

U.S. Fish & Wildlife Service

# Roanoke River

*National Wildlife  
Refuge*



*The Roanoke River National Wildlife Refuge situated along the Roanoke River in northeastern North Carolina is part of a 49,766 acre protected area involving the U.S. Fish and Wildlife Service, North Carolina Wildlife Resources Commission and The Nature Conservancy. It is one of over 500 refuges that make up the U.S. Fish and Wildlife Refuge System, an extensive network of lands and waters protected and managed especially for wildlife and its habitat.*



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

### **Introduction**

Roanoke River National Wildlife Refuge, which consists of 17,500 acres, was established in August 1989 to protect and enhance forested wetlands with high waterfowl value. The extensive floodplain in the lower reaches of the Roanoke River is considered to be the largest intact, and least disturbed, bottomland forest ecosystem remaining in the Mid-Atlantic Region.



*photo: Jerry Holloman*

*A blackwater creek*

### **River System Hydrology**

Water is the driving force of bottomland hardwood communities. Annual floods over the centuries have overtopped the riverbanks, dropping the coarser, heavier suspended sediments from upriver to form the levees and ridges of the floodplain resulting in forested communities characterized by sugar berry, sycamore, green ash, beech, cottonwood, elm, sweetgum, loblolly pine, and mesic oak and hickory species. The finer, lighter sediments (silts and clays) gradually settle in the slack water areas ponded behind the levees supporting stands of bald cypress and tupelo gum.

*cover photo:  
wood thrush*



photo: USFWS

Beaver

Patterns of water flow within the alluvial systems such as the Roanoke River are distinctly seasonal when unregulated. However, near the Virginia-North Carolina border, a series of three reservoirs established for hydroelectric power and flood control now regulate the flow of water, deviating from historical flow patterns. These are the John H. Kerr Reservoir, Lake Gaston and Roanoke Rapids Lake from upstream to downstream, respectively.



photo: Jean Richter

Yellow-crowned night heron

### Mammals

#### Wildlife

The combination of hard and soft mast producing trees and the availability of cover provides habitat for white-tailed deer, gray squirrel and marsh rabbit on the floodplains of the refuge. Likewise, a remnant population of black bear is found along the lower river in one of the few remaining expanses of habitat for this species in the state. Furbearers present include raccoon, mink, nutria, muskrat, otter, fox, bobcat, beaver and opossum.

### Birds

At least 191 birds including 88 breeding species have been identified on or near the refuge. The Roanoke River floodplains are believed to

support the highest density of nesting birds, especially songbirds, anywhere in North Carolina.

Exceptional birding is possible on the Refuge from March through June, the spring migration and nesting season. Some of the more notable species include cerulean and Swainson's warblers, Mississippi kite and our national symbol, the bald eagle that recently returned to nest at the mouth of the river after an absence of many years.

The refuge supports at least three active heron rookeries, including the largest inland rookery in the state. The red-shouldered hawk and barred owl are characteristic raptor species found in the wooded swamps and bottomland hardwoods. The ancient river ridges and terraces provide excellent food and cover for feeding and nesting turkeys.

Other game species that can be found sporadically in the refuge are woodcock and bobwhite quail. Nesting wood ducks and hooded mergansers can be found regularly in and around the refuge. Other frequently observed waterfowl species include pintail, wigeon, gadwall, green-winged teal, mallard, black duck, blue-winged teal, ring-necked duck, shoveler, bufflehead, and Canada goose.



photo: Betty Darling Cottrille

Scarlet tanager



photo: USFWS

Hooded warbler

### Fish

The Roanoke River and the associated refuge floodplain wetlands are especially important to anadromous fish, marine species that ascend rivers to spawn. Anadromous fish include striped bass, blueback herring, alewife, hickory and American shad.

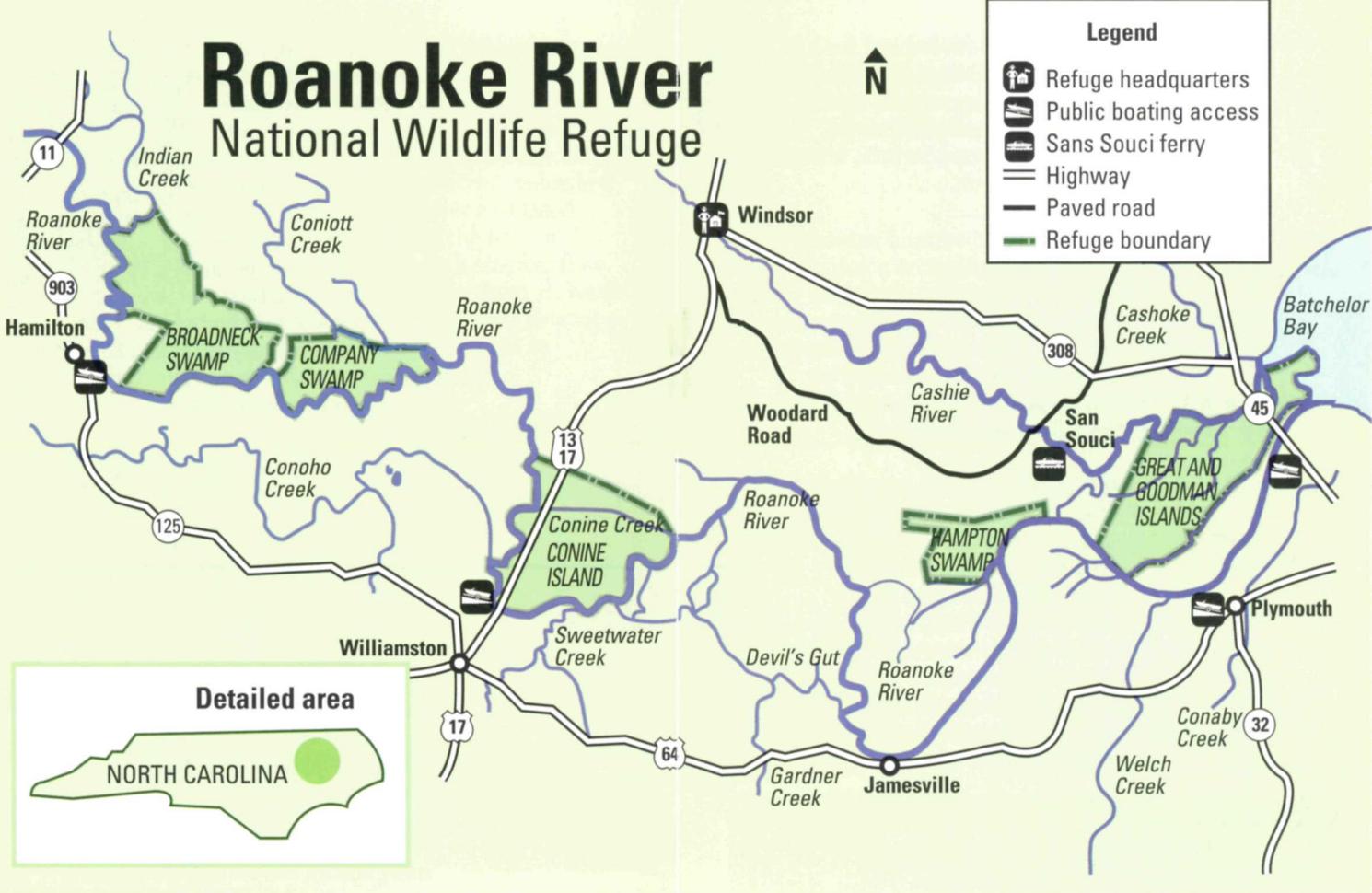


photo: USFWS

Bald eagle

In addition to the anadromous species which frequent the river during the spawning season, the Roanoke River and its tributaries

# Roanoke River National Wildlife Refuge



## Refuge Regulations

No littering—help keep your refuge clean!

Disturbing people, wildlife, plants and government property with vehicles, weapons, light and sound equipment or personal conduct is prohibited.

Firearms, weapons or fireworks are prohibited.

Hunting is by special permit only. Contact the refuge office or North Carolina Wildlife Resources Commission for information.

Pets are prohibited. Retrieving dogs used during the refuge waterfowl hunts must be under control at all times.



The refuge is closed to the general public during permitted hunts for safety reasons. Contact the refuge office for details.

Special wildlife observation areas along Highway 13/17 are available seasonally. Contact the refuge office for information.

The refuge is open daily during daylight hours.

Primitive camping is allowed only in conjunction with refuge hunts.

Special fishing regulations apply. Contact the refuge office for information.

provide excellent habitat for a diverse assemblage of resident fish species such as crappie, catfish, longnose gar, carp, shiners, largemouth bass, darters, bluegill, and white perch.

### *Reptiles and Amphibians*

The variety of wetland habitats found on the refuge support a unique diversity of reptiles. Snapping turtle, yellow-bellied turtle, Eastern mud turtle and the rare spotted turtle, along with the five-lined skink, newts, salamanders, toads and frogs can all be found.

Associated with the floodplains is a diversity of nonvenomous snakes ranging from the brown water to garter snake. However two types of venomous snakes can be encountered. These include the Eastern cottonmouth or water moccasin, associated more with inundated sites, and the copperhead, normally associated with drier, upland sites.



photo: USFWS

*Cypress/tupelo swamp*

### **Monitoring River Resources**

Human manipulations of the river's floodplain during past logging efforts and altered flow regimes have created an imbalance within the river's ecosystem. The result of these alterations is that areas which were flooded rarely flood now, and those

which do flood do so for a longer time period.

Refuge staff are researching the effect of asynchronous river flow patterns on anadromous fish utilization of refuge floodplain fish spawning habitat and on water quality parameters in the river proper and its associated tributaries. Flushing oxygen depleted waters from the backswamps aseasonally is believed to contribute to low dissolved oxygen in the downstream main channel.

### **Visitor Opportunities**

Visitors to the refuge may participate in a variety of activities including fishing, boating, hiking, photography, wildlife observation and hunting. The refuge is most easily accessed by boat. Due to the intermittent swales and ridges found within the vast floodplain, limited access by vehicle is only available from Highway 13/17. See map for details.



photo: Jerry Holloman

*White-tailed deer*

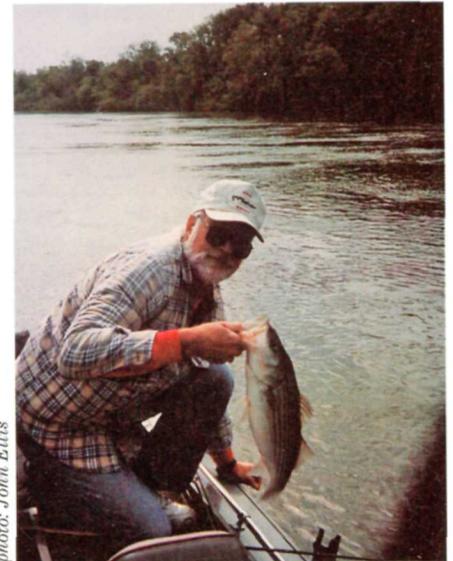


photo: John Ellis

*Striped bass catch*

Fishing is permitted in the Roanoke River proper and selected tributaries within the refuge boundaries.

The refuge hosts deer, waterfowl, small game and turkey hunts by permit only on selected refuge lands. Additional information is available from the refuge office.



photo: USFWS

White-tailed deer

Hikers, photographers and wildlife viewers are also invited to take in the sights and sounds. Everyone is reminded to be alert for venomous snakes and other hazards while enjoying your refuge.

### Wildlife Calendar

*Winter  
(December-  
February)*

Wintering waterfowl can be observed in forested wetlands and on the river. Bald eagles can also be observed in the river's corridor.

*Spring  
(March-May)*

Fishing is at its prime with striped bass, shad, and river herring making their spawning runs up the river. Wild turkeys can be heard gobbling. Neotropical migrants, resident songbirds and herons are nesting. Wood ducks and hooded mergansers can be seen in nesting habitat. Osprey chicks are hatching.



photo: Jerry Holloman

Atamasco-lily

*Summer  
(June-August)*

Soaring Mississippi kites can be seen feeding overhead. Barred owl hoots can be heard echoing through the bottomland hardwood forests. Fishing for bream and catfish is at a prime. Young herons can be seen flying the river's corridor.



photo: Jean Richter

Tiger swallowtail

*Fall (September-  
November)*

Neotropical birds are migrating south. White-tailed deer bucks are



photo: Jean Richter

Great egret

polishing their antlers, approaching rut. Fall colors dress the river corridor.

### For more information contact:

Refuge Manager  
Roanoke River NWR  
P.O. Box 430  
310 US 13/17 S.  
Windsor, NC 27983  
252/794 3808

Monday-Friday  
Closed holidays  
8:00 am-4:30 pm

Roanoke River National Wildlife Refuge  
P. O. Box 430  
310 US 13/17 S.  
Windsor, NC 27983  
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April 2000



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