

THE RED-COCKADED WOODPECKER IN SCOTLAND COUNTY, N.C.

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The late Ed Lyon introduced me to the Sandhills Wildlife Area shortly after I moved to Laurinburg, N.C., and it was there on 29 October 1960 that he showed me my first Red-cockaded Woodpeckers (*Dendrocopos borealis*). His marvelous enthusiasm for this remarkable bird proved to be contagious, and in the years 1960 through 1968 I made many trips into the Sandhills to find and study it.

Formally known as the North Carolina Wildlife Management Area, the preserve is located in Moore, Richmond, and Scotland Counties. My field work was limited to that section in Scotland County known as Area B-1. Manager Lyle Morgan, Hoffman, N.C., was most cooperative in allowing me access and in giving permission to construct a blind for nest observation.

The Red-cockaded Woodpecker appears to be very well established as a breeding and wintering species in the Sandhills. When I first asked Mr. Morgan where I could find any of these birds he pointed to a nesting tree in his front yard! The area of my study produced six nesting trees all within about 250 yards of a one-mile section of an unpaved road.

ENDANGERED SPECIES

As early as 1954 this bird was seen to be an endangered species. Sprunt (1954) said that "it is definitely uncommon now anywhere in the Southern Region," and he added, "with continued cutting of pine for pulpwood this woodpecker will doubtless decline even further." I was encouraged from my own field work and from that of others (see Lee Jones, 1963) to believe that this bird is now fairly common in certain areas. I had hoped that this meant a reversal of Sprunt's dismal prophecy. However, the recent careful work of Lay and Russell (1970) would seem to indicate that this species is in real danger. "The survival of the Red-cockaded Woodpecker . . . is endangered by its apparent requirement for old, diseased pine trees." Their studies showed that this species prefers "pines with redheart disease caused by the fungus *Fomes pini*. This is a common pine forest disease that enters trees through scars and broken limbs but rarely makes much progress in trees less than 75 years old. . . . Tree ages, among 60 bored, ranged from 56 to 193 years." The means on the three study areas were 103, 89, and 72 years. Current forestry practices, however, favor cutting pines much younger than this. US Forest Service studies show that most pulp wood trees are cut before age 30 and that other forest industries cut trees before age 50. Their judgment is rather grim: "The Red-cockaded's endangered status is reflected by the combined estimates of 2.1 per cent annual growth and 5 per cent annual mortality rate of the trees it prefers. To survive the species needs a steady ingrowth of older trees whose value to the landowner is declining. As these are harvested they are being replaced by pines that mature for cutting well before age 50."

The continuing preservation of wildlife areas including open pine barrens in which older trees will be allowed to stand is vitally important for the future of this bird.

UNUSUALLY LOW NEST

My nesting studies were cut short by my move to Mars Hill, N.C., in 1968. The purpose of this paper is to share my observations about an unusually low nest, only 5 feet above the ground, and about feeding activities that I have never seen described in the literature.

The nest of the Red-cockaded Woodpecker is made in a living pine tree with a dead heart. Usually the entrance is rather high above the ground. Sprunt (1954) says that

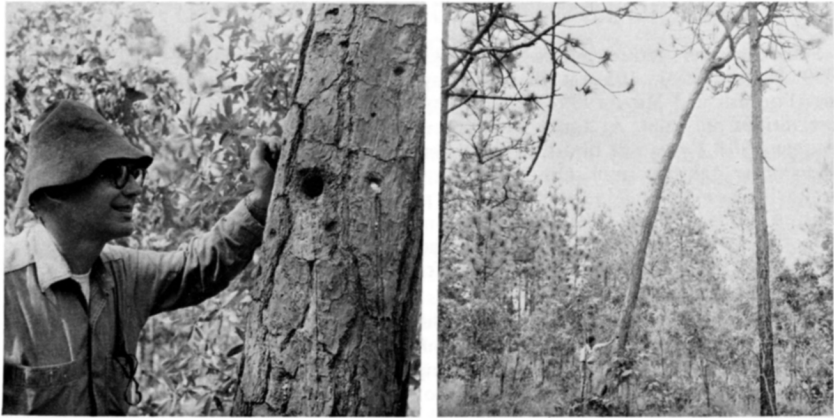


Figure 1. The author examines an unusually low Red-cockaded Woodpecker nest cavity in Scotland County, N.C. The entrance hole was only 5 feet above ground level. (Photo by Glen Bingham)

Figure 2. Glen Bingham stands beside the same tree. Photo by the author shows general habitat and the deformed nest tree as well as the low entrance hole.

the distance is "from 20 to 70 feet above the ground." In a study of 86 trees in Texas, Lay and Russell (1970) found that "hole height ranged from 10-55 feet with means of 25, 30, and 35 feet. Three holes not on these tracts were 5, 6, and 9 feet high." I do not have a record of the date, but I think that it was sometime in the winter of 1967 that I found a nest (Figure 1) the entrance of which was exactly 5 feet from the ground, thus matching exactly the lowest tree found by Lay and Russell. The entrance hole was 2 inches in diameter on the outside, and the bottom of it sloped upward so that the inside diameter was 1.6 inches. The tree itself was deformed in being bent over from the vertical (Figure 2). It thus matched Sprunt and Chamberlain's (1949) description of a nesting tree as "frequently one which is distorted in growth with a bend or crook in [the] trunk."

This nest evidently was not used in 1968. By 29 March there had been sufficient pecking around the entrance hole to cause the sap to flow very freely, and I found many small feathers around the entrance, but by the time I found birds nesting in other trees nearby no birds were seen coming to this nest. My observations indicate nesting usually takes place in late April. The earliest note of nesting I have is dated 23 April. Lee Jones (1963) says that in South Carolina nesting usually begins "by April 21."

CALLING WOODPECKERS

Robert P. Allen is quoted by Bent (1939) as reporting that he and Herbert Stoddard successfully called Pileated Woodpeckers by tapping on a wood surface. I was able to call Red-cockaded Woodpeckers in this area by tapping on a tree with the edge of a half-dollar or with the end of my pocket knife. One call of this bird is a loud and excited "cheep, cheep, cheep." On 16 February 1968 a bird feeding directly above my head in a tree gave this call which brought another bird that arrived with a loud fluttering of wings.

FEEDING BEHAVIOR

Some observers have reported that the bird feeds mainly in the tops of trees (Bent, 1939; Pearson et al., 1959) while others say they are usually seen on the trunk of the tree (Forbush and May, 1939). From my own experience I would say that both these observations are valid. At times I have seen the birds feeding high in the tops. On 20 October 1967 I saw one bird feeding in pine cones on the branches of a tree and two others on an oak tree trunk. On 16 February 1968 I saw one bird feeding on an oak tree along with a sapsucker. Most of the birds in my experience seem to prefer feeding on the trunk of the tree. Ligon (1968) found that male woodpeckers preferred the trunk above 15 feet and the limbs and branches while the females preferred the trunk below 15 feet. This would seem to account for the differences in feeding preferences reported by previous observers.

The food of these birds consists of, in addition to insects and conifer seeds, the larvae of wood boring insects (Sprunt and Chamberlain, 1949). In their feeding they work quietly on the tree with a very soft tapping and I was amazed one day (16 February 1968) to see a shower of bark chips float down from the feeding tree. One piece of bark measuring 1½ by 3½ inches lies on my desk as I write this, and it is a pleasant reminder of an unusually warm and lovely winter day in the field. This same day I observed a remarkable feeding habit that I had not seen before or read about in the literature. I was watching one bird from about 20 feet come down a pine tree backwards in jerky hops. The bird would peck for a while and then cock its head to one side against the tree as if listening for insects. Then it would probe beneath the bark scales of the pine with its head turned sideways to the trunk (and flat against it) to enable the bill to reach under the scales of the bark. Then, as I looked in disbelief, the bird rotated its head 180 degrees so that *while the body faced the tree the head faced away* allowing it to feed beneath bark scales directly above it.

LITERATURE CITED

- Bent, A.C. 1939. Life histories of North American woodpeckers. US Nat. Mus. Bull. 174.
Forbush, E.H., and J.B. May. 1939 A natural history of American birds of eastern and central North America. Houghton Mifflin Company, Boston.
Jones, L. 1963. Red-cockaded Woodpeckers in Chesterfield County, South Carolina. *Chat*, 26:35-39.
Lay, D.W., and D.N. Russell. 1970 Notes on the Red-cockaded Woodpecker in Texas. *Auk*, 87:781-786.
Ligon, J.D. 1968. Sexual differences in foraging behavior in two species of *Dendrocopos* woodpeckers. *Auk*, 85:203-215.
Pearson, T.G. 1936. Birds of America. Garden City Publishing Company, Inc., New York.
Pearson, T.G., C.S. Brimley, and H.H. Brimley. 1959. Birds of North Carolina. Revised by Wray and Davis. Bynum Printing Company, Raleigh.
Sprunt, A., Jr., and E.B. Chamberlain. 1949. South Carolina bird life. University of South Carolina Press, Columbia.
Sprunt, A., Jr., 1954. Florida bird life. Coward-McCann, Inc., New York.
- P. O. Box 146, Mars Hill, North Carolina 28754, 4 November 1970.*