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Dark-eyed (Carolina) Junco Nest on Sassafras Mountain in South Carolina

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19 July 1979

The Carolina Junco (*Junco hyemalis carolinensis*) has long been thought to breed in South Carolina on the basis of the 1932 observations of Sherman (Sprunt and Chamberlain 1970), who noted a pair of birds at 970 m on Sassafras Mountain, Pickens County, but did not find a nest. Sprunt (1968) and the A. O. U. (1957) include Sassafras Mountain within the southern Appalachian breeding range of this subspecies. Throughout much of its range the bird is a common breeder, especially above 910 m (Stupka 1963, Tate and Smith 1974, Simpson 1976). We cannot find a record of a nest of *J. h. carolinensis* from South Carolina, however.

On 19 May 1979, during a field trip led by Gauthreaux for the Carolina Bird Club, Floyd observed adult juncos carrying food and found a nest containing three young. The adults were typical *J. h. carolinensis*, judged on the basis of their rather neutral gray color, their pale blue-gray bills, and the location. A number of participants in the field trip observed the nest and the adult birds. On that day the young had sprouted pinfeathers, but sheaths had not yet begun to split.

Hamel revisited the site on 24 and 26 May 1979. On 24 May he photographed the nest (Fig. 1) and observed the parents as they fed the young. On the latter date he measured vegetation at the site and collected the empty nest. The nest and field notes have been deposited in the Vertebrate Collections of the Clemson University Department of Zoology.

The nest, placed on the ground in a small hollow spot at the base of several *Kalmia* seedlings, was 1 m up the northeast-facing bank of a 3.5-m roadcut, approximately 2 m from the edge of the paved road to the Sassafras Mountain firetower. Two *Rubus* plants, one live and the other dead, were within 1 dm of the nest. The opening of the nest was approximately level although the bank exceeds 45° slope. *In situ*, the outside dimensions of the nest were 10 x 13 cm; inside dimensions measured 7.5 x 7.5 cm; depth was 5 cm. The nest was constructed largely of rootlets and grasses and



Fig. 1. Nestling Dark-eyed (Carolina) Juncos on Sassafras Mountain, S.C., 24 May 1979.

lined with short, coarse hairs. The outer rim was covered with moss, *Hypnum imponens* (C. Douglass and L.E. Anderson, pers. comm.). The location of the nest, approximately 33 m from the point where the road splits to circle the firetower, lies on the boundary between Pickens County, S.C., and Transylvania County, N.C. (Byrd 1972).

On 24 May the nestling juncos were completely covered with feathers, and by 26 May they had left the nest. The plumage was similar to that described in Sprunt (1968).

The adult birds were tame, conducting their activities while observers stood in plain view within 4 m. During the hour of observation on 24 May the lighter-colored female fed the nestlings three times, bringing 2-cm green caterpillars and removing a fecal sac on each visit. She twice chased a Chipmunk (*Tamias striatus*) that was drinking runoff rainwater 10 m from the nest. The male, identified by darker plumage and the fact that he sang 3 m from the nest while carrying food, delivered an unidentified arthropod prey item once. He sang two other times that day and five times during 105 minutes of observation on 26 May. On the latter day one of the adults was seen 5 m from the nest carrying two caterpillars similar in appearance to those fed by the female on 24 May. On all days that the nest was visited, the adults were observed foraging or carrying food for the young on both the South Carolina and North Carolina sides of the territory.

Habitat at the site, elevation ca. 1060 m, is mixed Shortleaf Pine (*Pinus echinata*)-hardwood forest. Standing trees within 12 m of the nest were all <22 cm d.b.h. and <14 m tall, as follows: Red Maple (*Acer rubrum*) 4, *Prunus* sp. (probably *P. serotina*) 2, Sourwood (*Oxydendrum arboreum*) 2, *Rhododendron maximum* 2, Hemlock (*Tsuga carolinensis*) 1, and Shortleaf Pine 1. Several larger Shortleaf Pine and Black Oak (*Quercus velutina*) trees, 22 to 50 cm d.b.h., had been cut down within

the past 2 or 3 years, presumably to increase visibility from the firetower. The tallest tree in the vicinity was a 20-m Hemlock, 40 cm d.b.h., 21 m from the nest. Basal area was 16 m²/ha. Canopy cover by trees was 30%. Cover provided by the *Rhododendron*, *Kalmia latifolia*, and Red Maple midstory was 70%. Shrub stems <3 cm numbered 36,300/ha; those 3 to 8 cm numbered 5640/ha. Groundcover was approximately 40%, *Vaccinium* sp. and *Rubus* sp. predominating.

Birds heard or seen within 120 m of the nest site are as follows: Ruffed Grouse, Pileated Woodpecker Great Crested Flycatcher, Solitary Vireo, Black-and-white Warbler, Ovenbird, Hooded Warbler, American Redstart, Rose-breasted Grosbeak, and Rufous-sided Towhee.

This manuscript has benefitted from the review and comments of M. Tannenbaum, V. Nolan Jr., and E.D. Ketterson. We thank C. Douglass and L.E. Anderson for identifying the moss, and H.E. LeGrand Jr. for sharing notes on birds observed by him on Sassafras Mountain on 21 May 1979.

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Distraction Display of Chipping Sparrow

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While picking blackberries on the afternoon of 29 June 1980, I heard repeated loud "protest" notes of an adult Chipping Sparrow (*Spizella passerina*). The bird was 10 to 15 feet behind me, vocalizing from an extensive *Rubus* thicket in my yard at Bayleaf, Wake County, N.C. When I turned toward it, the bird flew to the ground, and while continuing its loud notes hopped and fluttered away from me with frequent pauses. One wing was lowered but not dragging. As I continued my activities, the bird returned to its original position and continued to chirp. When I again turned toward the bird, the entire process was repeated. After I progressed another 15 feet a single, recently fledged Chipping Sparrow flew out of the blackberry thicket I was working and went across a gravel drive in a downward glide. It landed near what I assume was its alarmed parent and disappeared into another *Rubus* thicket.

Eloise Potter kindly checked the manuscript text of the forthcoming *Birds of the Carolinas* and found that the only reference to warblers and sparrows performing