

Northern Flicker Nest Box Plans

Colaptes auratus

The Northern Flicker is a charismatic, ground-foraging woodpecker that brings life and rhythm to any property with its bold 'wick-a-wick-a' call and flashes of yellow or red wings. Building a nest box for this species is a unique carpentry challenge because you aren't just building a home; you're providing a site for their natural 'excavation' instincts to shine.

Nest Box Specifications

Entrance hole	2.5 inches (64 mm)
Floor dimensions	7.25 x 7.25 inches (184 x 184 mm)
Interior depth	18 inches (457 mm)
Mount height	6-20 feet (1.8-6 m) above ground
Facing direction	East or southeast, to catch morning sun while remaining sheltered from prevailing storms and afternoon heat.

Place the box on the edge of a woodland or in a yard with mature trees and open lawn for foraging. Ensure a clear flight path to the entrance hole and avoid high-traffic areas or spots near bird feeders where competition is high. Mount on a sturdy tree trunk or a heavy-duty pole with a predator baffle.

Cut List

From a 1x10 x 10 ft

Panel	Dimensions	Qty	Notes
Front	9.25" x 24"	1	Drill 2.5" entrance hole 20" from the bottom, centered; score horizontal 'ladder' grooves on interior below hole.
Back	9.25" x 28"	1	Provides 2" mounting tabs at top and bottom; pre-drill mounting holes.
Side (Left)	7.75" x 24"	1	Rip to 7.75" width so it fits between Front and Back panels; miter top at 10 degrees.

Side (Right)	7.75" x 24"	1	Hinge this panel at the top with two screws to allow for cleanout and refilling with shavings.
Roof	9.25" x 11"	1	Bevel the back edge at 10 degrees to flush against the backboard; provides a 2" front overhang.
Floor	7.75" x 7.75"	1	Drill four 1/4" drainage holes and recess 1/4" up from the bottom of the sides.

All panels are cut from a single 1x10 board. The front, back, and roof utilize the full 9.25" width, while the sides and floor must be ripped down to 7.75" to create the specific square interior volume flickers prefer.

Materials & Construction

Wood: 3/4-inch (19 mm) or 1-inch (25 mm) untreated cedar or redwood for superior weather resistance and insulation.

Boards: One 1" x 10" x 10' (120") untreated cedar board provides all necessary panels.

Hardware: 25x 1-3/4" stainless steel or galvanized deck screws, 2x 2" galvanized finishing nails (used as hinge pins), 1x brass swing latch or stainless steel wood screw (for side door security), Bag of natural cedar shavings (essential for this species), 4x 3" exterior lag bolts for mounting

Ventilation: Leave a 1/2-inch gap between the top of the side panels and the roof, or drill two 5/8-inch holes near the top of each side panel.

Drainage: Drill at least four 1/4-inch holes in the floor panel to allow moisture to escape and prevent the wood shavings from rotting.

Predator guard: Use a 24-inch 'stovepipe' or cone baffle on the mounting pole to stop snakes and raccoons. For tree mounts, install a 3-foot section of slick sheet metal around the trunk both above and below the box to prevent squirrel and cat access.

Materials Checklist

- 1x 1" x 10" x 10' cedar or redwood board
- 25x 1-3/4" galvanized deck screws
- 2x 2" galvanized finishing nails
- 1x Large bag of natural cedar or pine shavings
- 2.5" hole saw or spade bit
- Drill and 1/8" pilot bit

Measuring tape and carpenter's square
Handsaw or miter saw
80-grit sandpaper for smoothing edges
Exterior wood glue (optional)
4x 3" lag bolts for tree/pole mounting
Stovepipe baffle for predator protection

Seasonal Timeline

Install: Install in late fall or very early winter (January) to allow the birds to scout the location before the spring breeding season.

Nesting start: Nesting begins as early as March in the Southeast and Southwest. In the Northeast and Midwest, look for activity starting in mid-April to early May as migratory populations return.

Clutch size: 5-8 eggs

Incubation: 11-12 days

Fledging: 24-28 days after hatching

Cleaning: Clean out the box annually in late summer after the final brood has fledged. Crucially, you must completely refill the box with fresh wood shavings each winter, as Flickers will only use boxes they can 'excavate' themselves.

Regional Considerations

Northern Flickers breed across nearly all of North America, from the tree line in Alaska and Canada down through the entire United States into Mexico. They are particularly common in open woodlands, forest edges, and suburban areas with scattered mature trees.

In southern latitudes, Flickers may start two weeks earlier than those in the north. High-elevation populations in the West often wait until late May or June for the snow to clear and insect activity to peak.

European Starlings are the primary threat, often aggressively evicting Flickers from their cavities. Raccoons and climbing snakes are also major threats to eggs and nestlings if proper baffles are not installed.

Camera Placement

Because Northern Flickers are deep-cavity nesters, interior camera placement is best achieved by mounting a wide-angle, IR-capable camera to the underside of the roof. This top-down view allows you to see the entire nesting area, which is crucial since these birds spend significant time 'excavating' the wood shavings you provide before laying eggs. Ensure the camera has a short focal length to stay in focus at a distance of about 18-22 inches.

Cable routing is straightforward in a Flicker box due to its large size; you can run the power cable through a small notch in the back panel near the roof line. Since Flickers are sensitive to light changes inside the dark cavity, avoid using cameras with visible white LEDs. Instead, rely on 940nm 'invisible' infrared LEDs to observe their fascinating behaviors—from the initial woodchip tossing to the frantic feeding of the large brood—without disturbing the parents.

For external monitoring, a side-mounted camera or a nearby trail cam is excellent for capturing the 'wick-a-wick-a' display calls and the dramatic moment when fledglings first peer out of the 2.5-inch entrance. A rugged outdoor camera like a Blink or a dedicated PoE birdhouse cam works best here, mounted roughly 3-5 feet away on an adjacent branch or a separate post to capture the activity at the hole without obstructing the flight path.

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

European Starlings taking over: Flickers are larger and can often defend themselves, but you should completely pack the box with shavings. Starlings are less likely to put in the work to remove them, whereas Flickers enjoy the process.

Birds not using the box: Ensure the box is packed tightly with cedar shavings to the very top. Flickers won't nest in an empty box; they need to 'dig' out the cavity to feel it is a suitable site.

Squirrels enlarging the hole: Attach a metal portal protector or a piece of slate with a 2.5" hole over the entrance to prevent chewing.

Box is too hot: Ensure the roof has an adequate overhang and that the box is not painted a dark color; natural cedar or light stains are best.

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