

EASTERN BLUEBIRDS

Nesting Structure Design and Placement

Thomas G. Barnes, Extension Wildlife Specialist

Eastern Bluebirds: Nesting Structure Design and Placement

Thomas G. Barnes, Extension Wildlife Specialist

Colonial settlers called the eastern bluebird the harbinger of spring or “blue robin” because of its chestnut orange breast and iridescent blue back and tail. One of Kentucky’s common resident passerine birds, this strikingly elegant bird is admired most for its beauty, gentle disposition, family devotion, and delightful call. It is also easily attracted to home and farm surroundings when nesting structures are correctly constructed and well placed.

Natural History

Bluebirds prefer a mixture of open grasslands and scattered trees, so they are often called a forest “edge” species. Appropriate bluebird grassland habitat consists of open meadows, pastures, yards, cemeteries, parks, and highway right-of-ways. Bluebirds can also be found in old orchards and cutover woodlands. In summer, in these habitats, they consume grasshoppers, flying insects, beetles, and caterpillars during short foraging frays to the ground from an elevated perch. During winter they travel in flocks, feeding primarily on berries and fruits.

The eastern bluebird’s breeding season in Kentucky extends from March through July, although they may occasionally initiate nesting into September. Peak breeding activity in Kentucky begins in mid-April, when bluebirds use available nesting sites before other birds do. In the bluegrass area, peak breeding occurs in mid-May after other cavity-nesting species have begun their nests. Normally, bluebirds raise two to three broods per year, often using the same nesting site each year.

The female selects a proper nesting site 4 to 6 feet above the ground in a cavity or hole excavated by another animal. The nest is a neat, cup-shaped structure made of fine grass. The female lays one egg per day for 4 to 6 days in the nest, and then incubates the pale blue eggs for 12 to 14 days. Soon after hatching, the youngsters sprout feathers. They have gray backs coupled with spotted white breasts and only a hint of blue in the wing and tail feathers at this time. Young birds remain in the nest for 15 to 18 days.

The male is in charge of the youngsters after they leave the nest. He feeds the growing birds and teaches them how to obtain food for themselves. This training continues for several days until the youngsters can feed themselves. The female is busy at this time repairing and remodeling the old nest or constructing a new one.

How You Can Help

Bluebirds readily accept constructed nest boxes and in some cases prefer them to natural cavities. These boxes are easy to build, erect, and maintain. Bluebirds will readily nest in a variety of boxes, but several have been designed to exclude English sparrows and starlings.

Bluebirds appear to be site-specific in their acceptance of artificial nesting structures. For example, birds in eastern Ken-

tucky reclaimed coal mines will readily nest in wooden boxes, paper milk cartons, plastic soda bottles, or plastic milk jugs. In the bluegrass region, the birds prefer a wooden box and seldom nest in milk cartons or soda bottles. (Birds in this region prefer the wooden box to have a slot-type entrance (the Kentucky Bluebird Box). Use the slot entrance box if you have problems with starlings or house sparrows nesting in the box.

Building and providing nest boxes for song birds can be very rewarding for young and old alike. Because of building and maintenance ease, this “hands on” activity is a good educational experience in avian biology for youth clubs, classes, and individuals. This project can also be a successful money-generating activity if you sell the boxes.

Nest Box Construction

Materials

Select durable, weather-resistant materials because a properly constructed nest box should last 10 to 15 years. Most kinds of lumber or plywood are satisfactory for use. The most durable woods for nest box construction are red cedar, redwood, bald cypress, and red or white oak. These are usually expensive and tend to split when nails are driven into them without predrilled holes. Spruce, pine, or hemlock are less durable, but are easier to work with and are less expensive.

Boxes can be constructed of new or old lumber. Those constructed of old lumber are less noticeable, already weathered, and probably less expensive. Old oak fencing lumber makes superb nesting boxes. You can construct nest boxes of either rough or smooth (planed) lumber. Do not use wood treated with preservatives such as creosote or pentachlorophenol (penta).

Use dry wall screws, wood screws, corrugated underlayment nails, or galvanized nails for construction. Common or smooth nails are unsatisfactory because they do not hold well. Concrete-coated, ring-shank, or roughened-shank nails are recommended for boxes constructed of cedar or redwood.

It is not necessary to paint nest boxes, and exterior finishing may please the builder more than the occupant. Unpainted boxes made of cedar, redwood, bald cypress, or oak will weather naturally and turn gray, blending with their surroundings. If you paint the boxes, select a water-based exterior latex paint. Use a light color, green, gray, or tan, to prevent overheating of eggs or young. Oil-based stains used on homes and fences may also be used, but do not use paints containing lead or chemical preservatives. Apply finishes only to exterior surfaces.

Installation

Mount nest boxes on fence posts, metal posts, trees, utility poles, buildings, or fences 3 to 5 feet above the ground. The preferred mounting site is a metal post. The next choice is a wooden post. A utility pole is also a good site, but remember

to get permission from the utility company before erecting any boxes.

Fences are excellent sites if the box is on the side away from cattle. Otherwise, cattle will rub on a box and knock it down. Horses will reach across a fence and chew the box unless a barbed wire is stretched across the top. Near horse pastures, put the box low enough to be beyond the reach of a horse but not easily accessible by cats. The preferred option in this situation is to erect a metal post outside the fence.

Predators such as house cats, raccoons, and snakes will readily eat the eggs and young in a bluebird house. Make it difficult for predators to get into the boxes by placing them on metal posts. Coating the post with grease may further discourage predators.

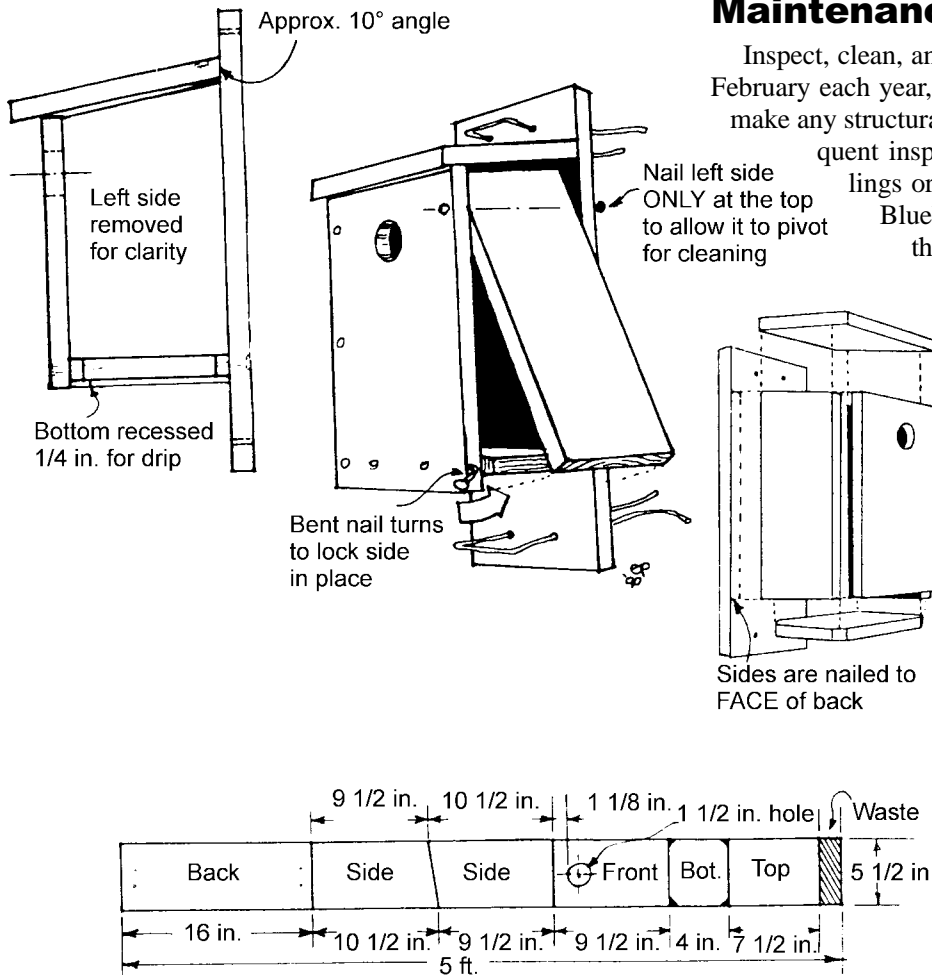
Location

Spacing of boxes is essential because birds have and defend territories during the nesting season. The spacing pattern will be dictated by the arrangement of food, cover, and isolation in any one locality. Place the boxes 75 to 100 yards or more apart in areas where trees, shrubs, fences, or utility wires are present. These structures provide perching sites for feeding.

Boxes can be erected at any time. However, you have your best chance of getting tenants if you put the boxes up by the end of February when the bluebirds start searching for nesting locations. The birds will use boxes erected as late as August. Place the boxes in suitable habitat including areas where insects abound and where there is a mixture of trees and open grassland. Open fields, cemeteries, pastures, golf courses, gardens, and large lawns can all be appropriate habitat. Try to avoid placing the boxes in areas where insecticides are heavily used. Often several boxes in good locations may be necessary to attract one pair of birds.

Boxes placed near woods, brush piles, or aquatic areas often attract other bird species such as chickadees, titmice, wrens, nuthatches, or tree swallows. Do not discourage these species from nesting because they are welcome additions to the area and eat large numbers of insects. House sparrows or European starlings may take over the boxes. Because these species are not protected by federal or state laws, their eggs and young can be removed. By repeatedly removing eggs or young, you can discourage nesting by these two species. If house sparrows evict bluebirds, quickly erect another box nearby. Bluebirds will not return to the boxes sparrows have taken over, but they will quickly find an empty box in the vicinity. The eviction is a minor setback to the bluebirds if another box is available.

Figure 1. Bluebird House (after Zeleny)



Maintenance

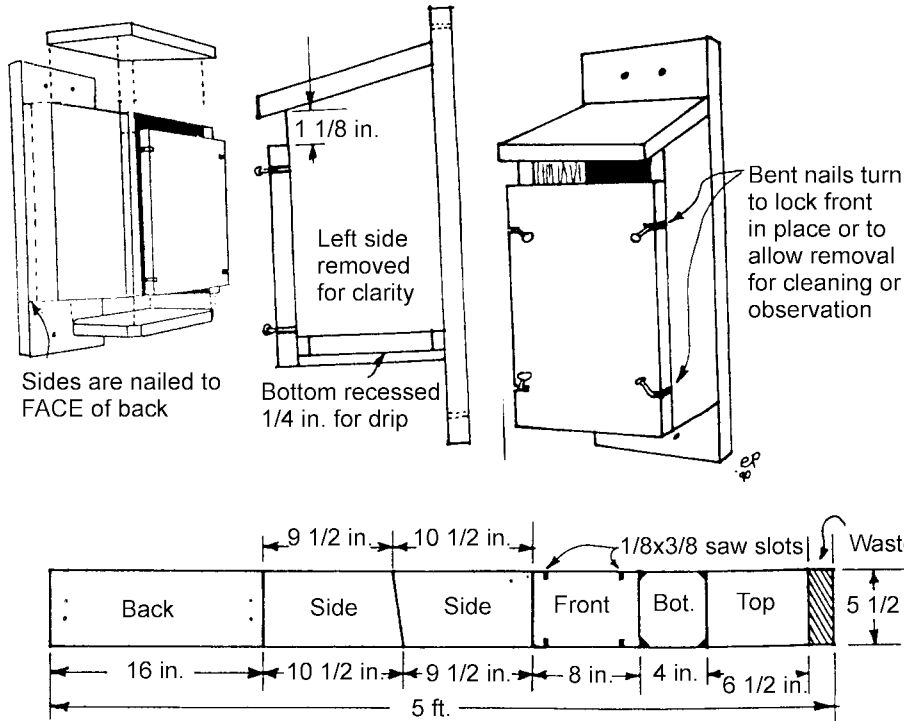
Inspect, clean, and repair nest boxes periodically. By late February each year, clean boxes of debris, open drains, and make any structural repairs. During the nesting season, frequent inspection may be required to prevent starlings or house sparrows from using nest boxes. Bluebirds do not seem to mind if you look in their nest; they will not desert it. Leave old nesting material in the box in the winter to provide insulation for birds taking refuge in the boxes during cold nights.

Evaluation

It might be interesting and fun to set up an experiment to evaluate which nesting structure birds use the most and how many young are produced each year. It is not necessary to check the boxes; however, amateur ornithologists have contributed greatly to our understanding of bird ecology and behavior.

Begin visitation in early March and continue throughout the summer. Check boxes every 7 to 14 days. During the egg-laying period, do not disturb the female in the morning. When you observe that nest construction is near completion, check the box in the

Figure 2. Bluebird House (after Davis)



yard or garden. The bluebird's diet is composed largely of insects, although they do eat substantial amounts of fruits and berries during the winter. A variety of birds will benefit from these plantings:

Trees	Shrubs
Oaks	Dogwoods
Cherry	Sumacs
Hackberry	Honeysuckle
Crabapple	Raspberry
Pines	Blackberry
Spruces	Serviceberry
Cedar	Inkberry, Hollies
	Mulberry
	Viburnum

Further Reading

The Bluebird: How You Can Help Its Fight For Survival by Lawrence Zeleny. 1976. Indiana University Press, Bloomington, Indiana. 170 pp.

afternoon. Do not disturb young birds after they are about 12 days old (near the time of leaving the box) at any time during the day. Disturbance during this period may cause young to leave prematurely and result in death from starvation or predation.

When checking the boxes, be careful not to disturb the nest, eggs, or young. Gently tap on the top of the box before opening to allow the female to leave. She will return after a short absence. After opening, examine the nest for signs of nest building, eggs, young, or other activity.

It is important to keep good records of the number of boxes containing nests, which bird species are utilizing the boxes, number of boxes with eggs, and how many young are hatched. More detailed information on the number of eggs per clutch, approximate hatching date, number of eggs hatched, number of young surviving, number of nestlings fledged, approximate time of fledging, and probable causes of nest, egg, or young loss can also be recorded.

Enhancing Bluebird Habitat

You can improve bluebird habitat, and songbird habitat in general, by planting a variety of shrubs and trees in your

A Field Guide to Birds East of the Rockies by Roger Tory Peterson. 1980. Houghton Mifflin Company, Boston. 384 pp.

The Audubon Society Master Guide to Birding Vol. 3, Old World Warblers to Sparrows, edited by John Farrand, Jr. 1983. Alfred A. Knopf Inc., New York. 400 pp.

Field Guide to the Birds of North America. 1983. National Geographic Society, Washington, D.C., 464 pp.

A Guide to Field Identification: Birds of North America. 1983. Golden Press, New York. 360 pp.

Sialia, official quarterly publication of the North American Bluebird Society, Box 6295, Silver Spring, Maryland, 20906.

Bluebirds and Their Survival, by Wayne H. Davis and Phillippe Roca. University Press of Kentucky, Lexington, Kentucky. 154 pp.