

Active Eastern Bluebird Nest Usurped by Second Pair of Bluebirds

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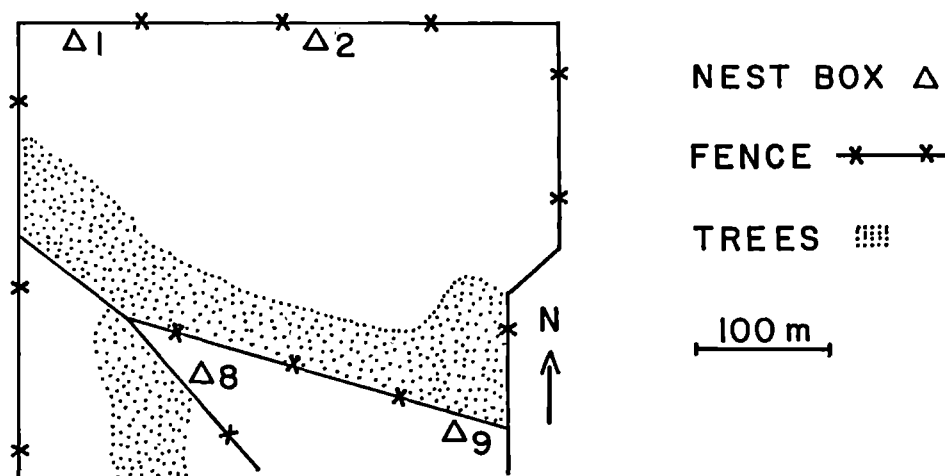
Martin, Tennessee 38238

Eastern Bluebird (*Sialia sialis*) nests in the egg laying or incubation stage are sometimes abandoned for no obvious reason. New nests are frequently constructed over the abandoned clutches. Occasionally an Eastern Bluebird egg will be deposited in a nest box with little or no nest material. Observations on my Weakley County, Tennessee, study area provide an explanation for these behaviors and show a connection between them.

The study area is a 33 ha cattle farm; about 75% of the farm is in pasture with the remainder in woodland. Virtually all of the adult bluebirds on the area are uniquely color banded. Nine nest boxes and numerous natural cavities are available for bluebird nest sites.

Female 1311-78951 and male 1311-78950 (Pair 1) had 2 nests, both successful, in box 9 (Figure 1) in 1984. In 1984, female 1311-78952 nested in box 1 and male 1311-78880 nested in box 8; in 1985, after the disappearance of their mates from the previous year, these 2 bluebirds formed Pair 2. All 4 of these birds had been aged as after-second-year when banded during the 1984 nesting season.

Figure 1. Map of a portion of the Weakley County, Tennessee, study area showing the relative positions of nest boxes used by Eastern Bluebird Pairs 1 and 2 in 1984 and 1985.



The 1985 nesting activities of these individuals are summarized as follows. Both pairs successfully fledged young from their first 2 nests by 26 June. Pair 1 used box 9, and Pair 2 used box 2. Pair 1 then moved to box 8 and began its third nest; the first egg of this nest was laid on 3 July. On 4 July female -51 laid the second egg before 0840 (CDT), but by 1015 female -52, with an unbanded male (Pair 2A), had almost covered the 2 eggs with nest material. On 5 July the 2 original eggs in box 8 were completely covered with nest material and a new egg was present; Pair 2A was near the box. Pair 2A continued to use box 8 until early August when a snake destroyed the nest just prior to fledging of the young.

Pair 1, whose nest in box 8 had been usurped during the egg laying stage, returned to box 9. On 7 July box 9 contained a small amount of nest material (less than 10% of the normal amount) and 1 egg. The egg was lying on the floor. The length and width of the egg were similar to the measurements of the 2 original eggs in box 8. Three days later (10 July), female -51 resumed nest construction in box 8; on 13 July she laid the first egg in the nest which now covered the single egg on the floor. A clutch of 4 was laid, and 4 young fledged.

As a result of these activities, 2 nests were constructed over partial clutches. In 1 case (box 8) the nest of an intruding pair covered the eggs of the original pair; in the second case (box 9) a female constructed a nest over her own egg following the disruption of her original nest. I suspect the single egg in box 9 was the last of a 5 egg clutch and that, following the laying of 2 eggs in box 8, female -51 had dropped the third and fourth eggs elsewhere.

Eastern Bluebirds usually, but not invariably, re-nest in the same nest box following a successful nest; a new site is selected if a nest is not successful. In the incidents described here, 2 pairs of bluebirds attempted to change nest sites after each pair had, apparently, successfully completed 2 nests in its respective nest box. While the nestlings of Pair 1 (box 9) are thought to have fledged successfully, a thunderstorm with heavy rain on 27 June, 1 day after the young fledged, may have killed them. No juveniles were seen with either female -51 or male -50 during their nesting activity at box 8 or, subsequently, at box 9. Likewise, while the available evidence indicates the young of Pair 2 (box 2) successfully fledged, the appearance of female -52 at a new nest site with a new mate (Pair 2A) suggests a breakup of the family. Male -80 (Pair 2) was not seen during the remainder of the nesting season. Although these observations suggest *why* each pair might have changed nest sites, they do not explain *how* Pair 2A was able to dominate Pair 1 at box 8.

Neither pair had been seen previously near box 8. Male -80, the mate of female -52 at box 2 in 1985 (Pair 2), had earlier (1984) nested with another female in box 8. Unless female -52 had accompanied him to box 8 and had become familiar with the site, I do not see how his experience there would have influenced her subsequent behavior with a different mate. The mate of female -52 (Pair 2A)

at box 8 was unbanded; consequently, his history is unknown. Certainly he was not reared in box 8 and he had not previously nested there, but he may have nested in a natural cavity in the area.

Pair 1 did not strongly defend box 8. During 244 minutes of observation at box 8 from 28 June through 6 July, I did not see any interactions between Pair 1 and Pair 2A. Box 8 was clearly visible from box 9; Pair 1, which continued to use its former territory around box 9, must have been aware of the take-over of its nest in box 8. This suggests that Pair 2A had a psychological advantage over Pair 1, due either to familiarity with box 8 or to previous experience with Pair 1.

In summary, a pair of Eastern Bluebirds abandoned its successful nest site for a nearby nest box; after the nest was completed and 2 eggs were laid at the new site, a second pair of bluebirds took over the nest box, constructed a nest on top of the original eggs, and laid a new clutch. The first pair of bluebirds returned to its original nest site where the female laid a single egg in an almost empty nest box. The egg was not incubated; instead, the female constructed a new nest over the egg and, 6 days after returning to the site, laid the first egg of a new clutch.

(Inland)

Grant Winners Announced

At the banquet held during the Annual Conference held in Moline, Illinois, on October 4th, 1984, this year's Paul Stewart Research Grant of \$300 was awarded to Bill Bowerman. Bill is studying the migration of the Bald Eagles that nest in the Ottawa National Forest of Michigan's Upper Peninsula. He will be tracking the birds to their winter roost areas with radio transmitters.

Paul Stewart Research Grants of up to \$300 are awarded annually for studies using bird banding in studies on the evolution of migration in birds.

This year's Willetta Lueshen Student Membership Award went to Gayle A. Unruth. Gayle presented an excellent paper at the conference on her studies of avian use of fencerows in west central Illinois.

There were no applicants this year for the Willetta Lueshen Harris' Sparrow Research Grant. Approximately \$100 each year will be available for research on the Harris' Sparrow. In addition to the money, the banding data of an Oklahoma Harris' Sparrow bander have been volunteered for the use of grant winners.

Those interested in applying for any of these grants offered by IBBA in 1987 should contact Chairperson, Dr. Donald G. Varner, R. 1, Box 1, Welling, OK 74471.

Back Issues of NABB Wanted

A number of people wish to purchase complete sets of back issues of the *North American Bird Bander*. Anyone wishing to donate theirs should contact Dr. Donald G. Varner, R. 1, Box 1, Welling, OK 74471. Dr. Varner is in charge of selling all back issues of *NABB*, *Inland Bird Banding*, and the old *Inland Bird Banding News* for IBBA. Those wishing to buy issues of the older publications, or to donate theirs, should contact him.