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U.S. Fish & Wildlife Service

Blackwater
National Wildlife Refuge

Delmarva fox squirrel
© Richard Webster

Environmental Education
USFWS

Welcome

This blue goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

Blackwater National Wildlife Refuge, located 12 miles south of Cambridge, Maryland, was established in 1933 as a refuge for migratory birds. The refuge includes more than 27,000 acres, composed mainly of rich tidal marsh characterized by fluctuating water levels and variable salinity. Other habitat types include freshwater ponds, mixed evergreen and deciduous forests, and small amounts of cropland and managed impoundments that are seasonally flooded for waterfowl use.

Originally established for migratory birds, primarily ducks and geese, Blackwater is one of the chief wintering areas for Canada Geese using the Atlantic Flyway. During the peak of fall migration, usually in November, Blackwater and surrounding lands host approximately 25,000 Canada geese, 5,000 snow geese, 500 tundra swan, and 15,000 ducks of various species.

Blackwater is also a haven for one of our nation's endangered species, the Delmarva fox squirrel. In addition, the refuge provides important nesting and wintering habitat for the bald eagle, which was recently removed from the Endangered Species List.

History

Before its designation as a refuge, the marshland along the Blackwater River was managed as a fur farm. Muskrats were the primary species trapped. Most of the woodlands, including the islands, had been timbered. Remains of old drainage ditches and furrows which crisscross in some existing woods indicate past agricultural use.

Wildlife

The varied habitats of Blackwater, from open water to dense woodlands, promote a diversity of wildlife that change in 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 more than 20 duck species. The most common ducks found are mallards, black ducks, blue-winged teal, green-winged teal, wood duck, 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 large 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. The golden eagle is also occasionally sighted on the refuge. Over 85 species of birds breed in the refuge woodlands and surrounding habitat.

Numerous marsh and shore birds arrive in the spring and fall, searching for food in the vast mud flats and shallow waters of the Blackwater river. Ospreys, or "fish hawks," are common from spring through fall; and use nesting platforms that have been placed throughout the marsh. Osprey and eagle interactions are interesting due to their competition for fish resources.

Adult bald eagle in nest
©Mary Konchar

The refuge woodlands provide year-round homes for owls, towhees, woodpeckers, nuthatches, bobwhite and woodcock. Also, a fast growing population of wild turkeys can be seen. The warmer months invite warblers, vireos, orioles, flycatchers, and many others to this same habitat. A bird list for the refuge has been compiled and is available to visitors.

Osprey in nesting platform
©Mary Konchar

Mammals

In addition to its extensive list of birds, Blackwater supports a variety of mammals, including bats, raccoons, rabbits, otters, opossums, skunks, and the elusive red fox. The marshes are home to large numbers of muskrats and, until recently, the larger nutria, a South American rodent introduced in the 1930s. The nutria caused considerable wetland damage, but an intensive trapping effort, begun in 2002, has nearly eliminated the nutria from the refuge. White-tailed deer can sometimes be seen in wooded areas and in fields along the forest edge. Sika deer, a species native to Asia, that were introduced to nearby James Island in 1916, prefer the wet woodlands and marsh. Sika deer are more nocturnal than white-tailed deer and, therefore, are less likely to be seen. Both gray squirrels and the endangered 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 are encouraged, providing an array of foods to meet the nutritional needs of migrating and wintering waterfowl. Although waterfowl hunting is not permitted on the refuge, hunting is allowed on surrounding private lands and state management areas.

Furbearers

A winter trapping program, regulated by the refuge and accomplished by trappers under a special permit, provides protection for fragile marsh vegetation by reducing the impact of foraging furbearers. All management programs are carefully monitored to ensure the best interests of wildlife resources.

Endangered & Threatened Species

Endangered species are a special responsibility at Blackwater. One of these species is the Delmarva fox squirrel which once ranged from southeastern Pennsylvania, south throughout the Delmarva Peninsula. This large, steel-gray squirrel was declared endangered in 1967, and currently only four counties along Maryland's Eastern Shore support natural populations. The loss of suitable woodland habitat (due primarily to land clearing) is the major factor in the squirrels decline. Forest management programs at Blackwater are designed to restore and protect forest habitats that are essential for the long-term viability of this endangered species.

Our national symbol, the bald eagle, once listed as an endangered species, was downgraded to threatened status in 1994, and was removed from the Endangered Species List altogether in June, 2007. Thanks to the hard work

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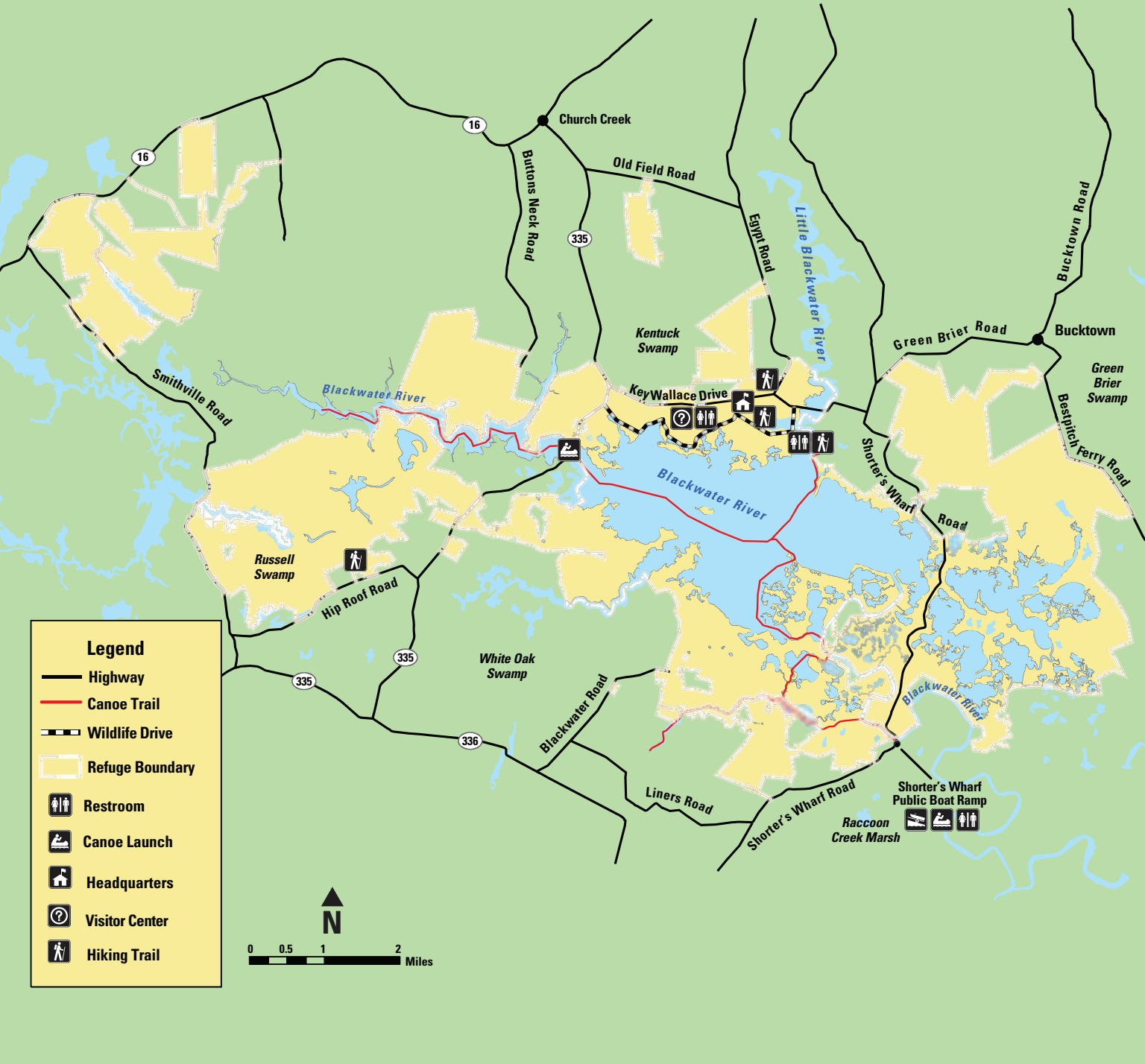

Great blue heron
Maggie Briggs

of the Fish & Wildlife Service and many others, bald eagle numbers at the refuge, in the Chesapeake Bay area, and around the country continue to increase. Like other birds of prey, the eagle's decline stemmed from causes endemic to our times - pesticides, pollution, irresponsible shooting, and human encroachment. Blackwater played an important role in protecting habitat critical for the eagle's recovery. Though no longer considered endangered, the bald eagle will continue to be protected under federal laws.

Wildlife Calendar

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

January

Geese, swans and ducks are present in the marsh along with hawks, great blue herons, and a few species of shorebirds. Midwinter 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 are rebuilding their nests high in loblolly pine trees.

February

First northward bound migrants appear late in February - killdeer, robins, and bluebirds. Eagles lay eggs late in the month. Wintering waterfowl are preparing for the long flight north through intense foraging.

March

Most migratory waterfowl depart for points north. Masses of red-winged blackbirds pass through; some remain to nest. Osprey return from southern wintering grounds and begin constructing nests.

April

Resident ducks and geese are incubating eggs. The majority of migrant marsh birds return by mid-April. Blue-winged and green-winged teal pass through.

Sika deer in brush
© Richard Webster

Red-winged blackbird on cattail
©Mary Konchar

(Blue-winged are latest in spring and earliest in fall). Delmarva fox squirrels are born. Young bald eagles (eaglets) begin hatching. Osprey, wild turkey and northern bobwhite, all begin to nest. Late April and early May heralds peak shorebird migrations.

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. Eaglets start to fledge; this will occur from the end of the month through the middle of June. The first broods of waterfowl appear.

June

Ospreys begin to hatch. Eaglets fledge. Songbirds begin to nest.

July

Local goslings start to fly. Large quantities of insects are consumed by swallows, kingbirds, and flycatchers. The conspicuous marsh hibiscus (mallow) begins to bloom along marsh edges at the end of the month. Osprey young leave the nest.

August

Wading bird numbers increase. Blue-winged teal begin to arrive from the north on their southward migration. Some bald eagles disperse northward after the breeding season.

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

September

Ospreys migrate to South and Central America. Waterfowl numbers gradually increase. Egrets and herons accumulate until cold weather pushes them south. Tickseed sunflowers bloom; cattails go to seed. Songbird migration peaks in late September and early October. Toads are abundant.

October - December

Autumn colors peak. Blackbirds, the last of the songbirds to migrate, peak in October and November.

Abundance of ducks and geese gradually increases. Peaks occur in late October or November. Tundra swans from Northwest Canada usually arrive in early November. Several hundred remain throughout the winter.

White-tailed and sika deer breed from October to December.

Bald eagle numbers increase with the arrival of migrants from the north. Golden eagles are occasionally seen during winter.

Waterfowl numbers decrease. Some remain all winter, others move south or disperse throughout the Delmarva Peninsula. Prescribed burning of the marsh begins for regeneration of specific waterfowl food resources.

Wood duck drake
© Richard Webster

Visitor Activities

Visitor Center

The renovated visitor center features wildlife exhibits, a second floor observation area, a library, a butterfly garden, a bookstore, and a gift shop.

Wildlife Drive

The drive consists of a six and a half mile loop or three and a half miles of all-weather road that winds along fresh water ponds, through woods, past fields, and adjacent to the marshes. Walking and biking on the Wildlife Drive is permitted. For safety's sake, visitors are asked to stay alongside the roadway.

Walking Trails

Interpretive trail leaflets are available at the visitor center or the trail-head kiosks. The *Marsh Edge Trail* and the *Woods Trail* are located on the wildlife drive. The *Marsh Edge Trail* is a 1/3 mile wheelchair accessible paved path along the edge of the Little Blackwater River marshes. The *Woods Trail* loops through prime Delmarva fox squirrel habitat of pine and mixed hardwoods for 1/2 mile. Located at the corner of Key Wallace Drive and Egypt Road, the 2.7-mile *Key Wallace Trail* passes through a demonstration forest and some of the oldest trees on the refuge. The *Tubman Road Trail*, located off of Hip Roof Road, takes visitors 1.5 miles through a mixed landscape of forest, old fields, and wet sloughs. Visitors are reminded that pets are not permitted on the trails.

Bike Route

Biking is permitted along the entire length of the Wildlife Drive. Directions and regulations are available at visitor center and refuge headquarters.

Fishing/Boating

Boating is permitted April 1 - September 30. Quality of fishing ranges from poor to fair. No fishing is allowed from the shore. Further information on fishing/boating regulations can be obtained at the visitor center or refuge headquarters.

Paddling Trails

Three marked canoe/kayak trails totaling over 20 miles are available for paddling. Boats may be launched from designated areas only. Detailed Canoe Trail maps may be purchased at the vistor center

Educational Opportunities

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

Hours

Visitor Center - Open 8:00 am to 4:00 pm, Monday - Friday; 9:00 am to 5:00 pm, Saturday - Sunday. Closed Thanksgiving and Christmas.

Wildlife Drive and outdoor facilities are open daily, dawn to dusk (year-round).

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

Passes are available at the visitor center and include either the current Federal Duck Stamp valid July 1 to June 30 ($15); the Interagency Annual Pass ($80) and the Blackwater NWR Pass ($12) valid one year from date of issue; the Interagency Senior Pass for those 62 years or older ($10); or the Interagency Access Pass free for people who are blind or permanently disabled.