

U.S. Fish & Wildlife Service

# Alligator River

*National Wildlife Refuge*



*The National Wildlife Refuge System is an extensive network of lands and waters protected and managed especially for wildlife and its habitat. Refuges stretch across the United States from above the Arctic Circle in Alaska to the subtropical waters of the Florida Keys and beyond to the Caribbean and South Pacific. The National Wildlife Refuge System is administered by the U.S. Fish and Wildlife Service which protects and manages over 500 refuges for wildlife and for people to enjoy.*

*Alligator River National Wildlife Refuge has large acreage of pocosin habitat. "Pocosin" is a native American word meaning "swamp on a hill." These wetlands are characterized by deep organic soils resulting in peat deposits that can hold vast quantities of water. However, when dry, these pocosins are highly susceptible to wildfire, with the possibility of a subsurface fire that can burn for months.*

### **Introduction**

Alligator River National Wildlife Refuge, established in 1984 and located on the mainland of eastern North Carolina, contains approximately 152,000 acres. The refuge was established to protect and manage unique forested wetland communities and associated wildlife species.

### **Background**

Long ago, the area that now comprises Alligator River National Wildlife Refuge was considered by most people to be a vast wasteland. Visitors to the Outer Banks from the west made special effort to complete their journeys before dark, lest they risk a vehicle breakdown in "no-man's land." Frightening stories of bears, snakes, and other creatures coupled with the mile after uninhabited mile on both Highways 64 and 264 made the casual traveler cautious, if not suspicious, of being stranded there.



Joe Foltz

In the late 1970's, biologists began to realize that many wetland communities were being destroyed at an alarming rate, including the





pocosins that covered almost half of this area. Before that time, no one had made an effort to determine exactly what role these wetlands played in the overall scheme of environmental complexities. A closer look at these sponge-like wetlands revealed a significant role indeed. In fact, the functions of the pocosin impacted the quality of the environment in a big way—especially relating to diversity of wildlife and water quality.



Throughout the coastal plain, pocosins were drained and then logged or farmed. Vast areas were clear-cut for the old growth cypress or Atlantic white cedar. The market price on this lumber supported the costly mechanics of retrieving it from such an inaccessible habitat. At the same time, “superfarms” were springing up throughout the region. Pocosins were going, going,....

Through the concerted efforts of several private conservation organizations and federal and state land management agencies, a campaign was launched to stop the destruction of these pocosin habitats before it was too late. Alligator River National Wildlife Refuge was established through a donation of 118,000 acres from Prudential Life Insurance Company. It has reached



its current size through purchases made with Congressional appropriations. The refuge was set aside to protect and manage the area’s unique wetlands and the wildlife species that use them. Also targeted in the objectives for the new refuge were endangered and threatened species, waterfowl, black bear, and both consumptive and non-consumptive wildlife dependent recreation.



### A Place for Wildlife

Many species of wildlife call Alligator River National Wildlife Refuge home. The refuge bird list suggests that 200 species of birds spend at least a portion of their time here. Many neotropical migrants, such as prothonotary

warblers, prairie warblers, Swainson’s warblers, worm-eating warblers, and red-eyed vireos nest in the thick pocosin vegetation. Wood ducks, barred owls, and other cavity nesters seek the old trees inevitably left by loggers due to their inaccessible locations. Endangered and threatened species found on the refuge include the American alligator, American bald eagle, peregrine falcon, red wolf, and the red-cockaded woodpecker. The refuge is also home to one of the largest remaining concentrations of black bear along the mid-Atlantic coast.

The role of management is significant on this refuge. Before man began altering the environment, nature provided processes to recycle nutrients and provide a network of



living spaces to meet the needs of a variety of wildlife. Wildfires caused by lightning provided diverse habitats, which provided homes for many species. Man's biggest impact on wetland habitats has been the long term tendency to ditch and drain. Changing the hydrology of the entire system impacted every part of that system. Peat soils were meant to hold water. Besides the subtle impacts on the species that were dependent on the original water regime, draining these peat soils caused a tremendous fire hazard. Fires that burn in the drained pocosins are very difficult to control. Without raising the water table for the entire area, firefighters are helpless to control these fires that can burn underground for miles and for months.

### Red Wolf Program

The red wolf was in trouble long before Alligator River National Wildlife Refuge existed. Native to the southeastern part of the United States, the species had been eradicated from all but a small segment of its original range. By the early 1970's, the U.S. Fish and Wildlife Service had captured the few remaining red wolves and declared the species extinct in the wild. Through captive breeding, red

wolves were maintained while a suitable location was found to reestablish them back into the wild. For red wolves, Alligator River National Wildlife Refuge offered hope.



By 1986, a five-year experiment to rebuild a self-sustaining red wolf population in the wild began on the refuge. During the experiment, red wolves proved that they could adapt to life in the wild and that they could find food and avoid people. That was the necessary combination for success. Today, red wolves roam wild and free in eastern North Carolina.

### Management Activities

#### *Hydrological Restoration*

A major refuge objective is to restore historical water levels and natural flooding regimes that have been altered by past logging and farming operations. This is being accomplished by plugging man-made drainage ditches and installing water control



structures that allow the seasonal manipulation of water levels, thus mimicking historical natural conditions. To enhance sheet flow through wetlands, culverts are being installed in key locations underneath roads. These activities not only restore valuable fish and wildlife habitat and increase biodiversity, but also reduce wildfire danger.



Bonnie Strausser

#### *Moist Soil Management*

A 5,100-acre agricultural area, a former “superfarm”, was added to the refuge several years after its establishment. This farmland offered a turn-key operation for waterfowl management. Currently, the area is divided into moist soil management units, agricultural lands (farmed by cooperative farmers), and semi-permanent water. Approximately 1,800 acres of farmland are diked and have water control structures. Although management of these moist soil units focuses on waterfowl, numerous other wildlife species benefit. The remaining 3,000 acres of farmland are actively farmed through our cooperative farming program. Good water management is critical to the success of both moist soil management and farming. Again, by providing diverse habitats, the refuge provides for many wildlife species.

#### *Wildlife Censuses, Inventories, and Nesting Programs*

A number of census programs are in place to monitor various wildlife populations ranging from American alligators to neotropical migrants.

The black bear population is monitored through track count surveys and use of bait station lines. Monitoring red-cockaded woodpeckers on refuge lands is especially challenging due to the pond pine pocosin habitat. Wood duck boxes have been erected throughout waterways of the refuge to provide nesting cavities.



Tom Eagle



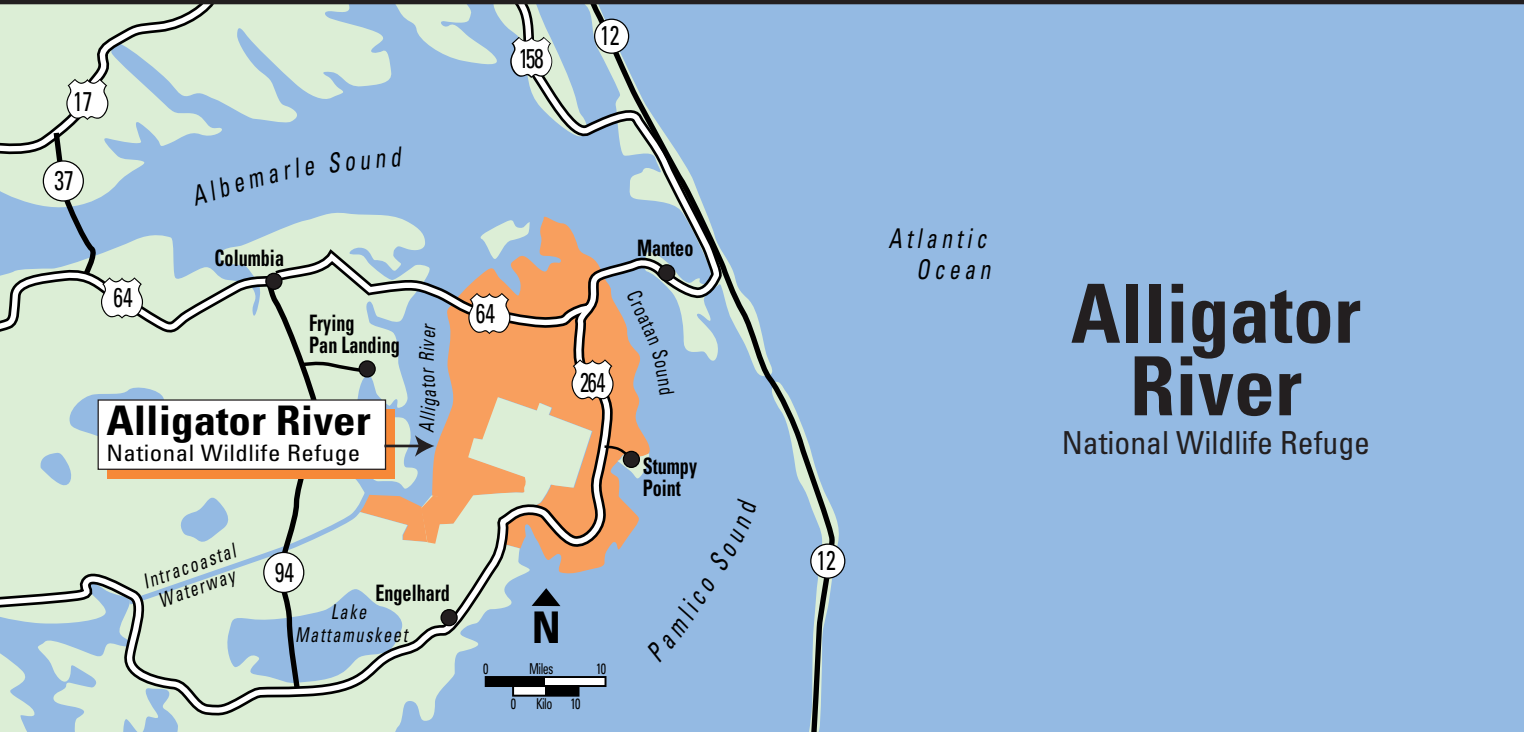
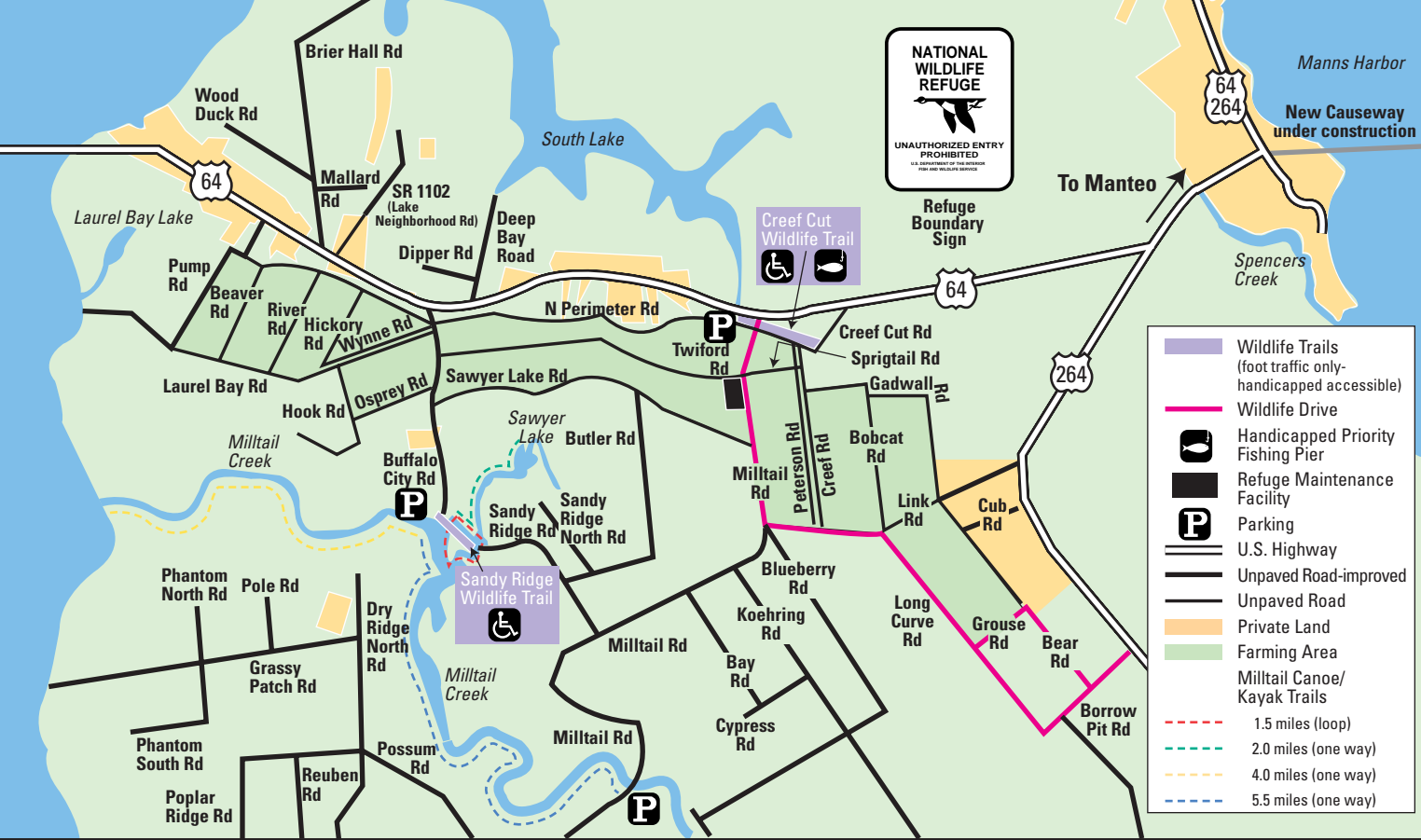
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#### *Waterfowl Banding*

The refuge bands wood ducks in the late spring and early summer. Depending on the focus species for the Service or special research projects, a number of waterfowl species may be targeted for banding during any given year.

#### *Atlantic White Cedar Reforestation*

To assess the status of white cedar regeneration in clear-cuts and natural stands, a research project has recently been completed. Data from this project will be used for management decisions regarding this habitat type. Another study began in 1998 to assess physical and ecological functions of the white cedar forests. The refuge inherited over 8,000 acres of white cedar in various stages of regeneration.



*Bottomland Hardwood Restoration*  
Historically, bottomland hardwood communities occupied much of the mineral soils found on the refuge. Habitat management actions will be directed at restoring as much of this valuable wildlife habitat as possible on mineral soils, as opportunities arise.

*Special Studies*  
In cooperation with universities, special wildlife or habitat studies are undertaken on the refuge. Examples of these studies include monitoring and evaluating the resident black

bear population, evaluating the effects of agricultural practices on bobwhite quail populations, and ecological studies. The refuge encourages outside entities to propose wildlife projects on refuge lands. Selected projects must benefit the refuge, as well as provide needed information on wildlife populations or habitats.

#### *Fisheries Management*

Little is known about fisheries resources on the refuge; recreational fishing is a popular activity. Fisheries resource definition and development of a fisheries management plan are underway.

#### **Alligator River National Wildlife Refuge . . . a place for people, too!**

Alligator River National Wildlife Refuge is open to public use year-round. Though remote and inaccessible, the refuge offers a challenge to the adventurous outdoor person. Birders, photographers, and lovers-of-the-outdoors find the refuge intriguing, but somewhat



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Bonnie Strauser

difficult in which to maneuver. Many roadways are open to the public for walking or driving. Caution should be used on refuge roads, as they may be impassable during wet weather.

Creef Cut Wildlife Trail and Fishing Area is fully handicapped accessible. This half-mile, paved trail leads to a 50-foot boardwalk with an observation platform that overlooks Creef Moist Soil Unit and a 250-foot boardwalk over a freshwater marsh. Look for waterfowl during the winter months. You may also see black bear, woodpeckers, and birds of prey. At the beginning of the trail, behind the interpretive kiosk, is a handicapped accessible fishing dock. All are welcome to fish here; however, the dock is designated "handicapped priority." Fish are naturally replenished from South Lake.



Bonnie Strauser





Bonnie Strauser

Users of the Milltail Creek Canoe/Kayak Trails indicate that perhaps the best way to see the refuge is by water. Canoes, kayaks, or small motor boats may be launched from the south end of Buffalo City Road. Four trails, totaling 15 miles, have color-coded markers to guide visitors through remote waterways where a variety of wildlife and habitat types can be viewed.

Sandy Ridge Wildlife Trail is also a fully handicapped accessible trail. It offers a 2,300-foot boardwalk and an overlook to view Milltail Creek. The trail dead-ends one-half mile from its beginning. It wanders through Atlantic white cedar stands and by beaver cuttings, wood duck boxes, and prothonotary warbler nesting areas. Keep your eyes peeled for rare sun dews. During the winter months, you might even hear the howl of a red wolf!



Larry Ditto

Hunting and fishing are very popular activities on Alligator River National Wildlife Refuge. Hunting is allowed on most of the refuge during State seasons and in accordance with state regulations. A permit is required to hunt on the refuge. While white-tailed deer is the main species hunted, a variety of small

game is also hunted, such as squirrels, rabbits, quail, and mourning doves. A current hunt brochure will provide the necessary permit and up-to-date information about the hunting program. Fishing is also allowed on the refuge in accordance with State regulations.



## Regulations

The refuge is open during daylight hours only (from 1/2 hour before sunrise to 1/2 hour after sunset).

Camping, open fires, feeding or baiting of wildlife, swimming in refuge canals, or entering any area posted with "Area Closed" signs is prohibited.

All domestic pets (dogs, cats, horses, etc.) must be properly confined, leashed (10-foot maximum), or haltered and under owner control at all times.

Littering or dumping of garbage, refuse, sewage, debris or other wastes or poisons is prohibited.

The use of a spotlight, automotive headlight, or other artificial light to spot, observe, locate, or take any animal on the refuge is prohibited.

Taking, possession, injuring, disturbing, damaging, destroying, or collecting any plant or animal (or attempting these actions) is prohibited.

Destroying, defacing, damaging, disturbing, or removing any private or public property, including any natural object or artifact is prohibited. The use or possession of metal detectors or similar devices is prohibited.

Disturbing, molesting, or interfering with any person engaged in an authorized activity is prohibited.

Entering or remaining on the refuge when under the influence of alcohol or a controlled substance is prohibited.

Begging or soliciting in any form or conducting a commercial enterprise on the refuge is prohibited.

Carrying, possessing, or discharging firearms, fireworks or explosives is prohibited. Firearms may be possessed, used or transported only

by persons engaged in public hunting or by persons carrying unloaded firearms that are either dismantled or cased.

Carrying, using, or possessing cross bows, bows and arrows, air guns, spears, gigs, or other weapons is prohibited. Some of these weapons may be legal to use for hunting or fishing (see current refuge hunting permit and state regulations).

Hunting and fishing are subject to state and local regulations, seasons and bag limits. A refuge permit is required for hunting.

The speed limit on all refuge roads, unless otherwise posted, is 35 miles per hour. State traffic laws that govern the use and operation of vehicles apply on the refuge.

Traveling outside of designated routes of travel is prohibited. Designated routes of travel are shown on the refuge maps or as posted with "Road Closed," "No Vehicle," or "Foot Traffic Only" signs.

Operating any vehicle or boat that does not bear valid license plates or identification numbers and that is not properly lighted, certified, registered, or inspected according to state laws is prohibited. ATV's (3-wheelers, 4-wheelers, dirt bikes, etc.) are prohibited.

Stopping or parking a vehicle (either attended or unattended) on a road, trail or firelane such that it blocks the free movement of other vehicles is prohibited.

In addition to these provisions, all state laws, county codes, and Title 50 of the Code of Federal Regulations apply on the refuge. If you have any questions about the legality of any activity, please contact the refuge manager at 252/473 1131.

John and Karen Hollingsworth ©



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Larry Ditto





## *You can help!*

*By obeying all refuge, state, and local regulations.*

*By respecting this unique place. Leave only footprints!*

*By sharing your conservation ethic with your friends.*

*By volunteering your time to help with refuge programs — biological, public use, or maintenance.*

*By joining the Coastal Wildlife Refuge Society—the refuge's non-profit support group. Your membership fees and donations (100%) benefit refuge programs.*

*Coastal Wildlife Refuge Society  
P.O. Box 1808  
Manteo, NC 27954  
[coastal-wildlife@outer-banks.com](mailto:coastal-wildlife@outer-banks.com)*

*Note: an audio tour tape or CD is available for purchase by contacting the Society or the refuge prior to your visit, or from the Pea Island National Wildlife Refuge Visitor Center on Hatteras Island.*



**Alligator River  
National Wildlife Refuge  
P.O. Box 1969  
Manteo, NC 27954  
252/473 1131  
Email: [alligatorriver@fws.gov](mailto:alligatorriver@fws.gov)  
<http://alligatorriver.fws.gov>  
<http://northcarolina.fws.gov>**

**U.S. Fish & Wildlife Service  
1 800/344 WILD  
<http://southeast.fws.gov>  
<http://refuges.fws.gov>**

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CELEBRATING A  
**CENTURY**  
of CONSERVATION

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