

Tree Swallow Nest Box Plans

Tachycineta bicolor

Tree Swallows are aerial acrobats that bring life to open fields and lakeside properties with their iridescent blue plumage and incredible insect-hunting skills. Building a home for these social birds is exceptionally rewarding, as they are one of the few species that will actually 'pair up' with bluebirds, allowing both to thrive in your backyard side-by-side.

Nest Box Specifications

Entrance hole	1.5 inches (38 mm)
Floor dimensions	5.75 x 5.75 inches (146 x 146 mm)
Interior depth	7 inches (178 mm)
Mount height	5-6 feet (1.5-1.8 m) above ground
Facing direction	East or northeast to catch the morning sun while avoiding the hottest afternoon rays and prevailing winds.

Place in open areas with low vegetation, preferably near a water source like a pond or marsh where insects are plentiful. Space boxes at least 100 feet apart for swallow-only colonies, or pair them within 20 feet of a bluebird box to reduce inter-species competition.

Cut List

From a 1x8 x 6 ft

Panel	Dimensions	Qty	Notes
Front	5.75" x 9.25"	1	Drill 1.5" entrance hole 7" from bottom, centered; rip width to 5.75"
Back	5.75" x 16"	1	Extends for mounting; rip width to 5.75"
Side	7.25" x 9.25"	2	Angle top edge from 9.25" down to 8.25" to shed water
Roof	7.25" x 11"	1	Use full board width; allows for a 2-inch front overhang

Floor	5.75" x 5.75"	1	Rip to 5.75" square; trim corners 1/2" for drainage
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The roof and sides utilize the full 7.25-inch width of the 1x8 board. The front, back, and floor must be ripped down to 5.75 inches to fit between the side panels. This creates a spacious interior for the swallow's large feather-lined nests.

Materials & Construction

Wood: 3/4-inch (19 mm) untreated cedar, pine, or redwood. Never pressure-treated.

Boards: 1x 1" x 8" x 6' untreated cedar board yields all panels.

Hardware: 20x 1-5/8" galvanized deck screws, 2x 1-1/2" exterior hinges (for side-opening door), 1x small latch or locking screw, 2x 3" lag screws for mounting

Ventilation: Leave a 1/4-inch gap between the top of the side panels and the roof, or drill two 1/2-inch holes in each side near the top.

Drainage: Clip all four corners of the floor panel at a 45-degree angle (about 1/2 inch) to ensure water can escape and air can circulate.

Predator guard: A 24-inch (61 cm) stovepipe baffle mounted on the pole below the box is essential. For areas with high sparrow pressure, an entrance hole precisely 1.5 inches prevents larger competitors like starlings from entering.

Materials Checklist

- 1x 1" x 8" x 6' cedar board
- 20x 1-5/8" galvanized deck screws
- 2x 1-1/2" exterior hinges
- 1x small hook and eye latch
- Exterior wood glue
- 80-grit sandpaper
- 1-1/2" hole saw
- Drill and 1/8" pilot bit
- Measuring tape and pencil
- Table saw or circular saw
- Stovepipe baffle (for pole)
- 2x 3" lag screws for post mounting

Seasonal Timeline

Install: Late February to mid-March in the northern US; late January in the southern range.

Nesting start: In the Southeast and West, nesting can begin in early April. Midwest and Northeast populations typically wait until May, following the emergence of flying aquatic insects.

Clutch size: 4-7 eggs (usually 5-6)

Incubation: 14-15 days

Fledging: 18-22 days after hatching

Cleaning: Remove the feather-lined nest immediately after the first brood fledges in mid-summer. Perform a deep cleaning with a 10% bleach solution in late fall once the birds have migrated south.

Regional Considerations

Tree Swallows breed throughout the Northern United States, all of Canada up to the tree line, and high-elevation areas of the West. They are particularly common near freshwater lakes, marshes, and agricultural fields.

Nesting timing is heavily influenced by 'insect air-time'; southern populations may begin in March, while those in the Canadian Rockies or Northern Maine may wait until June for consistent warm weather.

Raccoons, snakes, and House Sparrows are the primary threats. A metal mounting pole with a baffle prevents climbing predators, while the 1.5-inch hole and open-field placement help deter House Sparrows.

Camera Placement

For Tree Swallows, an interior camera mounted to the underside of the roof is the gold standard. Because these birds build deep nests of grass and line them with scavenged white feathers, a top-down view ensures you can see into the 'feather cup' to observe eggs and hatchlings. Use a small, wide-angle USB-powered camera with infrared (IR) capabilities; avoid white LEDs as they can disturb the birds during the night. Route the cable through a small notch at the top of a side panel, ensuring it is stapled flat to avoid snagging the adult birds' wings.

If you prefer an exterior view, place an outdoor wireless camera on a separate post approximately 4 to 6 feet from the entrance hole. Tree Swallows are extremely active flyers, and an exterior camera will capture their spectacular aerial displays and the moment the male presents feathers to the female. Ensure the camera faces North or South to avoid lens flare from the sun, which can wash out the

brilliant iridescent blue of their plumage.

For more advanced monitoring, a trail camera with a high-speed trigger is useful for capturing the rapid 'in-and-out' feeding sessions. Tree Swallows feed their young almost constantly during daylight hours, and a fast shutter speed is required to freeze the motion of their wings. If using an interior camera, ensure it is set to a high enough frame rate to capture the vibration of their throat during their liquid, chattering songs.

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

House sparrow competition: Place boxes at least 100 feet from buildings and monitor weekly; remove sparrow nests immediately to discourage them.

Blowfly larvae in nest: If nestlings look pale or weak, check for larvae under the nest; replace heavily infested nesting material with clean, dry grass if necessary.

Swallows and Bluebirds fighting: Pair your boxes by placing two units 15-20 feet apart; the two species will each take one and then jointly defend the area from others.

Overheating in summer: Ensure 1/4" ventilation gaps at the top and use light-colored cedar; do not paint or stain the box a dark color.

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