



A Red-cockaded Woodpecker looks for danger as it emerges from its resin-protected cavity



Fox Squirrels, inhabitants of longleaf forests, are resident at Brunswick Town

Brunswick Wildlife “Sticky Gold” Birding (Part I)

Wildlife watching in the lower Cape Fear enables one to absorb knowledge of the longleaf pine ecosystem through observation and study. Our wildlife, natural history, and cultural history are intertwined, centered around a unique and majestic tree...the longleaf pine. Many cavity-nesting birds such as bluebirds, nuthatches, chickadees, and woodpeckers make pine savannas home.

My affinity for mixing wildlife watching with history and ecology caused me to dig deeper into our past. I had seen remnants of the naval stores industry at the Boiling Spring Lakes and Green Swamp Nature Conservancy Preserves and at Brunswick Town....which are all sites on the NC Birding Trail and frequent stops on my outings.

“Naval stores” is the collective name for products from pines. “Naval” was derived from the early use of these products in building and maintaining ships. Tar and pitch, for example, were used for caulking and waterproofing.

In colonial times and the antebellum period (1789-1861) naval stores was eastern North Carolina’s most important industry...hence the name “sticky gold”.

The era of turpentine harvesting for naval stores ended in the 1930’s; however, a small number of longleaf pines called “flattops” may still be seen in Boiling Spring Lakes. Many still have “cat faces” that were cut to draw gum from the tree.

Some of these same trees are used as cavity trees by Red-cockaded Woodpeckers (RCW’s), year-round residents of mature longleaf forests in our area, because the pines are the oldest and have the most sap. On the value of these flattops, both man and bird agreed.

Our forest preserves have been cut once or twice; however, the flattops were left because they were not marketable as timber. By default they are the oldest trees remaining and, while they may be ugly to humans, they are cherished by RCW's.

RCW's are strong habitat specialists. They require high quality habitat typically consisting of open forests of longleaf pine with territories averaging 200 acres but ranging upward to 500 acres.

In the Lower Cape Fear, they excavate cavities for roosting and nesting in live longleaf pines that are about 100 years old. Cavity excavation occurs where red heart fungus, found in older trees, has attacked the tree and softened the inner heartwood making it easier to excavate.

Longleaf pine savannas are ecological communities comprised of scattered trees and large, open areas of grasses. Unfortunately, less than five percent of this habitat remains today and the RCW, once considered common, was designated as an endangered species in 1970.

For hundreds of thousands of years, fires which occurred regularly on a one to five year basis played an important role. Fire is necessary for those species that have adapted to it. Fire-tolerant longleaf pines require fire for seed germination and the open forest floor allows wiregrass and insectivorous plants to flourish. Fire maintains the open forest RCW's and other pine savanna wildlife need by killing hardwoods and forbs in the understory.

Modern fire suppression practices, however, leads to understory growth which chokes out wiregrass ground cover and fills in the open space. The dominant species in well managed savannas should be low density longleaf pines and wiregrass.

RCW's and woodpeckers in general are keystone species. Abandoned RCW trees offer cavities for other inhabitants like chickadees, titmice, and Great-crested Flycatchers plus Downy, Hairy, and Red-bellied Woodpeckers.

Other species of woodpeckers will sometimes enlarge an abandoned hole enough to accommodate screech owls, wood ducks, fox squirrels, and other mammals. Also standing in line for the next available cavity are reptiles and amphibians plus insects like bees and wasps.

RCW's live in extended family groups in a cluster of cavity trees. Each bird maintains its own cavity in the cluster. They excavate resin wells around their cavities (avian cat faces) that are kept flowing by daily maintenance. Resin flowing from the wells protects the birds, eggs, and nestlings from rat snakes and other predators.

RCW numbers continue to decline due to loss of habitat. The threat of logging has lessened; however, current culprits include clearing land for development, forest fragmentation, and fire suppression, all placing limits on available large territories needed for foraging.

Recovery efforts are daunting considering it takes longleaf pines 100 to 150 years to mature and the long period it takes RCW's to excavate cavities. Cavity competition is also a concern

for those trying to assist RCW's. Sometimes flying squirrels, other mammals, and other woodpeckers do not wait until an RCW cavity is abandoned before moving in.

RCW recovery plans therefore include managing longleaf ecosystems using prescribed burns, minimizing cavity competition with other species, and monitoring RCW populations and their nesting activities. Burns, like those recently conducted by The Nature Conservancy (TNC) at Boiling Spring Lakes and the Green Swamp, reduce the fuel load and the threat of catastrophic wildfires while maintaining open savannas. Of course, reducing fuel load also provides protection for nearby residential areas.

Angie Carl, the chief fire specialist for TNC, allowed me to join a recent burn at Boiling Spring Lakes already in progress. The photograph above shows a TNC team member igniting the edge of a section to be burned using a drip torch that dispenses drops of burning fuel, produced from a mixture of kerosene and diesel fuel.

In addition to the great birds at Boiling Spring Lakes, Brunswick Town provides good birding year round. It hosts hordes of overwintering blackbirds, several species of woodpeckers, and painted buntings and other nesting birds during breeding season.

Eastern Fox Squirrels are also residents. Fox squirrels were once more numerous and more widely distributed. Unfortunately, their preference for the longleaf pine ecosystem limits their recovery.

The second part of this article will continue my exploration of the naval stores industry and sticky gold birding with visits to the NC Forestry Museum, Turnbull Creek Educational Forest, and birding sites in Carolina bays habitats.

John Ennis



Jennifer Rogers, a Nature Conservancy team member, sets a line of fire with her drip torch