

Eastern Screech-Owl Nest Box Plans

Megascops asio

Inviting an Eastern Screech-Owl to your yard is like hiring a tiny, feathered night watchman to manage your rodent and large insect populations. These charismatic little raptors are surprisingly comfortable in suburban woodlots, making them the perfect candidate for a backyard habitat project that offers a front-row seat to the wonders of nocturnal life.

Nest Box Specifications

Entrance hole	3 inches (76 mm)
Floor dimensions	7.75 x 7.75 inches (197 x 197 mm)
Interior depth	10-12 inches (254-305 mm)
Mount height	10-20 feet (3-6 m) above ground
Facing direction	East or South, facing an open area or flight path while protected from prevailing winds.

Mount on a mature hardwood tree or a dedicated 4x4 post near the edge of a wooded area. Ensure there is a clear flight path to the entrance hole, free of small obstructing branches. Avoid placing near high-traffic areas or loud outdoor equipment like AC units.

Cut List

From a 1x10 x 8 ft

Panel	Dimensions	Qty	Notes
Front	9.25" x 16"	1	Drill 3" hole centered 12" from the bottom; score horizontal lines on the interior below the hole to help owlets climb.
Back	9.25" x 24"	1	Extends above and below the main box to provide easy mounting flanges for the tree or post.
Side	9.25" x 16"	2	Angle the top edge from 16" at the back to 14" at the front to shed water. One side should be hinged for cleaning.

Roof	9.25" x 12"	1	Provides a 2-3" overhang at the front to keep rain out of the entrance hole.
Floor	7.75" x 7.75"	1	Sized to fit inside the walls; clip 1/2" off all four corners for drainage and recess up 1/4" from bottom.

All panels are cut from the 9.25" wide 1x10 board. The floor is ripped down to 7.75" to fit between the two 0.75" thick side walls. The extra length on the back panel allows for easy installation using lag bolts.

Materials & Construction

Wood: 3/4-inch (19 mm) untreated cedar or redwood for maximum longevity. Pine is acceptable if painted on the exterior only.

Boards: A single 1" x 10" x 8' untreated cedar board provides enough material for all panels and the floor.

Hardware: 25x 1-5/8" galvanized deck screws, 2x 2" exterior-grade hinges, 1x brass shutter latch or heavy-duty hook and eye, 2x 3" stainless steel lag bolts with washers, 2-3 inches of kiln-dried pine shavings

Ventilation: Leave a 1/4-inch gap between the top of the side panels and the roof to allow for cross-ventilation and heat escape.

Drainage: In addition to clipping the floor corners, drill four 3/8-inch holes in the floor panel to ensure the nest stays dry.

Predator guard: Install a 24-inch wide stovepipe or sheet metal cone baffle on the trunk or post below the box. This prevents raccoons and snakes from climbing to the entrance.

Materials Checklist

- 1x 1" x 10" x 8' cedar board
- 1x 1" x 12" x 12" scrap (optional for larger roof)
- 25x 1-5/8" galvanized deck screws
- 2x 2" exterior hinges
- 1x brass shutter latch
- 2-3 inches of pine or cedar shavings
- 3" hole saw or spade bit
- Drill and 1/8" pilot bit
- Measuring tape and carpenter's square

Table saw or circular saw
Stovepipe baffle (for predator protection)
2x 3" stainless steel lag bolts

Seasonal Timeline

Install: Install by late December or early January in the South; by February in the North, as they begin scouting sites early.

Nesting start: In the Southeast, nesting can begin as early as February. In the Midwest and Northeast, it typically starts in March or April. Western populations follow a similar spring schedule based on elevation and local temperatures.

Clutch size: 2-6 eggs (usually 3-4)

Incubation: 26-31 days

Fledging: 27-30 days after hatching

Cleaning: Clean the box once a year in late summer after the young have dispersed. Replace the pine shavings with a fresh 2-3 inch layer for the winter, as owls may use it for roosting.

Regional Considerations

The Eastern Screech-Owl is found throughout the eastern half of North America, from the Atlantic coast to the Rocky Mountains, and from southern Canada to northeastern Mexico.

Nesting begins earlier in lower latitudes with warmer climates. In northern regions or higher elevations, breeding may be delayed by several weeks until consistent prey (large insects and small rodents) becomes active.

Raccoons and larger owls (like Great Horned Owls) are the primary threats. The deep box design and a baffle protect against climbing predators, while proper placement prevents larger raptors from easy access.

Camera Placement

When monitoring Eastern Screech-Owls, the camera must be placed at the very top of the box, ideally tucked into the corner of the ceiling. Because these owls are highly sensitive to light, you must use a camera with high-quality infrared (IR) night vision that does not emit a visible red glow. A wide-angle lens is essential to capture the entire floor area from such a short distance.

For the best view of the hatchlings and the parents' behavior, a top-down angle is superior to a side mount. Since the box is deep, a side-mounted camera often gets obscured by the adult owl's body during feeding. Cable routing should be handled carefully; drill a small hole just under the roof and use a cable gland or silicone sealant to keep moisture and insects out.

Because these boxes are often high in trees, a Wi-Fi-enabled interior camera like a modified Wyze or a specialized bird box camera with a long power lead is recommended. If your Wi-Fi signal is weak, consider an outdoor-rated battery camera like a Blink mounted on a nearby branch looking at the entrance, though this won't show the interior nesting activity.

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: Monitor the box closely in March; remove starling nests immediately and repeatedly. Starlings are persistent but will eventually give up if the box is checked frequently.

Grey Squirrels nesting inside: Squirrels find owl boxes very attractive. If squirrels move in, you may need to mount the box on a pole with a high-quality baffle, as they are harder to deter on trees.

Owls won't use the box: Ensure you have provided 2-3 inches of wood shavings. Screech-owls do not bring their own nesting material and will rarely use a bare wooden floor.

Bees or wasps in the box: Check the box in early spring. If a colony begins, wait for a cool morning to remove the small start of a nest, or rub unscented soap on the ceiling to discourage them.

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