

<http://wdfw.wa.gov/living/projects/nestboxes/index.html>

Nesting and Roosting Boxes for Birds

As you can see in Snags, dead and dying trees present a myriad of natural nests and roosts for wild animals. However, as we cut down these snags, we destroy the homes of these animals.

Although we cannot mitigate all the consequences brought about by eliminating snags in our environment, we can provide some replacements for a few of those animals, and at the same time gain a way to watch and appreciate wildlife.

Building a box for wildlife simulates these natural homes in which animals can be protected and comfortable, if built and maintained correctly. In the next several pages you will see plans for many different kinds of nest boxes and roosts, as different species require very different specifications for their homes. The following are some general guidelines on woodworking for wildlife. Please read these first in order to make sure the animals using these homes are safe and secure.



Materials

Wood is the best material to use for bird and small mammal houses. It's a good insulator, it's available and easy to use, and it blends in well with the landscape. Three-quarter inch boards are easiest to work with. Soft wood, such as cedar, is fine for both smaller and larger boxes and has its own weather proofing. If you use plywood, make sure it is exterior grade. A well-constructed and maintained house can last 10 years. Nest boxes made with outdoor wood screws rather than nails are sturdier and last longer. Nails tend to loosen as wood expands and contracts in weather extremes.

Some Cautions:

- DO NOT use wood treated with preservative.
- DO NOT paint, stain or treat box with creosote.
- DO NOT use tin cans, milk cartons or metal for nests. Metals quickly heat up to lethal temperatures on warm spring and summer days, overheating the eggs and killing the birds and small mammals

Design



Roof

Entrance Hole

Design and construction of bird houses need to be species specific. The most important part is the entrance hole. If the hole is too small, the desired bird won't be able to enter. If it's too big (and this is more likely) undesirable wildlife – like non-native sparrows and starlings, and uninvited squirrels, can get in and harm, evict, or kill the desired bird

As a rule, house sparrows can't enter a nest box if the entrance hole is less than 1 1/8 inches in diameter. Starlings can't enter if the hole is less than 1 1/2 inches in diameter. Entrance hole sizes in this publication are designed to exclude these birds wherever possible.

Roof

Roofs need to be built with enough of a slant to shed water. The top front edge of the roof should overhang at least 2 inches to protect the entrance from driving rain or snow, and to keep cats from reaching in from above.

Provide a hinged side or roof so houses can be checked and cleaned easily each year. Annual cleaning reduces the possibility of spreading parasites and diseases. Hinges should be rust-proof. Raccoons can open roofs kept shut with a hook and eye. Use paired roofing nails with large heads or duplex nails on the side of the roof and the upper edge of a side. Wiring these nails together will keep the bird house shut and raccoon-proof (See [Barn Owl Nest Box](#) or [Wood Duck Nest Box](#) plans).

Sides and Seams

Natural tree cavities have rough interior surfaces that give young birds traction, especially when climbing out of the nest. You can mimic this rough surface below the entrance holes with grooves or a roughed-up surface that can be gripped by the bird's feet.

Don't screw the sides to the top of the floorboard. The sides of a bird house should enclose the floorboard. This keeps rain from seeping into the crack between sides and floor and then into the nest. Placing the floorboard 1/2 inch above the bottom of the sides also keeps moisture from seeping in from below.

All seams that won't be open should be water tight. Caulk any wide gaps.

Ventilation Holes

At least two 1/4-inch holes should be drilled near the top of the right and left sides of all bird boxes for air circulation. This is especially important for small nest boxes located in hot areas.

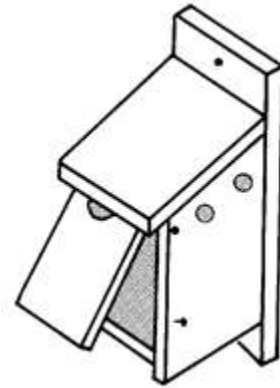
Drainage Holes

These are also important so the birds or other animals won't get wet and chilled. Drill at least four 1/4-inch drain holes in the floor of the house, helping drain moisture that gets inside.

Placement

When to put up

Some birds begin courtship and nesting activities as early as February, but most birds



Side and Seams



Ventilation holes

select sites from late March through May. This is also the time when most migrating birds return to Washington. Nest boxes can be set out as soon as you notice new birds arriving.

However, newly made bird houses need to be set out in winter to weather and air out. To prevent house sparrows and European starlings from setting up house in them before other bird species arrive, plug the entrance hole until you observe the preferred species.

Where

Boxes should be somewhat concealed, in partial shade and placed where predators can't get to it. Check to be sure birds have an adequate, clear flight path to the entrance hole. If possible, the entrance should face away from the prevailing wind. It usually helps to put the box on a habitat edge: between a group of trees and low-growing bushes, or between bushes and an open meadow, lawn or water.

All nest boxes should be firmly attached to a support post or a tree. When attaching a nest box to a live tree, use lag screws and washers. These screws can be loosened each year, preventing the back of the box from breaking and allowing the tree to grow without any deformities.

How Many

A good rule of thumb is to allow 1/4-acre between most houses. Most birds are territorial and the average-sized yard will probably only hold one nesting pair of a particular species. Territory size varies among birds - tree swallows require only several feet of space, robins need less than half an acre, while chickadees and nuthatches usually need several acres. Other birds, like purple martins and wood ducks, don't defend territories. That's why martin houses are the "apartment" type.

Pest Proofing

Natural enemies pose the greatest threat to birds using nest boxes. Metal poles used for mounts or a sheet metal guard encircling trees or wooden poles helps protect birds from cats and squirrels. Suspending small nest boxes from wires beyond the jumping range of these predators is also effective.

Perches aren't needed. If left on a nest box, perches will attract house sparrows and starlings.

House sparrows and European starlings usually won't nest within ten feet of the ground. Placing nest boxes four to five feet off the ground and in brushy areas will discourage these birds, but nest boxes at this height are vulnerable to predators such as cats.

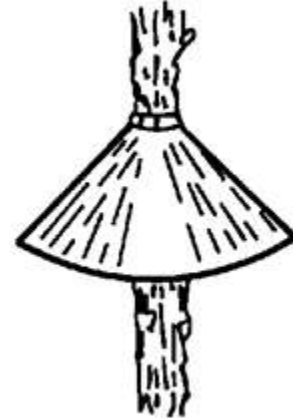
If you want to get rid of house sparrows or European starlings nesting in a bird house, it is legal to remove their nests and destroy the eggs. (Unlike most birds, these species are not protected by state or federal law.) Nests may have to be removed five to six times before sparrows or starlings finally abandon the house.

Small animals, like mice, native squirrels, bees and wasps, may also decide to move into a nest box. If you don't want them there, leave the nest box open to discourage them.

When the nest season is over, open an unseamed panel on the nest box and leave it that way throughout the winter. This prevents deer mice from using it as a winter home.

Otherwise these mice may "defend" their box from returning songbirds in the spring by killing and eating them if the birds enter "their" box.

Tips on Attracting Birds



It may take some time for birds to discover your nest box, even a couple of breeding seasons, so be patient.

- Plant native trees and shrubs for food and shelter
- Avoid using insecticide sprays whenever possible
- Leave grass and bush cuttings for nesting material
- Provide clean water in a birdbath
- Plant colorful wildflowers that will attract insects for birds to eat
- Leave 1-inch to 4-inch lengths of string or yarn for nesting material
- Set out a feeder or two to entice suet and seed eating birds