

Barred Owl Nest Box Plans

Strix varia

Haunting calls and striking 'barred' plumage make this owl a majestic addition to any mature woodlot. Building this heavy-duty sanctuary provides these non-migratory predators a permanent home to raise their fluff-ball owlets and naturally manage your local rodent population.

Nest Box Specifications

Entrance hole	7 x 7 inches (178 x 178 mm) square opening
Floor dimensions	9.75 x 11.25 inches (248 x 286 mm)
Interior depth	16 inches (406 mm)
Mount height	15-30 feet (4.5-9 m) above ground
Facing direction	South or East, aiming toward an open flight path into the woods

Place in a mature forest stand, ideally near a water source like a creek or swamp. Ensure there is a clear flight path to the entrance and avoid areas with high Great Horned Owl populations, as they are significant competitors and predators.

Cut List

From a 1x12 x 12 ft

Panel	Dimensions	Qty	Notes
Back	11.25" x 30"	1	Provides ample space for lag bolt mounting at top and bottom
Front	11.25" x 16"	1	The 7" gap between the top of this panel and the roof creates the entrance
Side	11.25" x 23"	2	Angle the top edge from 23" at the back to 16" at the front to match roof slope
Roof	11.25" x 16"	1	Attach with a slight overhang to protect the entrance from rain
Floor	9.75" x 11.25"	1	Recess 1/4" up from bottom; drill 1/2" drainage holes and trim corners

The back, front, sides, and roof are all the full width of the 1x12 board. The floor must be ripped to 9.75" wide so it fits between the two side panels.

Materials & Construction

Wood: 3/4-inch (19 mm) untreated cedar or cypress for durability. Pine is acceptable but will not last as long.

Boards: One 1" x 12" x 12' untreated cedar board yields all panels.

Hardware: 30x 2" galvanized deck screws, 4x 3" stainless steel lag bolts, 4x heavy-duty washers, 2x 3-inch bags of pine wood shavings

Ventilation: Leave a 1/2-inch gap between the top of the side panels and the roof for cross-ventilation.

Drainage: Drill at least five 1/2-inch holes in the floor and clip the corners of the floor panel to allow liquid waste to escape.

Predator guard: Since these boxes are mounted high in mature trees, a 3-foot wide aluminum sheet metal band wrapped around the trunk 4 feet off the ground is the most effective way to stop climbing raccoons and snakes.

Materials Checklist

1x 1" x 12" x 12' cedar board

30x 2" galvanized deck screws

4x 3" stainless steel lag bolts

4x heavy-duty washers

2x 3-inch bags of pine wood shavings

Exterior wood glue

1/2" drill bit (for drainage)

Circular saw or miter saw

Impact driver or socket wrench

Heavy-duty ladder

Sheet metal for trunk baffle (optional)

Safety glasses and ear protection

Seasonal Timeline

Install: Install by late autumn or early December; Barred Owls begin scouting nesting sites in mid-winter.

Nesting start: Nesting begins as early as January in the Southeast and Gulf Coast. In the Midwest and Northeast, expect activity in February or March, while Northwest populations typically begin in late March.

Clutch size: 2-3 eggs (occasionally 4)

Incubation: 28-33 days

Fledging: 28-35 days after hatching

Cleaning: Clean the box annually in October. Remove all old nesting material and debris, scrub with a weak bleach solution (1 part bleach to 10 parts water), and add 2-3 inches of fresh pine shavings.

Regional Considerations

Barred Owls are native to the eastern half of North America, ranging from Florida to southern Canada. They have recently expanded across the Pacific Northwest and into California, where they thrive in older, dense coniferous and deciduous forests.

Nesting occurs earlier in southern latitudes where winters are milder. In higher elevations and northern ranges, the start of nesting is often delayed until the spring thaw increases small mammal activity.

Raccoons are the primary threat to eggs and owlets; the height of the box and a trunk baffle are the best defenses. Great Horned Owls may attack adults or take over the box if it is placed in too open an area.

Camera Placement

Barred Owls are strictly nocturnal and highly light-sensitive, meaning you must use a camera with high-quality infrared (IR) night vision. Avoid any cameras with visible white LEDs, as these will disturb the owl and may lead to nest abandonment. A high-definition interior IP camera with a wide-angle lens is ideal for capturing the large floor area and the height of the box.

The best mounting position is in one of the top rear corners of the box, angled downward toward the center of the floor. Because Barred Owls are powerful birds, ensure the camera is securely housed in a protective bracket and that all cables are routed through the back of the box or protected by metal conduit to prevent the owls from pecking or pulling at them.

Given the size of the box and the bird, a small USB-powered interior camera may struggle with the

focal distance; a dedicated bird box camera or a small PoE (Power over Ethernet) security camera is recommended for the best detail. These cameras allow for continuous streaming so you don't miss the dramatic moments when the male brings prey to the brooding female.

For external monitoring, place a cellular or Wi-Fi-enabled trail camera on a neighboring tree approximately 10 to 15 feet away. This provides a secondary view of the 'landing pad' entrance, allowing you to observe the parents' arrival and the owlets as they begin 'branching' out of the nest before they are fully capable of flight.

Powering with a USB solar panel

Mount a 5V USB solar panel with a built-in battery 1-2 ft above the box on the same post, angled 30-45 degrees from vertical and facing south. Run the USB cable down the post inside split loom conduit (squirrels will chew unshielded wire), enter the box through the same grommeted hole as the camera cable, and seal with exterior silicone. Choose a panel with a 5-10 Ah battery buffer so the camera runs through cloudy days.

Common Problems & Solutions

Squirrels nesting inside: Install the box as late as possible (December) and clean out squirrel nests immediately if they appear before the owls arrive.

Owlets falling out (branching too early): Ensure the front panel is rough-sawn or has horizontal grooves cut into it to help owlets climb back up.

Box is too heavy to mount alone: Use a pulley system and a 'cleat' mounting bracket where a piece of wood on the box interlocks with one on the tree.

Bees or wasps in the box: Rub a thin layer of unscented bar soap on the interior ceiling of the roof to prevent comb attachment.

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