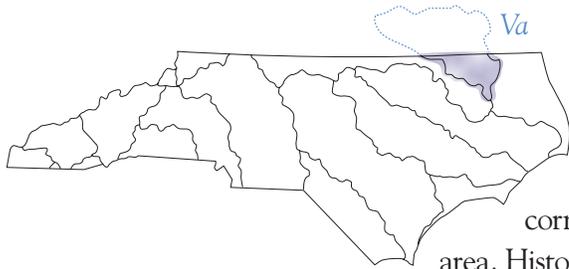
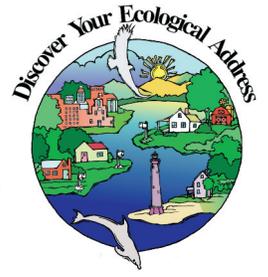


CHOWAN RIVER BASIN

The Chowan River Basin is a region of vast hardwood swamps and tea-colored rivers. It is a place where fish were once currency and rivers were once highways.



Since Colonial times, fishermen have netted legions of herring, shad and striped bass during the fishes' spring spawning runs into freshwater rivers. These tributaries also served as pathways of trade, through which timber, fish, tobacco, corn and animal hides left the thriving ports of the area. Historians believe homesteaders traveled south from the Jamestown, Va., area to settle the mouth of the Chowan River.

Bobcat



BILL LEA

BILL LEA

Before European settlement, the Chowan River was home to Algonkian Indians, who lived for centuries on the riverbanks—the Weapemeoc on the west shore, the Chowanoke on the east. They, too, fished the bountiful waters and farmed the fertile soils.

The waters of the basin are still known for some of the best fishing in the state. Largemouth bass, bluegill, chain pickerel, black crappie, sunfish, perch and herring are the most sought-after species. The Chowan River is often called the capital of the “river herring” fishery.

profile:

Total miles of streams and rivers: 791

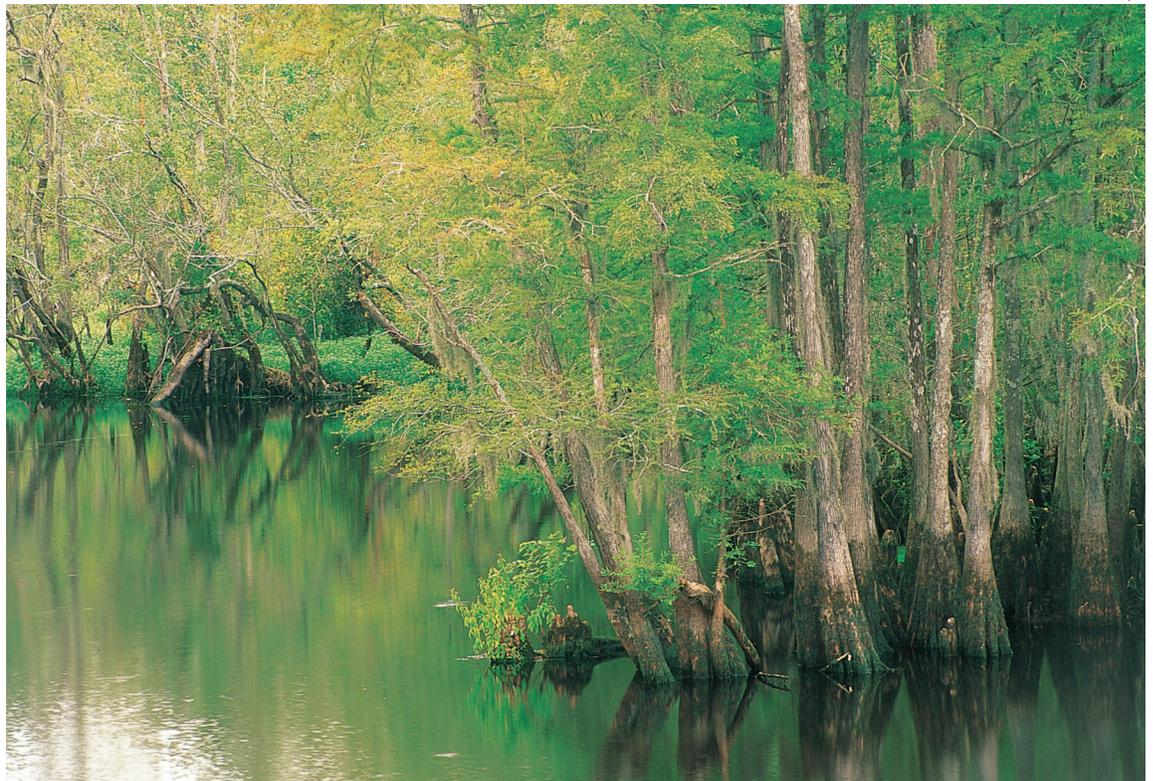
Total acres of estuary: 15,600

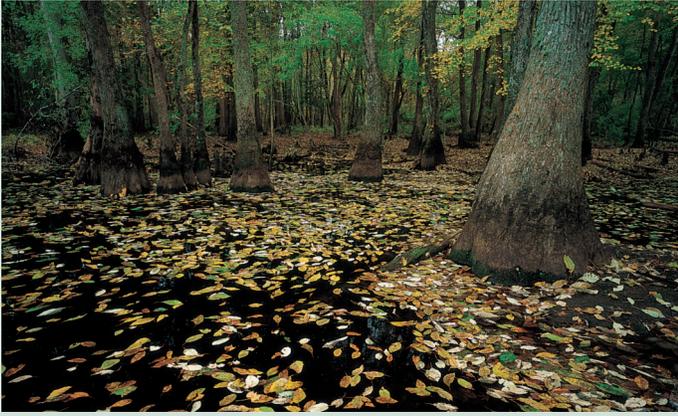
Size: 1,298 square miles

Population: 61,548 (2010 U.S. Census)

Cypress trees on Chowan River (below and left)

CHARLES BRASWELL, JR.





GEORGE HUMPHRIES

Enchanted Forest

*M*erchants Millpond State Park is a mystical place where ancient bald cypress trees and draping Spanish moss wrap around a 760-acre millpond nearly 200 years old. The floating leaves of water lilies meet knobby cypress knees at the surface of the still, black water. The pond's upper end contains a grove of 800-year-old bald cypresses and some of the



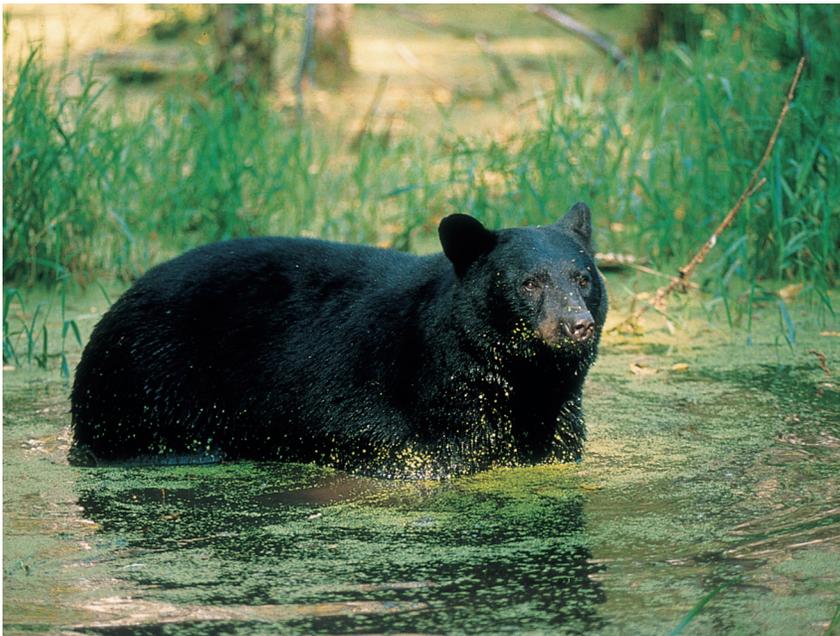
GEORGE HUMPHRIES

state's largest water tupelos. More than 200 species of birds have been recorded, and waterfowl abound in winter. Water moccasins, or "cottonmouths," proliferate in the warm months. Other inhabitants include alligators, black bears, minks, gray foxes and river otters.

A black bear wades through duckweed in a swamp.

The term is applied to both blueback herring and alewife, anadromous species that live as adults in the open ocean but swim back to the freshwater streams of their birth to breed. As recently as three decades ago, more than 12 million herring were processed annually in the town of Colerain. Early settlers ate their herring boiled, fried or corned (cured by salt). Many traded barrels of herring for sugar, rum and other goods. Though the population and commercial harvest of herring have drastically declined, it is still a spring tradition for locals to fry this fish-of-little-flesh to a crisp and eat it bones and all.

BILL LEA



The Chowan River proper originates at the North Carolina-Virginia border where the Blackwater and Nottoway rivers meet. Narrow and lively at its source, the 50-mile-long Chowan flows southeast past such small towns as Winton and Colerain before broadening to nearly two miles wide where it meets the Albemarle Sound near Edenton. Along with the Roanoke River, it supplies most of the fresh water to the sound, which is part of the second-largest estuary system in the United States (the Albemarle-Pamlico Estuary). Only the Chesapeake Bay is larger in area. Major tributaries in the basin include the Meherrin and Wiccacon Rivers and Potecasi, Ahoskie, Bennetts, Indian and Rockyhock creeks.

*Edenton Bay and
Albemarle Sound*



KEN TAYLOR, WILDLIFE IMAGES

DOUG WECHSLER, VIREO



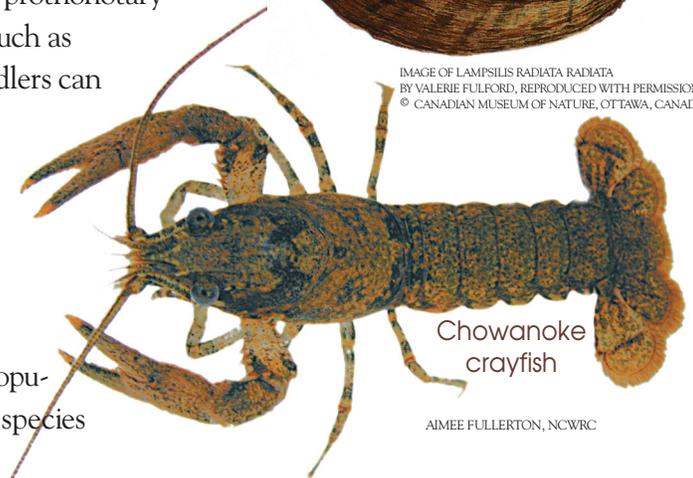
Ospreys are among several fish-eating birds that have made a comeback since the ban on the pesticide DDT in the United States.

One of the most extensive swamp forests in North Carolina, Chowan Swamp, lies along the northeast shore of the Chowan River. Between 1973 and 1994, The Nature Conservancy worked with Union Camp Corporation and Georgia-Pacific Corporation to protect almost 11,000 acres now owned by the N.C. Wildlife Resources Commission, the N.C. Forestry Foundation and the N.C. Division of Parks and Recreation. Most of the swamp is forested in swamp tupelo and red maple, with a narrow strip of bald cypress and water tupelo along the river. Freshwater marshes at the mouths of Bennett’s, Sarem and Catherine creeks contain large patches of prairie cordgrass, a significantly rare species in North Carolina. Wild rice and arrow arum grow there too. The swamp hosts breeding “neotropical” migratory songbirds, such as prothonotary and Swainson’s warblers, and mammals such as black bears, bobcats and river otters. Paddlers can access this wilderness through several blackwater streams.

The state’s Natural Heritage Program considers 100 miles of the Chowan and its tributaries significant aquatic habitat because of diverse, rare and vulnerable populations of freshwater mussels. Five mussel species



IMAGE OF LAMPISILIS RADIATA RADIATA BY VALERIE FULFORD, REPRODUCED WITH PERMISSION; © CANADIAN MUSEUM OF NATURE, OTTAWA, CANADA



Chowanoke crayfish

AIMEE FULLERTON, NCWRC

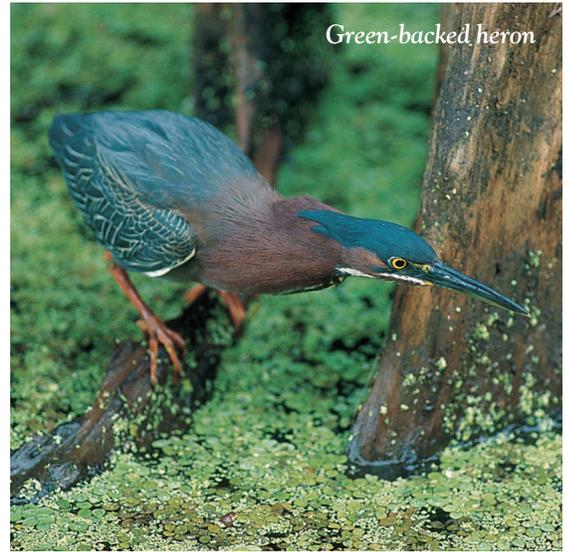
THE Kudzu of the WATER

Hydrilla, originally from Asia, showed up in North Carolina waters more than 30 years ago. A small fragment of hydrilla can grow into a whole colony of plants and clog a waterway from top to bottom in just a few years, damaging fisheries and vegetation by creating a tangled web that smothers aquatic species and blocks sunlight. Once the weed becomes established in an area, boating and water recreation becomes nearly impossible. Though the plant can spread by natural causes, the most common cause of spreading is by human activities. Signs posted on public boat ramps advise boaters about the need to inspect boats, trailers and gear and to remove any sign of the weed before leaving the site. Eradicating the plant through the use of herbicides or by using a fish called grass carp is an expensive and lengthy process. Hydrilla has been a serious problem in the Roanoke River Basin since the 1990s. It is now spreading within the Chowan and beginning to colonize shoreline along the Albemarle Sound. Biologists fear that it could find its way into pristine lakes such as those in and around Pocosin Lakes National Wildlife Refuge.



EDENTON-CHOWAN CHAMBER OF COMMERCE

Cannon's Ferry Heritage River Walk is near the site of a historic boomtown herring fishery.



Green-backed heron

BILL LEA

are state-listed as threatened: the triangle and alewife floaters, the eastern lampmussel, the eastern pondmussel and the tidewater mucket. The Chowanoke crayfish, a resident of sluggish, woodland streams of the basin, lives elsewhere only in southeastern Virginia. The Atlantic sturgeon is listed federally as an endangered species, though it hasn't been recorded in the Chowan River for more than 100 years. The red-cockaded woodpecker is another federally endangered species in the basin. The bald eagle, American alligator and coastal plain subspecies of the Rafinesque's big-eared bat are state-listed as threatened.

State officials in charge of monitoring water quality find the condition of the basin's waters generally good, so it's hard to believe that the Chowan River was once declared "dead." In 1972, the Chowan was the site of the first large-scale algae bloom in coastal North Carolina. Thick, green scum swallowed the lower half of the river. Depleted oxygen levels caused by the decomposing blue-green algae killed fish, and fish diseases were rampant.

For the past two decades, concerned residents and scientists have worked to restore water quality. A local group of residents began monitoring the river. They alerted officials to problems, attended public meetings and spotlighted possible polluters. Research indicated that excess levels of nitrogen and phosphorus in wastewater and runoff contributed greatly to the river's problems. In 1979, the Chowan became the first river basin in North Carolina to receive the "nutrient sensitive waters" classification. The state's Division of Water Quality recommended reductions in the amounts of phosphorus and nitrogen that wastewater treatment systems were allowed to discharge into the river.



Gray fox

Parker's Ferry

The community of Parker's Ferry in Hertford County is the site of a two-car ferry from the 1930s. From a ramp lined with water lilies off Secondary Road 1306, the ferry still takes passengers across the mouth of the Meherrin River. Parker's Ferry is also home to the Meherrin Indians, "the people of the muddy waters." After they were assigned to a reservation here in 1726, tribe members disbanded and moved into the surrounding swamps. By concealing their identities, they and their descendants became an integral part of the area's economy. The Meherrin's descendants reorganized in 1975 and gained official recognition as a tribe in 1986.



BILL LEA

Area farmers have taken voluntary measures to reduce soil erosion and runoff of fertilizer and animal waste. Researchers estimate that 123,244 fewer tons of soil erode each year because of these practices.

Bald cypresses stand like sentries on a Chowan swamp.

Another positive result can be seen in area fisheries. A 10-year fish consumption dioxin advisory was lifted for the Chowan River in 2000. (Dioxin is a byproduct of certain paper-bleaching processes.) New bleaching technologies at a Virginia paper mill have reduced contaminated wastewater discharge. The majority of the Chowan River's watershed (75 percent) lies in Virginia. Thanks to work by the Albemarle-Pamlico National Estuary Program, stakeholders in Virginia and North Carolina have pledged to work together to protect shared water resources. They've appointed a watershed field coordinator, and an interstate work group coordinates projects.



MURFREESBORO HISTORICAL ASSOCIATION

A variety of skills, knowledge and talents is necessary to solve water quality problems—which is why it's so important for many different people, organizations and agencies to pool their resources to protect a community's natural resources. Many opportunities exist for people to get involved in environmental stewardship in the Chowan River Basin. For more information, see the contacts on the back page.

Office of Environmental Education and Public Affairs, N.C. Department of Environmental Quality. *Editor* Carla Burgess • *Designer* KC Schott, Red Gate Design • Special Thanks to the N.C. Wildlife Resources Commission, N.C. Division of Water Resources and N.C. Natural Heritage Program • Date: 2018 • 5,000 copies of this public document were printed at a cost of \$1,768 or \$0.354 per copy.

Sunset and lone
cypress on the
Albemarle Sound



GEORGE HUMPHRIES

WHERE SHOULD I GO ?

What makes the Chowan River Basin so special? See for yourself. Visit these Environmental Education Centers to discover more about your ecological address:

- Merchants Millpond State Park

For more information about Environmental Education Centers in North Carolina, check out the Office of Environmental Education and Public Affairs' website at www.eenorthcarolina.org.

HOW CAN I HELP ?

You can gain a sense of community pride by learning more and helping to protect streams, rivers and lakes in the Chowan River Basin. The contacts listed below can help you do just that. To find out about local river organizations and conservation groups, contact your local soil and water conservation district.

Albemarle-Pamlico National Estuary Program
www.apnep.org/

North Carolina Association of Soil & Water Conservation Districts
www.ncaswcd.org

Chowan River Basinwide Plan*
<https://deq.nc.gov/about/divisions/water-resources/planning/basin-planning>

North Carolina Division of Water Resources Education Programs
<https://deq.nc.gov/about/divisions/water-resources/water-resources-training/public-involvement/project-wet>

Clean Water Management Trust Fund
<https://cwmtf.nc.gov/>

North Carolina Water Science Center
<http://nc.water.usgs.gov/>

**Basinwide water quality planning is a nonregulatory, watershed-based approach to restoring and protecting the quality of North Carolina's surface waters. The N.C. Division of Water Resources welcomes community input.*

▶ To order additional brochures on any of North Carolina's 17 river basins, a general river basin booklet or a poster, fill out the online order form at www.eenorthcarolina.org.