

white except for a very small strip—about 1/4 inch at the very tip of the tail—that was buff colored.

I saw the bird 8 or 10 different times between 0800 and 1030, when the sun burned off the overcast and the day warmed up. I was unable to locate it after that time, nor could I find it the next two mornings. I believe the bird was a Wheatear (*Oenanthe oenanthe*), a species previously reported only once from the Carolinas. Andrew Simons watched one at close range while golfing at the Charleston County Club, 1 October 1960. He noted the inverted T and rump patch together with the pumping action. Although E. B. Chamberlain (Chat 24:102) accepted this report and stated that the observation places the species on the South Carolina Hypothetical List, the Wheatear is not mentioned in the 1970 edition of *South Carolina Bird Life*, as revised by Burton. The species is, however, listed in *Birds of the Carolinas* (Potter, Parnell, and Teulings, 1980).

[NOTE: Publication of the above field note adds the Wheatear to the North Carolina state bird list with Provisional I status.—DSL]

Confirmation of Breeding Red Crossbills in the Mountains of North Carolina with Notes on Nesting Behavior

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Although there is considerable evidence for Red Crossbills (*Loxia curvirostra*) breeding in the southern Appalachian Mountains and in North Carolina (Johnston 1963, Simpson 1974, Swindell 1974, Sykes 1974, Carter 1976, Phillips 1979), no one has reported finding an active nest with eggs or nestlings. Consequently, little has been recorded on the breeding biology of the species in this region.

On 5 September 1981, Joe Williams and I discovered a female Red Crossbill building a nest in a White Pine (*Pinus strobus*) at the edge of a gravel parking lot off of Plemmons Drive on the Appalachian State University campus in Boone, Watauga County, N.C. The altitude at this site is approximately 1006 m.

About 23 m in height with a d.b.h. of 62 cm, the nest tree is part of a large, fairly uniform stand of White Pines that cover an area of roughly 3 ha. These pines, like many others throughout the county, were heavily covered with cones in September 1981. The nest was placed in the fork of a branch 3.5 m from the main trunk and 19 m from the ground. Although visible from below, the nest was partially concealed from above by small pine boughs. Because the limb pointed south and extended over the parking lot, it received sunlight during most of the daylight hours.

On 5 September between 1700 and 1900, the female made 10 trips to the nest with building material. She collected epiphytic mosses, Tulip Poplar bark fibers, and unidentified materials, using her bill, feet, and body to construct the inner

cup of what appeared to be an almost completed nest. Between 1300 and 1630 on 6 September, the female made approximately 21 visits to the nest with material. Her visits were usually no longer than 3 minutes, and most were between 15 and 30 seconds.

Although the male usually accompanied the female as she searched for nesting material, I never observed him carrying material. As the pair flew to and from the nest, I heard the characteristic "kip-kip-kip" call notes. Often as the female worked on the nest, the male positioned himself at the top of the nest tree or some nearby tree and sang a series of notes that were quite musical.

Williams first noted the female incubating on 11 September. Since I later discovered four eggs in the nest, I conjectured that they were laid from 7 to 10 or from 8 to 11 September. If the female started incubating after she laid the last egg, then the incubation period started on either 10 or 11 September. On 12 September I observed the female incubating, turning her eggs, and preening her belly and breast. On 13 September between 0700 and 1200, the female had three attentive periods totaling 287 minutes and three inattentive periods totaling 13 minutes. The male continued to sing from the tops of the surrounding trees. On a few occasions the female called softly from the nest. Although I never observed the male incubating, he fed the incubating female.

On 13 September, the male and the female were associating with three heavily streaked juveniles that still had uncrossed bills, and twice the male fed two of the young birds regurgitated food. The juveniles frequently followed the male throughout the nesting period, and one of the juveniles begged from the breeding female. Thus I conclude that the nest I found was at least the second during the 1981 season for this pair of Red Crossbills. On 22 September I photographed the incubating female (Fig. 1). Returning to the nest at 0900 on 26 September, I found four newly hatched chicks. From their appearance, I estimated that the chicks were just a day old and had probably hatched on the 25th. If the female did indeed start incubating on the 10th or 11th, then the incubation period was approximately 14 or 15 days. Lawrence (1949) states that the incubation period for this species is "probably 14-18 days."

At a distance of 3.5 m I continued to make observations until 1300 on 26 September. During this period the male fed the offspring two times and the brooding female four times. As the male fed the female, she tilted her head back, fluttered her wings, and begged as if she were a newly fledged bird. After receiving regurgitated food from the male, the female usually waited a minute or two and then began to feed the nestlings. This involved a slow movement of her bill in and out of the nestling's mouth. As she drew her bill out, a white, watery, regurgitated substance was pushed into the nestling's mouth with her tongue. She normally fed the nestlings until they stopped begging. Before returning to brood, she usually checked the nest for fecal sacs, and if she found one, ate it. The male also ate fecal sacs. Although the breeding pair most often ate seeds from White Pine cones, on one occasion during the nestling period the male captured and ate a green caterpillar.

I made my last observations of 3 October, but Williams checked the nest between 7 and 13 October. On the 12th at 1630 he noted that the nestlings were on



Fig. 1. A female Red Crossbill incubates her eggs in a nest at Boone, N.C., on 22 September 1981. (Photo by Tom Haggerty)

the edge of the nest, flapping their wings. When he returned on the 13th at 1305 only one nestling remained at the nest, and at 1400 it also had left. If the eggs hatched on 25 September and the birds fledged on 13 October, then the nestling period lasted approximately 19 days. Synder (1954) reports a nestling period of 15 to 16 days. Lawrence (1949) found in her studies that the young remain in the nest "at least 17 days," and Skutch (1976) gives a nestling period of 18 to 24 days.

The extreme temperatures during the nesting period were 26°C (79° F) and -1°C (30° F). The average temperature was 14°C (56.5° F), and 5.3 cm of precipitation was measured (National Oceanic and Atmospheric Administration 1981).

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In western North Carolina, Asheville bird club members are assisting U.S. Fish and Wildlife personnel with a survey of Great Horned Owls in preparation for a planned Peregrine Falcon hacking program. For about 7 weeks they observed nesting owls at Lake Julian Park from a blind constructed some 35 feet above ground. An article in *Asheville South*, 22 June 1982, reported that the adult owls were aware of the visitors and never went to the nest while anyone was in the blind. Park officials protected the two fledgling owls by not releasing news of their presence until after they left the nest.

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female cowbird was feeding on some birdseed. I tossed out some of my food and she flew to my feet and ate. Then, as she did not make any move to leave, I began walking slowly about the lawn. The cowbird followed me. I began scuffing my feet through the grass and, to my surprise and delight, she followed me and began looking for insects. However, this early in the spring there were none to be found, so she gave up and flew away. This pretty well convinced me that she had to be my little #5 cowbird of the summer preceding—no other bird would have responded to my actions in that same manner. We never did have the opportunity to “play cow” again. Oh how I wished that I had been able to have banded that little fledgling!

Although the pair of adult cowbirds stayed around until July, I never did have any new young fledglings to feed and study that summer—nor the next one, either. Maybe this year, come hot, sticky, dull August, I will once again have the chance to “play cow.”—GAIL T. WHITEHURST, 1505 Brooks Avenue, Raleigh, N.C. 27607