

Build a nest box to attract birds

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In springtime in Nebraska some birds, like robins, build an open nest, but others prefer nesting in cavities of decayed trees or stumps. Cavity-dwelling birds, like woodpeckers, chickadees, house wrens and bluebirds, will substitute a nest box for a tree cavity. Natural nest sites disappear as weakened or dying trees are removed from our landscape. Depending on other attributes in your landscape, providing an appropriately sized nest box may help attract some bird species to your yard.

Although elaborate designs for boxes are available, you can successfully attract birds by building an inexpensive, simple, six-sided box. Whatever the design or material used, the boxes must be strong, weather-proof and securely fastened.

Single-compartment nest boxes are the easiest to build and the most frequently used by birds. When you are building the box, be sure to allow easy access for cleaning and occasional observations. You can use the same basic box design for all species (see the diagram). Table 1 gives the proper dimensions and hole sizes that are appropriate for different species.

There is no need to put nesting material into the box in the spring because lining the box is often part of each species' mating ritual. For some birds (woodpecker, owl, chickadee and duck families), a layer of wood chips or shavings (not sawdust) about one-inch deep may be placed in the bottom of the box.

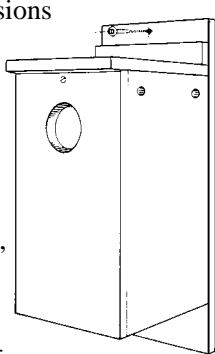
Drainage and ventilation are important features of a nest box.

Drill a few small holes just below the roof overhang and in the floor of the box near the walls.

You can suspend the box from a tree, mount it on a pole, or attach it to a building three feet below the roof. Find a location that is protected from the sun for part of the day and turn the entrance away from the usual direction of wind and rain.

Protect your boxes from predators. The most common predators are squirrels, raccoons and cats—all of which are excellent climbers. Do not place a platform or perch below the entrance hole of the nest box because these structures provide a support for animals raiding the nest. Place nest boxes on poles at least 15 feet away from trees and shrubs to stop squirrels from jumping onto the roof of the box. To prevent raccoons from raiding wood duck boxes, make the entrance hole oval in shape and erect the pole in water near the shore. Protect boxes that are placed on poles with a predator guard, such as a large inverted cone or a 60 cm strip of metal wrapped around the pole. A large clean plastic bottle (e.g. a bleach container) with the bottom cut out and nailed to the pole at the neck would also work.

Parasites, like lice and mites, are common in most nests, and their numbers increase as the season progresses. Young birds usually leave the nest before parasites become a major problem. If weather and food conditions allow the adult pair to start a second clutch, and the eggs are laid in a box already infested with parasites, the young may not survive. Providing a second box approximately



What makes the water cycle polluted?

Human and animal wastes are one source of pollution but a far more serious threat comes from the dumping of chemical wastes into water by some factories. Even a small amount of these poisonous chemicals can kill plants and animals that live in or around the water and make the water unsafe for humans to use.

If we use a fertilizer and/or a pesticide, rain washes either or both into streams and rivers which also may affect our groundwater. Fertilizers contain nutrients that make plants and

grasses grow more quickly but once these nutrients reach the ponds and streams, they over-feed water. This causes algae to grow on the water's surface. The build-up of algae prevents oxygen from reaching creatures and they suffocate. Furthermore, fertilizers and pesticides may seep into the groundwater to make our drinking water polluted.

We produce chemical wastes in our homes, too. Every time we flush away chemicals after cleaning, we send polluted water

into the sewer system. Stores, restaurants and hospitals also may flush chemicals down the sewer. This waste water might contain bleaches and detergents.

Although sewer water is filtered and cleaned, it is more economical and safer for us to be more aware of ways to reduce water pollution.

What can we do? Here are a few suggestions:

1. Check the labels on detergents. Use ones that are

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Wetland factoids

- Wetlands act as purifiers, cleaning the water before it exits. Wetlands do this by removing, retaining and transforming nutrients, processing wastes and trapping sediment.
- In the 10 years from 1982 to 1992, national wetland losses occurred at the higher rate in the East and Southeast than they did in the Midwest and West—primarily due to development.

- Half the original 221 million acres of wetlands in the lower 48 states have been destroyed and an estimated 290,000 acres continue to be lost each year.
- Migratory birds use different types of wetlands for specific habitat and nutritional needs during their migrations. Some birds prefer swamps and others like potholes, for example. Some stop in wetlands to nest,

- others for wintering and still others for short periods to refuel or mate on the way to northern nesting grounds.
- About one-half to two-thirds of America's wild ducks hatch in the prairie pothole wetlands of North Dakota, South Dakota, Minnesota and Iowa.
- Wetlands support a multi-

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Table 1. Dimensions for nest boxes for some species of birds found in Nebraska

Species	Entrance hole diameter (inch)	Width of floor panels (inch)	Height of wall panels (inch)	Minimum height above ground (feet)	On pole or tree near shrubs	On pole or tree in open areas
House Wren	1	4x4	6	5½	yes	-
Chickadee	1¼	4x4	5	5½	yes	-
Nuthatch	1¼	4x4	5	5½	yes	-
Downy Woodpecker	1¼	4x4	5	5½	yes	-
Eastern Bluebird	1½	5¼	10	6½	-	yes
House Sparrow	1½	5¼	10	6½	-	yes
Starling	2	5x5	12½	9	-	yes
Common Flicker	2½	6x6	15	9	-	yes
Screech Owl	3	8x8	17	14	-	yes
American Kestrel	3	8x8	17	14	-	yes
Wood Duck	3x4 oval	10x10	20	7	yes	yes

Table 2. Information on nesting

Species in a clutch	Number of eggs (days)	Incubation period	Age when the young leave the nest (days)
House Wren	6-8	13	12-18
Chickadee	6-8	12	16
Nuthatch	5-9	12	18
Downy Woodpecker	3-5	12	24
Eastern Bluebird	2-3	12	15-18
House Sparrow	10	14	12-14
Starling	10	12-14	16-18
Common Flicker	5	14-16	25-28
Screech Owl	2-3	26	24-26
American Kestrel	2-3	28	24-26
Wood Duck	10-15	29	1-2

15-20 feet away will give the birds an alternative nesting site that is free from parasites. Leave the second box closed until about two weeks after the first eggs have hatched. You can help control parasites by sprinkling diatomaceous earth in the nest box. This nontoxic substance scratches the outer covering of many parasites, causing them to die of dehydration. It is completely harmless to other life

forms. Maintenance Occasional and careful inspection of the box during the nesting season will enable you to check on the progress of the babies. Do not inspect the box during the first five days of incubation as the adults are susceptible to disturbances during this period and may abandon the nest. Carry out inspections, as quickly as

possible, preferably when the adults are away feeding. If any nestlings have died, it is best to remove them. Sometimes predators will follow a human's trail to find eggs and young in nest boxes. If you are worried about predators, postpone your inspection until after the nesting season. At the end of the nesting season, remove the nesting materials from the interior of the nest box.

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earth wellness festival

Thursday, March 25
9 a.m. - 3 p.m.
Southeast Community College-Lincoln
8800 O Street
"Educating future stewards of the earth" (ALH)

Make your own water filter

Here's one way to clean muddy water. Warning: Don't drink the filtered water. It may still contain bacteria. You'll need:

- paper coffee filter
- funnel
- charcoal or fine gravel
- sand
- muddy water
- container

1. Place the coffee filter in the funnel.
2. Put a layer of crushed charcoal or gravel in the bottom

of the funnel. Make another layer of sand above it.

3. Pour the muddy water through your filter into the container. What happens to the water? Is it clearer?

In many water treatment plants, dirty water is first allowed to settle in a large basin and then is filtered through layers of sand and gravel. This filtering method copies nature—rainwater seeping through the ground gets cleaned the same way. (ALH)