

ing attempt, or would the pair, Pink and Green, leave and nest in a new territory?

This discussion merely emphasizes the fact that, to attain an understanding of bird behavior and to arrive at a plausible explanation of unusual episodes, much is yet to be learned of the habits of common birds in their natural habitat.

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SUCCESSIVE NEST SITES OF INDIVIDUAL BIRDS OF EIGHT SPECIES

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Finding that in woodland and bush-grown countryside the density of bird nests is greatest at ground level and falls off rapidly with height, whereas in suburban areas of "perpetual alarms" the density is greatest above the ground, Preston and Norris (1947: 268-269) have suggested that the suburban bird population may be formed by the elimination, through attrition pressure, of individuals within a species that practice low nestings. They suggest the possibility "that within a given species, some individuals persistently nest high and others low, and that an individual does not vary its nesting height over the whole range used by the species." They also suggest that "there is at least a partial tendency for the young to follow the nesting behavior of their parents."

Several years' observation of color-banded birds in suburban sections of Baltimore—areas of detached homes and a bit of scrubby wild land—has yielded data on successive nestings of birds of eight species; observed nestings by single birds range up to six in number, and nestings by the same pairs range up to four. The data on these are presented below as a contribution toward an evaluation of the Preston-Norris

theory as far as it concerns adults. I have never observed a bird banded as a nestling to return and build its own nest within my study areas; I therefore have no data to offer on the second part of the theory.

Like figures on ten nests that I have presented elsewhere, the data on forty nests given below indicate fairly fixed nesting heights for some birds and variable ones for others. For example, one pair of Song Sparrows had two nests that were both about 5 feet above the ground, and one pair of Blue Jays had two nests 22 feet 4 inches and 25 feet up. On the other hand, four nests of one pair of Robins varied in height from 8 feet 7 inches to about 23 feet, and one pair of Wood Thrushes had two nests about 18 and 8 feet up. Obviously, figures on a large number of nests will be needed before conclusions can be drawn.

It seems that, at best, interpretation of such figures will be complicated by the fact that, even in species where all or practically all of the building is done by the female, the site of the nest may be chosen by either bird of the pair. Howell (1942: 556) reports two nests of one male Robin built on an identical site although the bird had different mates during the nestings; the male must have brought about the use of that site, at least the second time. I have recorded (1943: 74) a similar occurrence in the Wood Thrush. Preston (1944: 249) reports a nest built entirely by a male Robin. The proclivities of both birds of a pair may therefore be represented in a succession of their nest sites.

So that that factor may be weighed as well as is possible, in the following records each banded bird is given a simplified designation, in which M stands for male, F for female, and X for unbanded or unidentified. M1 thus means Male No. 1, M2 means Male No. 2, F1 means Female No. 1, and so on, and under each species heading a particular designation always refers to the same individual. In this way the records show whether birds changed or retained mates from year to year, and it can be seen just which nest sites each could have influenced.

Heights were measured from the ground to the base of the nest, or to the lower edge of the entrance hole.

Red-headed Woodpecker, *Melanerpes erythrocephalus* (Linnaeus) MX-F1 1947—Hole about 48 feet above ground, in oak in small grove on golf course. MX-F1 1948—Hole about 42 feet up, same stub as 1947.

Blue Jay, *Cyanocitta cristata* (Linnaeus). M1-F1 1942—22 feet 4 inches up, against trunk of beech in a back yard. M1-F1 1943—25 feet up, behind transformer on electric pole in a back yard.

Carolina Chickadee, *Parus carolinensis* Audubon. M1-F1 1947—Hole 7 feet 1 inch up, bark-covered bird box in a back yard. M1-F1 1948—Hole 6 feet up, decorated "cottage" style bird box in a back yard (1947 box was available).

Catbird, *Dumetella carolinensis* (Linnaeus). MX-F1 1942—23 inches up, in dense grape vine against side of one-car garage on edge of wooded and weedy vacant lot. MX-F1 1943—35 inches up, in honeysuckle covering sapling on wild land, well removed from dwellings. M1-F2 1946—First nest, 7 feet 7 inches up, in a backyard lilac; second nest, 6 feet 10 inches up, in a back-yard mock orange. M1-F3 1947—4 feet 8 inches up in a 6-foot back-yard barberry hedge.

Robin, *Turdus migratorius* Linnaeus. M1-F1 1947—First nest, 14 feet up, on electric insulator and wires on corner of house; second nest, 18 feet 1 inch up, 5 feet out branch of a white oak beside a house. M1-F2 1948—First nest, 12 feet up, in a back-yard apple tree; second nest, 8 feet 7 inches up in a back-yard lilac; third nest, about 23 feet up in a back-yard oak, well out a branch; fourth nest, not found; fifth nest, 8 feet 11 inches up in honeysuckle on trellis against a porch. I have previously (1947: 116) reported on ten other Robin nests.

Wood Thrush, *Hylocichla mustelina* (Gmelin). M1-F1 1942—First nest, 17 feet up in beech beside a house, on horizontal fork 10 feet out from trunk; second nest, 13 feet up in ailanthus beside a house, in a "basket" of vertical stems. M1-F2 1943—First nest, 17 feet up in beech beside a house, saddled on one stem of the fork on which first 1942 nest was based; second nest, 11 feet up in oak on a vacant lot, 6 feet out from trunk. M1-F3 1944—First nest, 16 feet 6 inches up in another oak on vacant lot, 4½ feet out from trunk; second nest, 12 feet 6 inches up in red maple in a back yard. M2-F4 1943—First nest, about 18 feet up in oak on vacant lot, 7 feet out a long branch; second nest, 8 feet up in snowball bush beside a house. M3-F5 1948—First nest, 7 feet 3 inches up in back-yard privet hedge, set in "basket" of twigs; second nest, 13 feet 9 inches up in front-yard oak, 9 feet out a 15-foot branch, set on fork; third nest, 10 feet 9 inches up in maple, 6 feet out 15-foot branch, set on horizontal fork.

Cardinal, *Richmondia cardinalis* (Linnaeus). MX-F1 1942—6 feet up, in wild grape on crown of sapling, on wild land. M1-F1 1943—8½ feet up in honeysuckle on 16-foot ailanthus on wild land. M1-F1 1944—5 feet 9 inches up in honeysuckle overrunning dead 8-foot sapling on wild land, in a vertical fork of heavy honeysuckle stems. M2-F2 1944—One nest, 8 feet up in honeysuckle-covered top of black cherry sapling on wild land; next nest, 6 feet up in dead willow sapling overspread by grape vine, wild land.

Song Sparrow, *Melospiza melodia* (Wilson). M1-F1 1946—First nest, about 5 feet up in top of a front-yard barberry hedge; second nest, 5 feet up in side of a back-yard barberry hedge. M2-F2 1947—First nest, 3 feet 8 inches up in side of back-yard barberry hedge; second nest not found; third nest, 6 feet up in top of same hedge as first. M3-F3 1948—First nest, 4 feet 4 inches up in top of back-yard barberry hedge; second nest, about 6 feet up in side of another such hedge; third nest, 4 feet 8 inches up in top of first hedge.

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