinity. Other habitat types include freshwater ponds, mixed woodlands, and a small amount of cropland.

Although originally established for ducks, Blackwater has become one of the chief wintering areas for Canada geese using the Atlantic Flyway. Geese number approximately 33,000 and ducks exceed 15,000 at the peak of fall migration, usually in November.

Blackwater is also haven for three of our nation's endangered species, and possibly a fourth. The resident bald eagle and Delmarva fox squirrel are regularly seen on the Refuge as is the migrant peregrine falcon during certain periods of the year. It is possible that the red-cockaded woodpecker also occurs here though a sighting has not been confirmed since 1976.

HISTORY

Before its designation as a refuge, most of the marshland along the lower Blackwater River was managed as a fur farm. At that time, muskrats were the primary species trapped. Most of the wooded lands, including the islands, have been cut over for timber. Drainage ditches and old furrows criss-cross in some existing woods indicating past agricultural use.

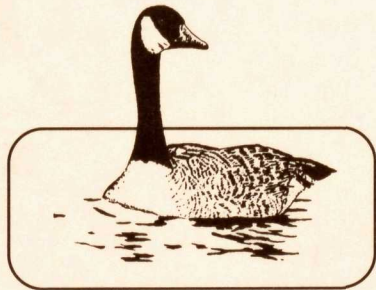
WILDLIFE

The varied habitats of Blackwater - from open water to dense woodlands - produce a diversity of wildlife in a panorama that changes by numbers and species with the seasons.

Birds

The best time for viewing waterfowl is between mid-October and mid-March. Wintering species include tundra swans, Canada and snow geese, and over 20 duck species.

The most common ducks found here are mallards, black ducks, blue-winged teal, green-winged teal, wigeon, and



pintails. Although most waterfowl migrate north in the spring, some remain through the summer, using the protected areas of the Refuge to raise their young. These nesting waterfowl include Canada geese, mallards, black ducks, wood ducks, and blue-winged teal.

Other resident birds include the great blue heron and the bald eagle. Sightings of eagles are fairly common as Blackwater is the center of the greatest nesting density of bald eagles in the eastern United States north of Florida.

Numerous marsh and shore birds arrive in the spring, searching for food in the shallow waters. Ospreys, or "fish hawks," are common spring through fall and conspicuously use nesting platforms that have been placed throughout the marsh.

The Refuge woodlands provide year-round homes for towhees, woodpeckers, brown-headed nuthatches, bobwhite and woodcock. The warmer months invite warblers, vireos, orioles, flycatchers, and many others to this same habitat. A complete list of the birds has been published.

Mammals

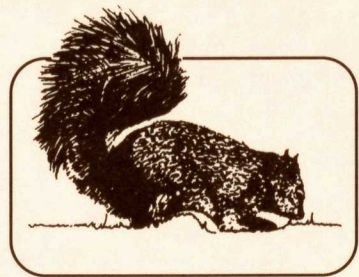
In addition to its extensive list of birds, Blackwater harbors a variety of mammals, including raccoons, otters, opossums, skunks, and the elusive red fox. Muskrats are common in the marsh,

as is the larger nutria, a South American rodent introduced to this country in the 1930s. The nutria population on the Refuge greatly fluctuates due to occasional severe winters. White-tailed deer can sometimes be seen in wooded areas and in fields along the forest edge. Asian sika deer, introduced to nearby James Island in 1916, prefer the wet woodlands and marsh. They are more nocturnal and, therefore, are less visible than the white-tails. Both gray squirrels and Delmarva fox squirrels inhabit the wooded areas.

MANAGEMENT

Waterfowl

Refuge programs specifically designed for waterfowl include management of the brackish marsh to produce succulent natural foods and management of impoundments to provide freshwater habitat. A variety of crops are planted and native plants encouraged, providing a variety of foods to



meet the nutritional needs of migrating and wintering waterfowl. Although waterfowl hunting is not permitted on the Refuge, hunting is extensive on surrounding areas. A winter trapping program, regulated by the Refuge and accomplished by trappers under special permit, provides protection for fragile marsh vegetation by lessening the impact of foraging furbearers. All management programs are carefully monitored to ensure the best interests of wildlife resources.

Endangered Species

Endangered species (now protected by the 1973 Endangered Species Act) are a special responsibility at Blackwater. One of these species is the Delmarva fox squirrel which once ranged from southeastern Pennsylvania down through the Delmarva Peninsula. This large, light-gray squirrel now exists in only four counties along Maryland's Eastern Shore and at Chincoteague National Wildlife Refuge in Virginia. The loss of suitable woodlands (due primarily to the demands of a growing society) is a major factor in its decline. Forest management programs at Blackwater aim to simulate and restore the type of habitat required by this beleaguered squirrel.

Our national symbol, the bald eagle, is another endangered species found on the Refuge. Like other birds of prey, the eagle's decline stems from causes endemic to our times - pesticides, pollution, irresponsible shooting, and human encroachment. The Refuge offers constant protection for this diminished species.

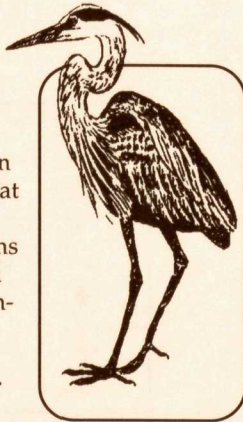
Another endangered species which utilizes the Blackwater area is the peregrine falcon, which is occasionally seen during migration.

WILDLIFE CALENDAR

Events may vary by one or two weeks depending on weather conditions.

January

Geese, swans and ducks remain in the marsh along with hawks, great blue herons, and a few species of shorebirds. Mid-winter observations are best during thaws. Eagles, both bald and golden, are sometimes conspicuous along the Wildlife Drive. Great horned owls are incubating eggs while bald eagles rebuild their nests high in loblolly pine trees.



February

First northward bound migrants appear late in February - killdeer, robins and bluebirds. Eagles laying eggs late in the month.

March

Most migratory waterfowl departing for points north. Masses of red-winged blackbirds pass through; some stay to set up territories.

April

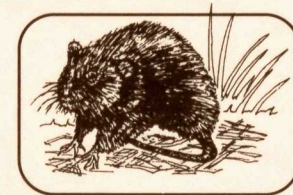
Resident ducks and geese incubating. Majority of migrant marsh birds return by mid-April. Blue-winged and green-winged teal passing through. (Blue-winged are latest in spring and earliest in fall). Fox squirrels reproducing. Eaglets hatching.

May

Migratory songbirds peak in late April and early May with warblers being most conspicuous and abundant. White-tail fawns (usually twins) begin to appear.

June

Ospreys hatching in June. Muskrats (though seldom seen) repopulate the marsh with several litters a year. Eaglets fledge.



July

Local goslings starting to fly. Large quantities of insects being consumed by swallows, kingbirds, and flycatchers. The conspicuous marsh hibiscus (mallow) begins to bloom along marsh edges at end of month.

August

Shore and wading birds increase. Osprey young leaving the nest. Blue-winged teal from the north arrive on southward migration. Some bald eagles disperse northward after breeding season.

September

Ospreys begin leaving the marsh (headed for South and Central America). Waterfowl numbers gradually increase. Egrets and herons accumulate until cold weather pushes them south. Tickseed sunflowers blooming; cattails going to seed. Songbird migration peaks in late September and early October. Toads abundant.

October - December

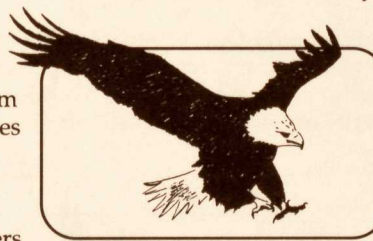
Autumn colors peak. Blackbirds are last of the songbird migrants, peaking in October and November.

Numbers of ducks and geese gradually increase, then peak in late October or November. Tundra swans from NW Canada usually arrive in early November. Several hundred remain all winter.

Breeding season of white-tails is November-February.

Bald eagle numbers increase with the arrival of migrants from the north. Golden eagles also occasionally seen during winter. Waterfowl decrease - some remain all winter, others move south or disperse throughout the Delmarva Peninsula. Burning of the marsh begins for regeneration of specific waterfowl food resources - preparation for another year.

Note: In summer, be prepared for large concentrations of flies and mosquitoes in the woods.



VISITOR ACTIVITIES

Visitor Center - Exhibits and films for daily viewing and an auditorium for special, prescheduled programs.

Wildlife Drive - Five miles of all-weather road along fresh water ponds, woods, fields, and marsh. Walking on the Wildlife Drive is permitted. For safety's sake, visitors are asked to stay within the roadway. Pets on leashes are permitted on the Wildlife Drive and established parking areas.

Observation Tower - This tower overlooks the junction of the Big and Little Blackwater Rivers and their marshlands.

Walking Trails - Interpretive trail leaflets are available at the visitor center. Visitors are reminded that pets are not permitted on the trails.

Marsh Edge Trail - Wheelchair accessible trail loops through and along the edge of the marsh for 1/3-mile. An 80-foot boardwalk extends into the marsh. Located at parking turn-off before Observation Tower.

Woods Trail - Loops through pine and mixed hardwoods for 1/2-mile. Located along Wildlife Drive.