

The Cross-Watershed Banding Together for Birds Initiative

Nesting Box Plans, Species Information & Project Details



A Proud Partnership Between:



WINTER RIVER - TRACADIE BAY
WATERSHED ASSOCIATION



With Support From:



PRINCE EDWARD ISLAND
WILDLIFE
CONSERVATION FUND

The Cross-Watershed Banding Together for Birds Initiative

PROJECT OVERVIEW

The Cross-Watershed Banding Together for Birds Initiative is a partnership between PEI Watershed Groups and experts to help conserve declining aerial insectivores. Partnered Watershed Groups include, Trout River Environmental Committee, Kensington North Watersheds Association, Wheatley River Improvement Group, South Shore Watershed Association, Hunter-Clyde Watershed Group, Stratford Area Watershed Improvement Group, Bedeque Bay Environmental Management Association, Belfast Area Watershed Group, Tignish Watershed Management Group, and Winter River-Tracadie Bay Watershed Association.

This program aims to establish a standardized tree swallow monitoring and banding across Prince Edward Island; providing safe nesting habitat for declining aerial insectivore species and educating community members on conservation efforts.

Tree swallows are cavity nesting birds but are unable to excavate their own holes. As such, providing safe nesting habitat using tree swallow nesting boxes goes a long way.

This booklet will provide information on tree swallows, nesting, box construction, and maintenance.

We are incredibly grateful to the Wildlife Conservation Fund for financially supporting this important project that will benefit tree swallows for many years to come.

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TREE SWALLOW

Tachycineta bicolor

OVERVIEW

The tree swallow is a small songbird known for its aerial acrobatics. Tree swallow populations have demonstrated long-term declines due to the loss of nesting habitat from human activities such as land development and intensive agriculture. Exposure to pollutants, especially insecticides, is an additional concern. They have also shown sensitivity to climate change.

IDENTIFICATION

Adult tree swallows have pure white throats and bellies with black flight feathers, eye masks, and notched tails. Their upper body and head vary: males are shiny, iridescent blue-green, females are a duller black-brown with hints of blue, and juveniles are sooty grey. Weight: 16-25g; Length: 12-15cm; Wingspan: 30-35cm.

HABITAT & FOOD

Tree swallows prefer open areas in or near wetlands, where aerial insects are found. They can often be seen chasing prey while flying above grassland, pastures, and shorelines. During the breeding season, they eat calcium-rich items like fishbones and mollusk shells. They migrate along the Atlantic Coast to their wintering grounds in Florida and Central America.



NESTING

Nest Description

Tree Swallows do not excavate their own cavities, instead they rely on old woodpecker holes, natural tree hollows, and building eaves. The female builds the nest with grass, pine needles, moss, feathers, and hair. This species readily accepts nesting boxes.

Nest Facts

Clutch Size:	4-7 eggs
Number of Broods:	1-2
Egg Length:	1.7-2 cm
Egg Width:	1.3-1.4 cm
Incubation Period:	11-20 days
Nestling Period:	15-25 days

Egg Description

Pale pink, turning to pure white within 4 days.

Condition at Hatching

Helpless, with closed eyes and pink skin sparsely covered with down.



TIMELINE

March

Clean out the nest box and ensure it is in good condition.

April

Tree swallows return from their overwintering grounds. Keep an eye out for breeding pairs around your nest box! If you're lucky, you might see a female bringing nesting material to your box.

May to Mid-July

This is the nesting time for most tree swallows! Your box can be checked biweekly, when the parents are absent, until you find eggs. Once eggs are present, monitor the box from a distance to avoid disturbing the nest. Check the box once, 11-20 days after observing the eggs, to determine hatching success and then again 28-31 days later to confirm fledging. Once the young have fledged, clean out the box. If done early enough, they might produce a second brood or another bird species, such as the Eastern bluebird, might use the box.



ADDITIONAL INFORMATION

Information Sources

All About Birds, the Cornell Lab of Ornithology, the Salmon Creek Tree Swallow Project, and the National Audubon Society

Funding

Prince Edward Island Wildlife Conservation Fund

Tree Swallow Box Construction Plans



**Produced by: Kensington North
Watersheds Association**



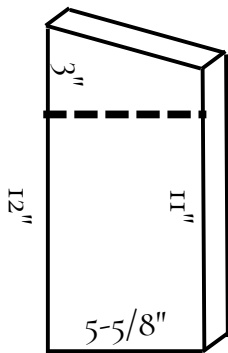
Blueprint



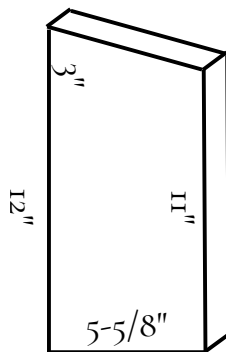
MATERIALS

- 4" Sandpaper
- 1-1/2" hole saw
- Wooden BBQ skewers
- 1-1/2" finish nails
- 1-1/4" finish nails
- 4" hinge
- Wood glue
- 2" deck screws

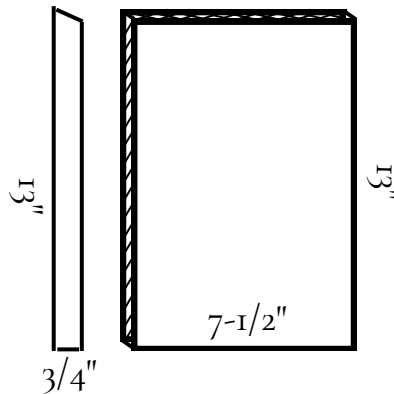
Door Side



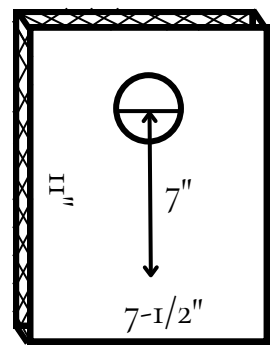
Fixed Side



Back



Front

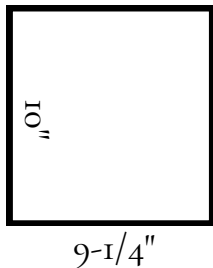


Cut the top of both side pieces on an 11° angle. Cut one side piece 3" from the top- this will become the door.

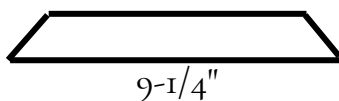
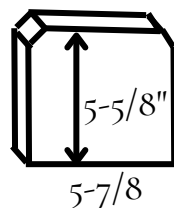
Bevel the tops of the front and back pieces 11° to align with the sides.

The 10" sides of the roof are beveled at 10°

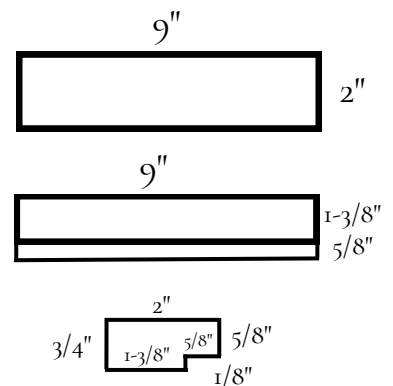
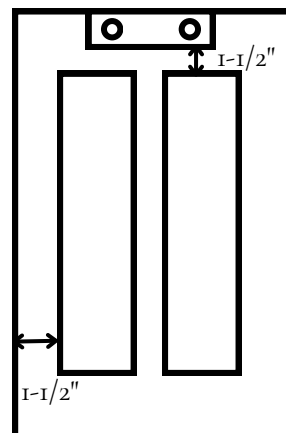
Roof



Floor



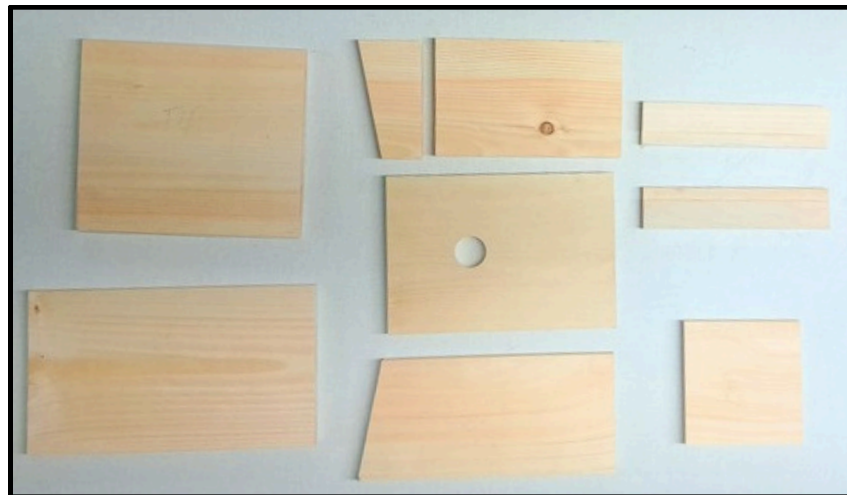
Optional T-post Bracket



Cut Layout

1" x 10" x 6'

Top					
	Back	Front	Floor	Side 1	Side 2



NOTES

- All pieces are cut from a single piece of 1" x 10" x 6' knotty pine shelving.
- All nail holes are pre drilled using a 1/16" drill bit.
- Before construction, an entrance hole is cut in the front piece using a 1-1/2" hole saw.
- The back edges of the floor are cut to allow for drainage.
- Remember to sand all of the wood, especially the entrance hole!
- Optional T-post brackets are cut from leftover/waste wood.
- Swallow boxes should be installed in late winter to allow optimal time for swallows to take to the boxes; we are installing our boxes in late March and early April.
- The entrance to the box should be at least 5 ft from the ground and installed at least 50 ft apart. Swallow boxes should be installed facing east or overlooking a pond or wetland, if possible. You can also install them in a naturalized field.
- This swallow box design opens from the top and has a side that swings out for easy cleaning.
- Maintenance is important to ensure nesting boxes can be used for multiple nesting seasons. At the end of the nesting season, boxes should be cleaned out and properly sanitized to reduce ectoparasites.

Instructions

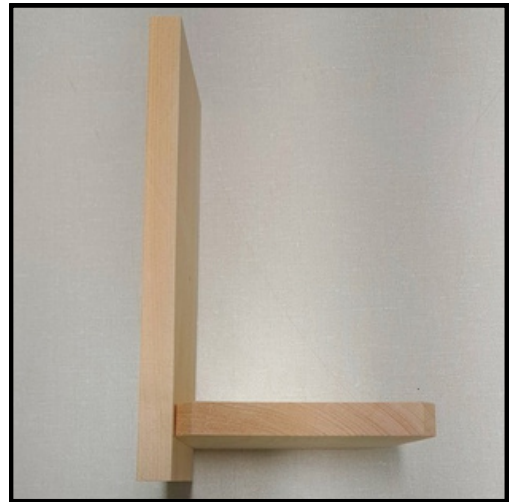
Step 1

Before construction, drill the entrance hole in the front using a 1-1/2" hole saw. The center of the hole is located 7" from the bottom and 3-3/4" from the sides. During this step, glue three skewers on the inside of the front to assist baby swallows in exiting the box.



Step 2

Nail the 5-5/8" edge of the floor 1" from the bottom of the fixed side piece. Use two 1-1/2" finish nails and pre-drill all nail holes with a 1/16" drill bit to prevent splitting.



Step 3

The front is then nailed to the side and bottom pieces using the 1-1/2" nails. Use four nails to attach the front to the side and two nails to attach the floor. Ensure that the bevel on the top is flush with the angle on the side and that the floor is spaced 1" from the bottom of the front piece.



Step 4

Attach the back in a similar manner as the front using four nails along the side and two on the floor.



Instructions

Step 5

Attach the angled side piece between the front and the back using two nails on each side. It is very important that nail holes are pre-drilled at this step so the piece doesn't split.



Step 6

Align the door so that its bottom is flush with the front. Drill a pilot hole $\frac{3}{8}$ " from the bottom of the front piece and a second $1\frac{3}{8}$ " from the bottom of the back piece. Use $1\frac{1}{2}$ " nails as "hinges". Before nailing them in fully, test the door with them nailed partway to ensure that the door swings properly.



Step 7

If the door doesn't fit properly, sand any edges that are rubbing together or move the door down slightly. Once you are happy with the fit, hammer in the nails the rest of the way and screw the door shut using a 2" deck screw through the front.



Step 8

Secure roof using a 4" hinge. The back of the roof should be flush with the back piece and slightly overhung in the front. We also used two 2" screws to keep the lid from blowing open. If you don't need to access the box from the top, you can skip the hinge and attach the roof using finish nails.



Optional Features



PAINTING

After construction, we sometimes paint our logo on the side of the box. This allows for people to know who to contact if the box is in need of maintenance. If you choose to paint the box, use a non-toxic paint and do not paint the inside!



METAL T-POST

T-post install design:

- Two wooden brackets- dimensions shown in picture
- Six 1-1/4" finish nails
- Two 1-1/8" eye screws
- Approximately 40" of wire

The two wooden brackets are nailed 1-1/2" from the top and 1-1/2" from each side. Eye screws are placed along the side of the wooden brackets. The birdhouse is wired onto the T-post using the eye screws and T-post holes.

