unlikely that blowfly infestation will threaten the lives of the nestlings.

**Raccoons** - Raccoons are a common predator of bluebirds and other cavity-nesting birds. They may remove eggs, nestlings, or even incubating adult birds or harass incubating or brooding adult birds enough to cause nest abandonment. An extended 5-inch roof overhang at the front of the box will prevent raccoons from reaching the entry hole from the top of the box. Applying a coating of heavy grease to the mounting pipe can also be effective in discouraging raccoons.

### **Monitoring Bluebird Nest Boxes**

It is important that all nest boxes be monitored every week or so during the breeding season to observe the status and check for problems. When approaching the box, make noise enough to warn its occupants, and lightly knock on the box before carefully opening the door. Peek in to be sure all is well. If House Sparrows or European Starlings have taken over the nest box, remove the nest to make the box available to bluebirds or Tree Swallows.

In early spring, check each nest box to see if mice have over wintered there. Remove the mouse nests, using gloves, and collect the material for later disposal. Your nest boxes will be ready for the next bluebird occupants.

For further reading we recommend "The Bluebird Book" by Donald and Lillian Stokes and "The Bluebird Monitor's Guide" by Berger, Kridler and Griggs. Both of these publications can be found at bookstores or may be purchased through the NYSBS website.



A clutch of five bluebird eggs

## Have You Seen a Bluebird Lately?

The Eastern Bluebird, with its beautiful plumage and spirited song, has long been celebrated as a harbinger of spring in books, poetry and art. Bluebirds were once among the most common songbirds in North America, but many young people today have never seen a bluebird. Where have all the bluebirds gone? Eastern Bluebird populations declined severely in the early to mid 1900s due to a shortage of natural cavities for nesting, competition for nesting sites from non-native species such as House Sparrows and starlings, and pesticide use. To help bluebirds recover, a widespread effort was begun to provide additional nesting sites for bluebirds. Today, bluebird populations are rebounding, in response to the availability of nest boxes provided by people like you!

Bluebird trails are a source of great pleasure and satisfaction to those who operate them. A bluebird trail may be only a few nest boxes on one's own property or hundreds of boxes spread over many miles. Bluebird populations have dramatically increased in areas where bluebird trails have been operated successfully for several years making areas where the natural cavities have either been destroyed, or usurped by non-native starlings and House Sparrows once again available to nesting bluebirds. Each of us can make a difference in the recovery of the Eastern Bluebird. Whether you install only a few nest boxes on your property or develop a more extensive trail, your chance of success can be greatly improved through knowledge of the habits of the bluebird, appropriate nest boxes, nest box location, and nest box maintenance. This brochure contains the information you need to get started.

Good luck and happy bluebirding!

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This brochure was produced by the New York State Bluebird Society.

Please visit our website: www.nysbs.org





Photo: Marjorie J. Hilger, Turtle Hill Images

# Having Fun with Bluebirds

How to Provide and Maintain Nest Boxes for Eastern Bluebirds

#### The Bluebird Nesting Season

Bluebirds return to the northern parts of their range early in the spring, hence their reputation as a harbinger of spring. The lengthening days of late February and early March bring with them the arrival of bluebirds in search of nesting sites. As a cavity-nesting species, bluebirds nest and raise their young in the holes of dead trees, fence posts or nest boxes. The male returns before the female and immediately starts searching for unoccupied cavities or nest boxes he considers suitable for nesting.

#### Courtship

Through song and by tail and wing displays, the male urges the female, upon her arrival, to explore several cavities as potential nest sites. This process may take days or sometimes weeks. If the female approves of one of them, she accepts him as her mate and the pair will remain in the area until nest building commences.

#### **Nest Building**

Days and often weeks elapse between the selection of a nesting site and the actual start of nest building. In most areas, nest building begins in the months of April or May. The female builds the nest almost entirely by herself. The three to four inch deep nest is made of finely woven grasses and sometimes pine needles. Depending on the weather, it usually takes several days for the nest to be completed. Bluebirds time their activities so that the first egg is laid four to five days after the nest has been completed. One egg is laid each day until the clutch is complete. Clutch size ranges from three to six, with four or five being the most common. The eggs are usually pale blue in color, but white eggs are occasionally encountered.

#### The Fledgling Period

On the day they are hatched, young bluebirds are virtually naked and weigh about one-tenth of an ounce. They are fed small, soft insects every few minutes from dawn to dusk. The male does most of the feeding at first since the female must spend most of her time brooding the young to keep them warm. Within about 12 days, the weight of the young bird approaches that of the adult and the gray and blue juvenile plumage has replaced the natal down.

Young bluebirds leave the nest in 17 to 21 days. On the day of fledging, the parents encourage their young to leave the nest by limiting feeding and by calling to them repeatedly from a short distance away. Upon leaving the nest, each young bird will attempt to fly to a nearby tree or bush. The newly fledged bluebirds quickly make their way into the higher branches of nearby trees, flying from tree to tree to gain strength.

For the first 7 to 10 days the parents feed the fledglings. Thereafter they begin finding a portion of their food on their own, becoming self-sufficient

within another week or so. Bluebirds have strong family ties, so the young birds usually remain fairly close to their parents throughout the summer and early autumn.

Bluebird pairs will usually raise a second and occasionally a third brood. It is recommended that the old nest be removed and the nest box cleaned after the first brood has left the nest. This increases the chance that a second brood will be raised in the same box.

#### **Types of Nest Boxes**

Numerous styles of nest boxes have been developed in an effort to arrive at a "perfect" bluebird nest box. However, only a few have received the endorsement of the North American Bluebird Society (NABS) and are recommended by the New York State Bluebird Society (NYSBS). Among the recommended nest boxes are the traditional 1-1/2 inch round entry hole NABS style box (shown on the front of this brochure), the oval entry hole Peterson box, the PVC box and the Gilwood box. Detailed nest box plans can be found on the NYSBS website (www.nysbs.org). Assembled nest boxes can also be ordered through the NYSBS website.

#### **Locating and Mounting Your Nest Box**

As with real estate, when it comes to bluebirds, where you locate your nest box may be more important than how the box is designed. Open areas with scattered trees or fields with nearby posts or wires for perching are best, especially where vegetation is kept short by mowing or grazing. Parks, pastures, large lawns, cemeteries, golf courses and abandoned orchards are usually good bluebird habitat. Generally, bluebirds prefer rural areas and the very outer edges of suburban developments.

Proper placement of your nest box can encourage bluebirds and at the same time discourage other competing birds and predators. Face the box towards a tree, shrub or pole, so the young can fly towards it when they fledge. Your nest box should be mounted and ready for use by the end of March. If it is put up later it may still be attractive to bluebirds raising their second or third broods. Be patient, it may take several seasons for bluebirds to find your box! Below are some tips for mounting your nest boxes that can help improve your chances of attracting bluebirds:

- 1. Mount nest boxes on 3/4" or 1" smooth metal pipe 5 or 6 feet above the ground. If there are cats in the area, mount the nest box 7 feet or more above the ground.
- 2. Place nest boxes in pairs, 10 to 15 feet apart to minimize competition from Tree Swallows. Swallows will usually exclude another pair of swallows from nesting nearby, thus leaving the adjacent box

available to bluebirds.

3. To minimize competition from House Wrens, place the bluebird nest boxes in more open areas 100 feet or more away from brush and woods.

#### **Predators and Competitors**

Non-native House Sparrow and European Starling are the most serious competitors for bluebirds for nesting sites. However, several mammals and reptiles, including raccoons, squirrels, domestic cats, certain snakes and a parasitic insect called the blowfly prey on adults, young and eggs of bluebirds.

**House Sparrows and Starlings -** Competition from aggressive starlings and House Sparrows, which often force bluebirds from the nesting sites, is a major factor in the decline of bluebirds. A

1-1/2 inch entry hole on a nest box will exclude starlings, but House Sparrows can readily enter this size opening.

When a House Sparrow wants a cavity occupied by bluebirds, it will attempt to drive the bluebirds away. Frequently, House Sparrows will puncture and remove bluebird eggs, or kill the nestlings or brooding adults by pecking their heads. Placing your nest boxes away from areas with high House Sparrow concentrations, such as barns, will reduce the chances that House Sparrows will usurp nest boxes intended for bluebirds.

Federal law does not protect European Starlings and House Sparrows, as it does native species. Therefore, House Sparrow nests should be removed from bluebird nest boxes as soon as nesting is initiated. Repeated removal of nesting materials may discourage House Sparrow use, but the most effective means of controlling House Sparrows is removing them from the area. Further information about controlling House Sparrows is available at the NYSBS website.

**Blowfly Larva** - Blowflies may contribute to the death of nestling bluebirds or swallows. One or more female blowflies will lay eggs in the bluebird's nest. The eggs hatch into tiny, tan-colored larvae that attach themselves to the nestling's feet, legs, underside of wings and beaks, and draw out blood and body fluids. Unless the nestlings are weakened or stressed due to other factors, such as unusually cold weather, it is (see next panel)