

(Kilham, 1958) with pieces of bark and all were well hidden. After the defenses the Red-headed Woodpecker removed four seeds from the knothole and restored them in the dead stub. No additional seeds were stored in the knothole, although storage continued at the other two sites until 30 June. Red-headed Woodpeckers were seen utilizing the cached stores during July and August, but none was seen in the area after early September.

Most observations of food storage in the Red-headed Woodpecker (Kilham, 1958; Hay, 1887; MacRoberts, 1975) refer to storage and re-storage during fall and winter. Reller (1972) and Jackson (1976) studied this species during the nesting season and did not mention food storage. I could find no records of Red-headed Woodpeckers hoarding seeds obtained at a feeder. In fact, Beal (*in Bent*, 1939) implies that seeds are uncommon in the diet of this species although Kilham (*pers. comm.*) observed Red-headed Woodpeckers extracting seeds from pine cones and Jackson (1976) states that seeds and fruit may be eaten.

Natural selection would favor behavior optimizing the time woodpeckers spend storing food. Discovery of a food cache by competitors apparently stimulated the Red-headed Woodpeckers to store and re-store caches at new, more distant, or better concealed locations despite the greater energetic cost of doing so.

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**Do Eastern Bluebirds and House Sparrows Prefer Nest Boxes with White or Black Interiors?**—Reports by Mason (1967) and Kibler (1969) indicated the external color of nest boxes has little, if any, effect on utilization rates by Eastern Bluebirds (*Sialia sialis*). Blagosklonov (1970) demonstrated the effect of nest box interior color on some forest dwelling species by alternately white-washing and blackening the interiors; utilization rates were consistently much higher in boxes with white interiors. Jackson and Tate (1974) suggested House Sparrows (*Passer domesticus*) may prefer boxes with dark interiors.

To determine if Eastern Bluebirds and House Sparrows prefer nest boxes with white or black interiors, 15 pairs of nest boxes were erected in February 1972 on a 20 ha cattle farm in Obion County, Tennessee. Boxes had identical cavity sizes (10 x 12.5 x 15 cm) and exterior colors (gray). One box of each pair had a white interior, and the other box had a black interior. Boxes of each pair were at the same height (1-2 m), faced the same direction, and were 1-3 m apart. Boxes were inspected weekly or twice weekly throughout the nesting seasons of 1972 and 1973.

Bluebirds constructed 33 nests in boxes with white interiors and 3 nests in boxes with black interiors ( $\chi^2$ ,  $P < .005$ ). House Sparrows constructed 9 nests in boxes with white interiors and 2 nests in boxes with black interiors ( $\chi^2$ ,  $P < .05$ ). The two sparrow nests constructed in black boxes were at sites where the white boxes were not available. At one site bluebirds occupied the white box, and at the other site a previously used House Sparrow nest teemed with mites.

These results agree with the conclusions of Blagosklonov (1970), but they differ from the findings of Jackson and Tate (1974). However, the suggestion of Jackson and Tate (1974) was not based on data from situations where sparrows had a choice of black or white cavities. My data indicate House Sparrows

prefer boxes with white interiors, but they will nest in boxes with black interiors if no other boxes are available.

Boxes with white interiors may be preferred because of the increased visibility of the box contents. An adult bluebird or sparrow typically blocks the opening while entering and hardly any light enters the box. Against a white background, even in very dim light, predators such as rat snakes (*Elaphe obsoleta*) could quickly be detected by the entering bird. However, against a dark background predators might not be detected in time to allow the bird to escape. Also, nestlings may be more easily seen and fed against a white background.

A similar preference for white is shown by the propensity of Tree Swallows (*Iridoprocne bicolor*) to use white feathers in their nests (Buckingham, 1975). House Sparrows also frequently use white feathers to line their nests (Summers-Smith, 1967:39). In addition to their insulating qualities white feathers could increase the visibility of nest contents.

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