

## Eastern Bluebird *Sialia sialis*

On June the 20<sup>th</sup> 1782 the Bald Eagle was selected as the National Bird over the objection of Dr. Benjamin Franklin, he wanted the Wild Turkey named. They should have named the Eastern Bluebird, it has the right colors, found nation wide, courageous and will fight to death to defend its family against the enemy. In a way it has many human traits, the male locates the home site but they don't move in until approved by the female, she does all the house work and tends the young while the male provides the food for the family. It isn't a lifelong partnership, but often the pair raises several families together receiving help from their older broods.

Nation wide there are three specie's of bluebirds, Eastern, Mountain, and Western. The Eastern *Sialia sialis*, is found from the east coast west to the Rocky Mountains where the Mountain Bluebird, *Sialia currucoides* makes its home. The Western Bluebird, *Sialis mexicana* territory overlaps with the Mountain Bluebird and extends to the west coast. All are members of the Thrush family, cavity nesters and feed primarily on insects. They are short distant migrants moving to a winter food supply.

North America has some 80 plus cavity nesting birds. Very few are equipped to build a nest cavity, they depend on natural cavities or abandoned woodpecker holes for a nest site. With changes in timber management, fewer dead trees are left standing making nest cavities of any kind extremely competitive. The American Bluebird Society came into being to help fill the need for suitable nest sites for bluebirds and other small cavity nesters such as tree swallows, chickadee, nuthatches and others.

Starting a bluebird trail is easy as installing one house or as many as you can manage. Bluebirds will readily use a manmade nest box that can be purchased or made with just a few tools and a small amount of lumber. Installing a bluebird trail is a serious responsibility that doesn't end with putting up nest boxes. It is the trail owner's duty to provide as safe habitat as possible for the low rent tenants. This includes protection from predators and other hazards the birds may encounter while raising their family.

This package contains some useful information on getting started with your bluebird trail. The nest box plan was designed by the Hattermer Engineering firm, for easy construction and good ventilation to help lower inside temperatures during our hot summer months. We have listed some consideration to help you place your nest box in the best habitat and some things a male bluebird may consider when looking for a suitable nest cavity. As a trail owner you are responsible for the safety of your tenants so we have listed some of the predator you could encounter and how to deal with them. To help you understand your bluebird tenants and what can be expected during the breeding cycle we have included some information on the life cycle of the Eastern Bluebird.

## Hattermer Eastern Bluebird [*Sialia sialis*] Nest Box Plan

This plan conforms to the American Bluebird Society recommendations. The design is to maintain the lowest interior temperature during the nesting season. Plans have been provided by the Autauga Bluebird Trail Prattville, Alabama.

[www.ataugabluebirdtrail.com](http://www.ataugabluebirdtrail.com)

### Recommended Material:

Rough cut 1 inch cypress or cedar is suggested. DO NOT USE TREATED MATERIAL. This plan is for use with 3/4 inch thick lumber; adjust measurements for 1 inch material. It is suggested that the box be assembled with deck screws or galvanized screws. If painted, use a light or natural color; do not paint the interior. Roughen up the front below the hole and interior of the front so the birds can get a grip on the surface. Young need help to exit the box.

### Material:

- 11 X 6 inch untreated lumber for the back, front, floor and the 2 sides
- 11X10 inch untreated lumber for the top
- for assembly, number six 1½ inch deck or galvanized screws

### Construction: [Cut out]

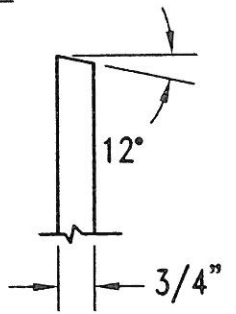
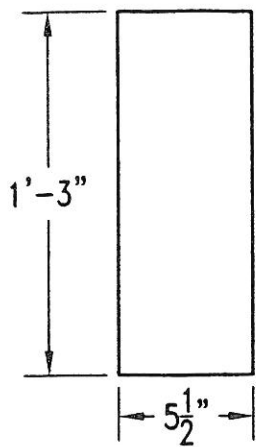
This plan is designed to open the side for inspection and to clean out the nest box. It can be constructed to open either side.

- Cut the back with a 12 degree slope across the back at the top.
- Saw the front and drill a 1¼ to 1½ hole centered 7 inches from the bottom.
- Cut a 12 degree slope across the top of the front,
- Cut two sides angled from back [10 inches] to the front [9 inches].
- Saw the bottom 4X 5½ inches and cut the corners off ½ inch from the corner.

Below is a drawing and measurements for each piece of the nest box.

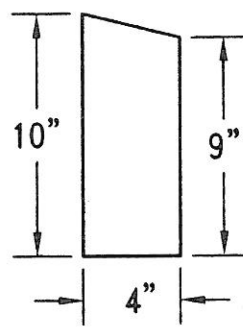
- Back
- Front
- 2 Sides
- Bottom
- Top

BACK

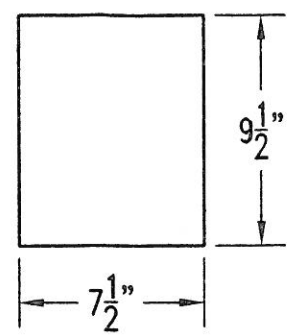


BEVEL TOP  
(ENLARGED  
FOR CLARITY)

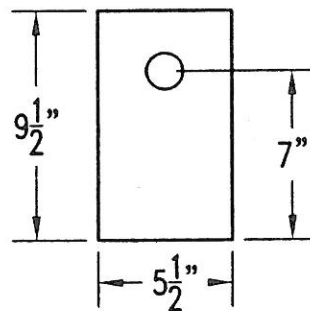
TWO SIDES



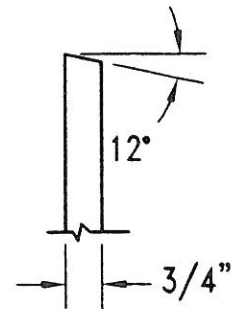
TOP



FRONT

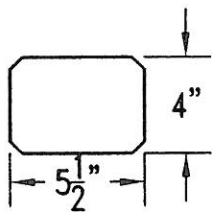


1-1/2" TO  
1-1/4" HOLE  
CENTERED



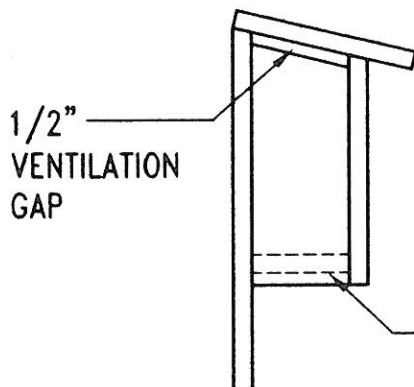
BEVEL TOP  
(ENLARGED  
FOR CLARITY)

BOTTOM

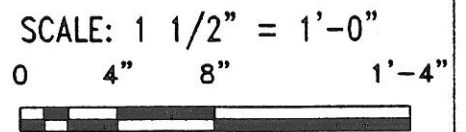
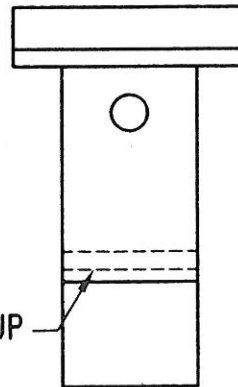


CHAMFER CORNERS,  
1/2"

ASSEMBLED SIDE VIEW



ASSEMBLED FRONT VIEW



AUTAUGA  
COUNTY  
BLUEBIRD TRAIL



PROJECT:  
AUTAUGA COUNTY BLUEBIRD TRAIL

TITLE:  
EASTERN BLUEBIRD NEST BOX  
CONSTRUCTION DRAWING

BY	CHECK
DATE 06-07-12	SHEET 1.1
REV.	

## **Assembly:**

- Mark and drill all pilot holes prior to assembly.
- Attach the fixed side to the back with the top of the side  $\frac{1}{2}$  inch below the top of the back.
- Attach the front to the fixed side with the front  $\frac{1}{2}$  inch above the top of the side. [This will allow a  $\frac{1}{2}$  inch vent between the top and sides].
- Attach the bottom [lower side] recessed  $\frac{1}{2}$  inches up from the front and side.
- Now attach the side that opens; drill pivot holes to the front and back of the side that opens.
- Drill a  $\frac{1}{8}$  inch hole in the front  $\frac{1}{2}$  inch from the edge and 2 inches below the top.
- Drill a  $\frac{1}{8}$  inch hole in the back  $\frac{1}{2}$  inch from the edge and  $2\frac{1}{2}$  inches below the top. These holes should be level across the back and front.
- Attach the side with screws through the holes and flush with the front bottom.
- Secure the opening side by drilling a hole through the front and side to hold the side closed.
- Attach the top with a 2 inch overhang on each side and flush at the back.

## **Some Consideration in Selecting a Place for Your Nest Box**

Is this the right habitat for Bluebirds? Select a site that is similar to an area outlined in "What a Male Bluebird looks for in a Nesting Site."

Will the birds be safe in this site? Avoid sites prone to attract House Sparrows, Fire Ants, and crawling critters such as snakes.

Which direction to place the entrance hole? Avoid placing the entrance hole where usual blowing rain may wet the inside and where direct sun light shines directly inside the box. This will raise the inside temperature.

Place your box where the young will have a safe place to fly to when they leave the box.

Central Alabama's bluebird population increases in winter with migrating birds from northern locations. It is recommended that you have your nest box installed by the end of October for two reasons. Your nest box may be used as a shelter during cold wet weather and a pair of migrants may be attracted to your nest box for the breeding season.

## What Does the Male Bluebird Look for in a Nesting Site?

Although the female Eastern bluebird (*Sialia sialis*) builds the nest and incubates the young, the male arrives first and makes the initial site assessment. Then, during courtship, the male must persuade a potential mate of his overall fitness as determined, in part, by his choice of a nest site with abundant food for the young and protection from predators and competitors. The male waits by his suggested site, singing (loudly at first, then more softly when a female approaches) and performing courtship displays to draw attention to the nest site. If a female agrees, a match is made. Sites with repeated successful nestings of Eastern bluebirds in man-made nest boxes are common:

- Short, mowed grass, such as a golf course or cemetery.
- Open land, similar to a meadow.
- Utility wires overhead, for bluebirds to perch while hunting insects below.
- No nearby buildings that might harbor house sparrows, which can parasitize bluebird nests and kill the young.
- An expanded front yard with a garden.
- Scattered knee-high bushes, such as those found in old fields.
- Grasses and other low vegetation under the shade of 20-foot-high trees.
- Well-established maturing trees.

## **PREDATOR CONTROL**

Putting up a nest box is a responsibility that should not be taken lightly. When you put up a nest box, a commitment is made to provide as safe as possible place for the birds to raise their young. Please take this commitment seriously and both you and the bluebirds will be rewarded.

Maintaining a bluebird nest box or trail is a great hands-on project but, from time to time, problems will arise on your trail. Common problems on the bluebird trail include predators that may attack a sitting female, the eggs or the nestlings. Your responsibility as a trail manager is to prevent, as best you can, these attacks that will destroy the nesting attempt. Below are some of the common predators you may have to deal with.

### **FIRE ANTS AND OTHER ANTS:**

Ants are usually not a problem until after the eggs hatch. Fire ants are attracted to the nest looking for food and will quickly destroy nestlings. However, more significant effects on survival of bluebirds may be an indirect reaction as fire ants feed primarily on arthropods a major food of bluebird. Other ants are attracted to the nest box to build their nests especially in very wet conditions. Proper box placement can be a factor in ant protection; don't place boxes in ant infested habitat. Coating your nest box pole with a ring of axle grease will help prevent ants from getting in your box.

### **HOUSE SPARROWS AND STARLINGS:**

Sparrows and starlings are cavity nesters and are very competitive with bluebirds for nest sites. Both sparrows and starlings will evict a nesting female bluebird and take over the nest box. They are known to kill a nesting female bluebird and remove eggs and nestlings from the box. Location of the box is important so it should not be placed where sparrows and starlings congregate.

### **RACCOONS AND OTHER WILD CRITTERS:**

Raccoons will climb the pole and take the nestlings. A metal predator guard will prevent the animal from reaching the box. A cone shaped metal guard just under the box should keep the critter out.

### **SNAKES:**

Snakes are among the most serious bluebird predators during the nesting season. Virtually all climbing snakes will rob bluebird nests of their eggs and young. Even with a predator guard they sometimes find a way to get in the nest box. The most effective device is a large conical guard made of sheet metal attached to the post on which the nest box is placed. A large plastic bucket placed over the pole and attached just below the box is effective. Be sure all of the space between the guard and the pole is closed. Don't place a box under hanging branches as snakes can drop down on the box.

### **WASPS:**

Bluebirds will not use a box if wasps have built a nest inside the box. We have found it best to prevent wasps from moving in and building its nest rather than removing it. You can prevent them from building a nest by coating the inside roof and under the floor with soap or Vaseline. The nest just won't stick if treated this way.

**Eastern Bluebird Life and Behavior**  
**Presented by the Autauga Bluebird Trail**

**Food habits:** Bluebirds are primarily insectivorous, two thirds or more of their food supply comes from a wide variety of insects. It is important to place you nest box near areas of short grass. They seem to avoid fields of long grass where it would be difficult to find insects.

**Courtship:** Courtship in our area usually begins in late February to mid March with the male locating a suitably nest cavity to raise a family. His next job is to find a mate and show her the nest site. He does this by singing from a high perch.

**Nest Building:** Nest building is performed almost completely by the female with the male encouraging her by singing. Nest building is started from mid March to mid April and is usually completed in three to five days. Pine straw is the preferred nesting material.

**Egg Laying:** Egg laying usually starts soon after the nest is completed but could be from one or two days to a week later with some pair. There are usually 5 eggs laid one each day until the clutch is complete. Eggs are light blue, however, occasionally some pair lay white eggs.

**Incubation:** Incubation is done almost totally by the female and requires fourteen to fifteen days for the young to hatch. For the first few days the young are brooded by the female with the male supplying small soft insects to feed the young. As the young grow both parents work to feed the family bringing larger insects to the nest. The young leave the nest box at about nineteen days old. The male tends the young after they fledge and the female starts a new nest.



## KEEPING ACURATE RECORDS

If you put up a nest box, you should monitor it on a regular basis. What exactly is monitoring? It is simply checking on your boxes on a regular basis to see how your renters are doing. If there is a problem you try to solve it.

An important part of monitoring is gathering data or a record of what is going on in your nest boxes. A record should be kept on each of your houses from the date installed until the end of the breeding season. The record should provide, at a minimum, the following on each of your bluebird houses:

- the date of the first nest and each successive nest.
- the date and number of eggs in each nest
- the number of eggs that hatched in each nest
- the number of young that fledged the nest.

A form is provided for recording this data; each house should be assigned a number so the data from the same boxes will be recorded on your form. At the end of the season you should total the number of nests, the total number of eggs and the number hatched and fledged the box. It will be fun to compare your results from year to year and with others that have a Bluebird Trail.