

Help bring back our Gems of Blue



ILLINOIS
DEPARTMENT OF



NATURAL
RESOURCES

Natural Heritage Division
One Natural Resources Way
Springfield, IL 62702-1271

Where Have All the Bluebirds Gone?

How many of us have seen a bluebird in recent years?

The great majority of young people today have never seen a bluebird. Yet 50 years ago, bluebirds were among the most common songbirds in America!

Besides the inspiration they have provided to poets and songwriters praising their beauty, their happy song, cleanliness, their serenity and family devotion, bluebirds are an asset to farmers and gardeners because their diet consists almost entirely of insects and grubs in spring and summer, turning into wild berries in late fall on their migration south for the winter.

The Eastern bluebird range once covered the entire eastern half of the United States, west across the great plains, where they meet the Mountain and Western bluebird. But with the obstacles mankind has created for them, their population has declined almost 90% in the past fifty years. Cavity nesters, they depended upon woodpeckers and other cavity-makers to bore holes in dead trees and fenceposts. As man came to look upon dead trees as unsightly, in the way of clearing land, or firewood, the extra cavities have disappeared along with the use of wooden fenceposts. The introduction of house sparrows and starlings proved to be a disaster, because they have become the bluebirds' worst avian enemies. In addition, increased pesticide use, while destroying insects, has also inadvertently reduced these lovely blue thrushes.

Now *we* must step in with a helping hand and provide the only hope for reestablishing bluebirds once again: carefully designed and regularly maintained artificial nesting boxes.

How Do Bluebirds Nest and Rear Their Young?

Generally bluebirds nest only in rural areas and in the outer edges of suburban developments, as the house sparrows and starlings have driven them from small towns and cities. The ideal habitat is relatively free from underbrush, in the open, but near a wooded area where bluebirds can perch on a tree limb or telephone wire and observe the open field, pasture or meadow, as they prefer open ground with sparse vegetation or short grass for feeding. Fenceposts along country roads with telephone lines overhead are excellent *if* vandalism and predators are not a problem.

In Illinois, bluebirds arrive in March or early April. (Nesting boxes should be ready for occupancy by March 15th.) They will search diligently for days or weeks over a large area, if necessary, in order to find acceptable nesting sites. The male takes the initiative. Days and weeks often elapse between selection and actual start of nest building. The nest is built in 5-6 days. It is composed of

thin grass or weed stems made into a neat cup shape. In artificial houses, this is almost always three inches below the hole. One egg is laid each day, with an average of five. They are usually a light sky-blue, but about 7% will lay white eggs. The female incubates for two weeks; both adults feed the young in the nest 16 to 23 days.

Young bluebirds are naked upon hatching and remain so for several days. They are extremely susceptible to cold at this time. They are fed small, soft insects every few minutes from dawn to dusk. Within 12 days the fledglings are almost adult size, natal down has been replaced by beautiful soft grey and blue juvenile plumage and they are being fed larger insects, with grasshoppers making up a large part of the diet of both young and adult.

The young can fly 50 to 100 feet on their very first flight from the nest box directly to a high perch and do not return to the nest. The male usually takes complete charge of caring for the young while the female renests, sometimes in a matter of hours. The older fledglings have been observed helping feed the second brood. The empty bluebird nest will be a little flattened but is as immaculate as when it was built: the adults remove all fecal material scrupulously, in contrast to sparrows and swallows.

It's Easy to Start a Bluebird Trail!

A bluebird trail is five or more bluebird nesting boxes mounted on fence posts, pipes, or preferably, free-standing posts. A good practice is to place them in pairs about 100 yards apart, facing an open area (especially north) as described above. Entrance holes should be 4-6 feet above the ground and should face the north, east or northeast to prevent sunlight shining into the hole and overheating the box interior. Ideally, the houses should be checked at least once a week to remove undesirable tenants, detect predation and to record data on nest, eggs, young, etc., from April 1 through August 15. Much of the fun and the rewards of a bluebird trail come during these inspections!

The house plans in this brochure are certainly not the only kind which will attract bluebirds, but over 20 years of experience of dedicated "bluebirders" have led to the preferred house design included here. While a 1-1 1/2 inch round hole is common, years of research have led us to believe an elongated, oval hole 1-3/8 " x 2-1/4" has far-reaching advantages (watch how they slip easily into it!), and yet extensive testing shows it to be the best deterrent to starlings. Heavy construction (meaning fairly thick wood) reduces the difficulty that is found in houses of less than 3/4" tops and 1/2" sides. Light-weight houses, and especially milk-cartons, have been found to literally "cook" the young when the hot sun beats down upon them. Detailed studies show a 9° *critical* difference between houses constructed of thick wood and adequate (but not too much) ventilation and those of thin con-

struction. The better insulation of thicker wood is also critical when that March blizzard hits and the female is trying desperately to keep her eggs warm.

The large, overhanging roof with a deep slant gives maximum protection from animal predators; the drop front provides easy access for checking and for the essential cleaning between nestings.

It is quite possible to open the nest box for observation; this should be done quickly and quietly to cause the least disturbance. Often the female will remain on the eggs. However, it is best not to open the boxes when the fledglings are 12 or more days old, as premature fledging may result, thereby reducing their chance of survival.

The narrow bottom is preferred by bluebirds, and helps to discourage birds with large broods.

Houses need not be painted, but should remain light in color for less heat absorption. Light gray green or beige stain may also be used.

Note: It is not necessary to own land in order to put up a bluebird trail. However, the landowner's permission *must* always be obtained first, and is usually given with enthusiasm and cooperation when the benefits of a bluebird trail are explained. With proper placement of the recommended bluebird houses and careful control of starlings and house sparrows, you should have reasonable success with your bluebird trail and be able to send back increasingly enthusiastic reports.

Once you have listened to the exalted song of happiness of *your* bluebirds, you'll never tire of the delight and joy of doing all you can to bring these lovely "Gems of Blue" back to Illinois.

Who Else May Be Using Your Bluebird Houses?

The house sparrow (or English sparrow) is absolutely the bluebird's worst avian enemy and *must* be kept from the houses. They will eventually give up if their nests (loose weeds, bits of debris, leaves, often with feathers) are constantly removed. They like a perch — bluebird houses must *never* have a perch (though a few horizontal scratches below the entrance hole will help the bluebird hang on while feeding young). Sparrow eggs are cream colored with brown specks. Neither house sparrows nor starlings, which have no natural enemies and therefore multiply virtually unchecked, are protected by law; therefore they must be destroyed whenever possible.

A beneficial bird, the house wren, will take up residence in a bluebird house *if* it is near undergrowth and bushes. The fiercely competitive wrens can carry out a whole bluebird egg, but more often will pierce the eggs and start filling the box to the top with sticks. A male wren will put sticks in several boxes to attract his mate to choose, so these sticks should be quickly removed. We recommend putting wren houses in bushy areas that

wrens prefer, to lure them away from the bluebird boxes. Wren eggs are small, pale pink flecked with reddish brown.

Chickadees infrequently will use the boxes — they have a lovely nest made with moss; it may look empty because the moss is pulled over the whitish, brown-speckled eggs while the female chickadee is away. They are not usually a problem; we could recommend enjoying the chickadees also, and making sure there are empty houses enough for bluebirds.

Nuthatches may also use nest boxes. Their eggs are similar to the chickadee's but the specklings tend to be more red.

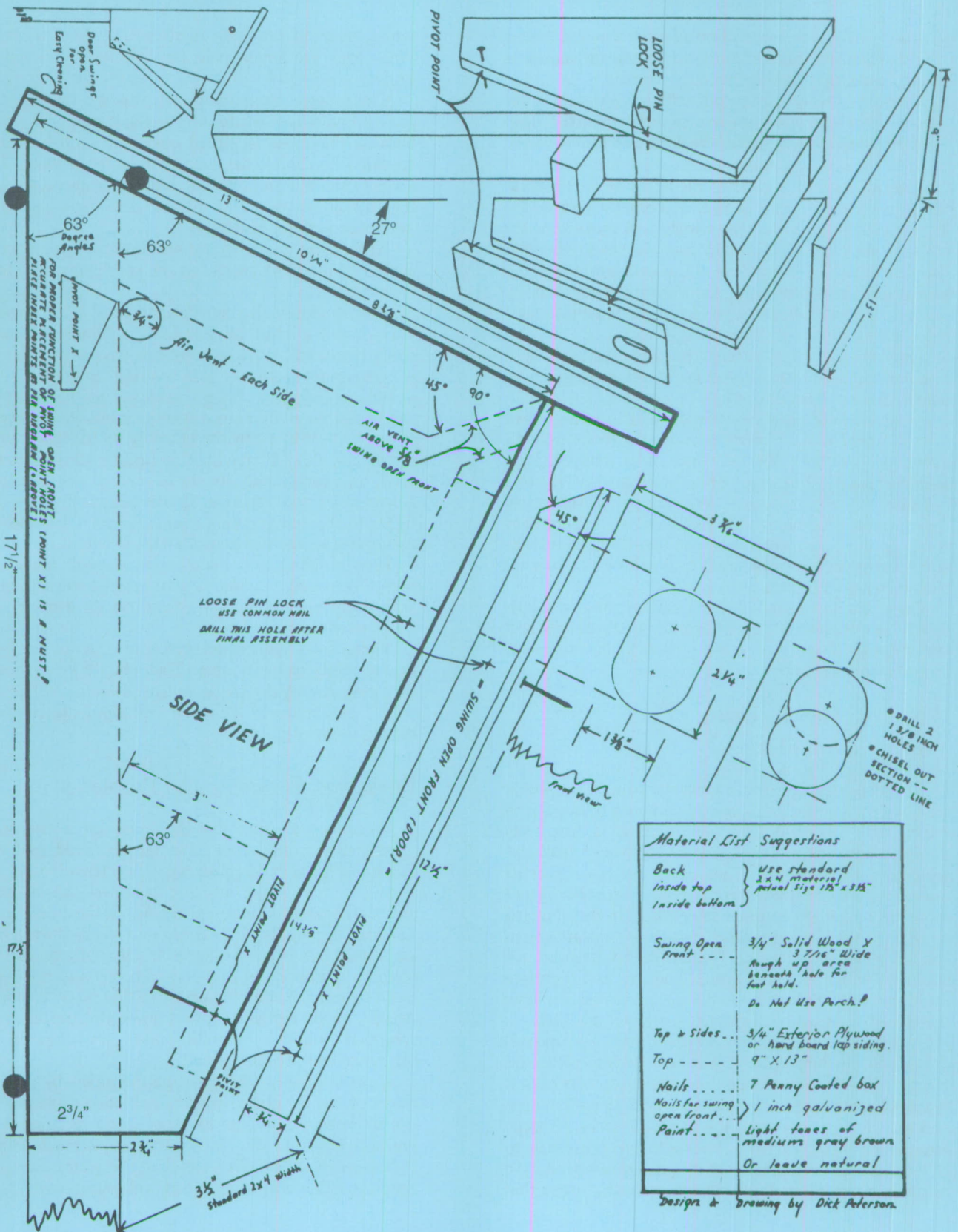
Tree swallows, also beneficial and real aerial acrobats, have caused a lot of "bluebirders" in Illinois to become really frustrated. Various solutions have been tried and we get reports of success with "pairing" of houses — even as little as 25' apart, though swallows are *not* territorial like bluebirds and you may just get more swallows closer together! While bluebirds usually return earlier in the spring and should have the first nesting started, there is often an overlap and swallows will, if nest boxes are scarce, build right over the bluebird eggs. In aerial dog-fights, the bluebirds do not have a chance. The bluebirds may move to another house, which is why it is essential to keep building and maintaining enough houses for both. Tree swallow nests have large loose straw or grass, with many white feathers wherever they are available, and 5-7 pure white eggs.

Flying squirrels and deer mice may occupy the houses, especially in the winter. They should be evicted as they may destroy the box as well as saturate it with excrement. House doors left open will eliminate problems during the winter.

Predators, Parasites and Problems

We must recognize that the house cat is one of the most common predators. The large slanted roof with overhang helps in keeping our feline friends (and raccoons) from reaching into the hole from above; small strips of jagged tin on top also help. If the culprit cat is known, clipping its claws every two weeks during nesting season from April to August is one solution. The best solution is to prevent cats and raccoons and occasional bull snakes from climbing up in the first place; tin sheets, usually about 15¢ each from a newsprint office, can be wrapped around free-standing posts just below the box for an excellent predator guard.

If metal pipe is used, greasing the pipe will help, but of course the car grease must be reapplied regularly. We do not believe the extra block of wood in front of the entrance hole (to make the hole deeper) is much help, as it hinders the bluebirds in feeding the young almost as much as it deters a "long-armed" cat or raccoon.



Material List Suggestions	
Back inside top inside bottom	Use standard 2x4 material actual size 1 1/2" x 3 1/2"
Swing Open Front	3/4" Solid Wood X 3 7/16" Wide Rough up area beneath hole for fast hold. Do Not Use Perch!
Top & Sides	3/4" Exterior Plywood or hard board lap siding.
Top	9" x 13"
Nails	7 Penny Coated box
Nails for swing open front	1 inch galvanized
Paint	Light tones of medium gray brown Or leave natural

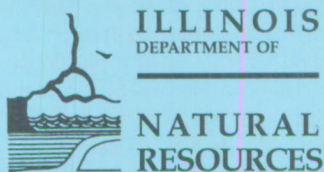
Design & Drawing by Dick Peterson.

The most serious bluebird parasite is the blowfly. Eggs laid in the nesting material hatch into larvae or maggots which attach themselves to baby birds and suck their blood. They then become puparia (dark brown oval cases about 3/8" long) which hatch after 12 days into adult blowflies to repeat the cycle. Puparia should be brushed out during routine inspection. Extensive research is being done to control blowflies. Parasitic lice or mites may also be present in the box. (Don't be fooled by the fine white granules on the bottom of a used box - these are probably pin-feather cover-scales - not lice!) Ants are sometimes a problem: a couple of drops of name-brand ant poison in a bottle cap, placed at the very bottom of the box underneath the nest works well.

Where Can You Get Advice, Plans, and Report Sheets?

The Natural Heritage Division of the Illinois Department of Natural Resources has established a network of people throughout the state who are volunteering time and effort toward reestablishing bluebirds in Illinois. The Division will hold bluebird workshops each year throughout the state to show people how to build bluebird boxes and put up bluebird trails.

Information about nesting programs, establishment of bluebird trails, nest box blueprints, or bluebird workshops can be obtained from the:



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This brochure is made available from donations to the Illinois Wildlife Preservation Fund.



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