

Building and Installing Mountain Bluebird Houses

Each spring, starting in mid-March, mountain bluebirds arrive to Alberta and begin searching for places to build a nest and raise their young. Mountain bluebirds are “cavity nesters”, meaning they like to build nests in enclosed spaces that are protected from the elements – in nature, this might be a tree cavity made by a woodpecker or a hole in the side of a bank. The following factsheet contains instructions on how to build, install, and maintain a front-opening bluebird house that mimics these natural cavities and will be difficult to resist for any mating pair of mountain bluebirds that happen to pass by.

Materials

- 55” of pine board (1”x6”)
- 9” of pine board (1”x10”)
- Saw to cut boards
- 16 deck screws (1 ½”)
- 1 brass screw (1 ¼”)
- 1 chisel (1/2”)
- 1 hole saw or forstner bit (1 9/16”) – drill press makes this easier
- 1 drill with 1/8” and 3/8” drilling bits, and screwing bits



Figure 1. Mountain bluebird. Photo credit: Don Ruzicka.

Procedure

1. Cut pine board to the following dimensions (refer to Figure 2a):
 - Front piece: 4” x 10 ¼” (cutting 1/16” narrower makes for an easier fit)
 - Back piece: 5 ½” x 14 ½”, with the top 5 ½” edge cut at 22.5°
 - Bottom piece: 4” x 4 ¾”, with corners cut off at 45° angles, ½” from corners
 - Two side pieces cut 5 ½” wide. The bottom is cut straight across and top is cut sloping upwards towards the back at a 22.5° angle such that the front length is 10 ½” and the back length is 12 ¾”.
 - Top piece (use 1”x10” board): 9” x 9 ¾”, with the back 9” edge cut at 22.5°
2. Drill a 1 9/16” entrance hole into the front, 2 ¼” from the top and 2” from either side.
3. Chisel out shallow, criss-crossing cuts into the inside of the front piece, to make a “ladder” for fledglings to climb out of the house (Figure 2b).
4. Use the 3/8” drill bit to drill 3 ventilation holes ¾” from top of each side piece and one in the middle of the bottom piece.
5. Align back to back edges of sides so that the 22.5° slope is flush (see Figure 2c). Use a 1/8” drill bit to drill a pilot hole through the back and into the side. Keeping everything aligned, drill a 1 ½” deck screw into the pilot hole and repeat for a total of 3 screws on each side of the back (6 altogether)
6. Measure and mark a 3/8” recess line on bottom of back and two sides

7. Insert bottom piece so it is level with recess line and screw it in place, drilling a pilot hole for each screw (Figure 2d). Use one screw for each side and one through the back (3 altogether).
8. Measure and mark a location for the pivot point for the front piece to swing open, 2" down from the top of each side.
9. Position front (door) between the sides so there is a ¼" gap at the top (Figure 2e).
10. Drill pilot holes through sides and into door, and install one screw in either side (not too tightly; Figure 2f).
11. Position the top piece so that its back edge (cut at a 22.5° angle) is flush with the back and there is an even overhang on both sides.
12. Drill pilot holes and install screws through the top, one at a time, until 5 screws have been installed (2 on each side and 1 in the back; Figure 2g).
13. Mark position where bottom of front (door) can be attached to bottom. Pre-drill a hole (1/8") and install a brass screw (Figure 2h). This screw will secure the door in place, and can be taken out when opening the door for monitoring or maintenance.
14. Optional – apply an oil-based exterior seal to improve the lifetime of the house.

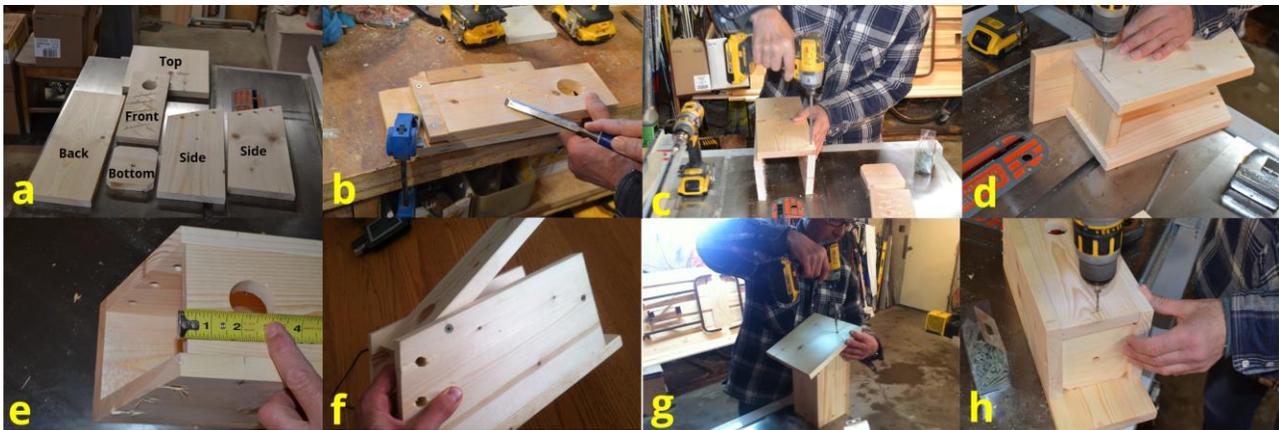


Figure 2. Images of select steps to building the bluebird house. Photo credit: AWES.

Installation

Install the house by screwing the back and/or bottom of it to the top or side of a post/tree (drilling pilot holes first) in ideal mountain bluebird habitat (Figure 3). Houses should be installed 1.2-2m (4-6') above the ground facing a perching site (e.g. another fence post, wire, or tree branch). Placing the houses 90m (300') apart will ensure an adequate territory size for each mountain bluebird family. If competition with tree swallows is an issue, the houses may be placed in pairs 1.5-4.5m (5-15') apart as tree swallows will occupy one of the nests and allow mountain bluebirds (but not tree swallows) into the other.

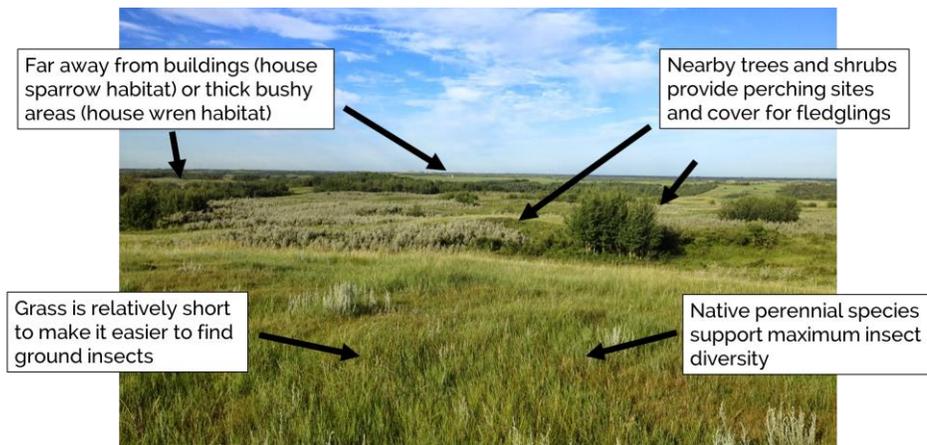


Figure 3. Ideal mountain bluebird habitat. Photo credit: Karin L. on www.bovinepracticum.blogspot.ca

Monitoring and Maintenance

Your bluebird house may not necessarily be occupied by mountain bluebirds – tree swallows, house wrens, chickadees, house sparrows, European starlings, mice, bees, and wasps may take up residence instead. Monitoring your house weekly is a useful way to keep track of which species occupy it and how many eggs are being laid. Some bluebird house stewards choose to remove any “pest” species that occupy the houses (e.g. house sparrows, European starlings, mice, and wasps) – note that it is illegal to remove native bird species such as tree swallows, house wrens, and chickadees. Monitoring should be done in mild, dry conditions in the early part of the season when the adult bluebirds are away from the nest. Avoid opening the houses after the fledglings are 15 days old as it may cause them to jump out prematurely.

Clean out nest material and debris in October after the nest has been abandoned for the season. Avoid cleaning in the summer months even if the nest appears to be abandoned, as re-nesting can sometimes occur. Cleaning can be done with gloved hands, a putty knife or screwdriver (to scrape out droppings). If the nest is extremely dirty or mice have been in it, a mild bleach solution is recommended.

References

Gary Bank, personal communication.

National Audubon Society, 2012. *DIY: Build a Bluebird Box*. Available from: <http://www.audubon.org/news/diy-build-bluebird-box>

Pearman, M., n.d. *Attracting Bluebirds Fact Sheet*. Ellis Bird Farm, Red Deer County, AB.

Sialis, n.d. *Nestbox Plans*. Available from: <http://www.sialis.org/plans.htm>

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