

Bluebird Nest Box Monitoring

Number of Active Volunteers: 11

Daphne Byron, Rebecca Ellen, Diane Goebes, Leslie Hoffer, Matt Holly, Karen Irons, Pat Melville, Ryan Robison, Samantha Scheff, Mark Wagner and Kait Whiting

Season Schedule: April 1 – August 25, 2023 (plus a few extra visits in September at Box #1 at Glendening by Pat Melville)

Total # of Field Project Hours

23 visits- each visit took a minimum of two hours with at least two volunteers on each visit

Overview: We monitored 15 Bluebird (and other songbird species) nest boxes at Jug Bay Wetlands Sanctuary - Seven (7) boxes at Glendening Nature Preserve, Plummer Road Entrance, and Eight (8) boxes at River Farm

Nest Watch (data entered by Leslie Hoffer) provided the following quick summary for 2023:

1. 15 Nest Sites
2. 28 total nesting attempts
3. 105 total eggs
4. 93 total young
5. 52 fledglings

Methods: Digital Data Entry- done by volunteers in the field. The data entry is relatively easy to do although monitors have to repeat information such as the date and volunteer's initials for each nest box. Also connectivity is occasionally a little slow. Usually one volunteer checks the nest box while the other volunteer takes care of the digital data entry. Photos (when there is something to see such as eggs or hatchlings) are also taken and uploaded at the same time. The 15 nest boxes were examined once every week (from April 1 to August 25) by teams of two to three volunteers. When examining each nestbox, the volunteers record the box number, the status of the nest, the species that built/occupied the nest, the number of eggs/ hatchlings in the nest, the age of the chicks, and how many of those chicks had fledged. The "status" of the nest is recorded as either "empty" (no evidence of nest building or occupancy), "incomplete" (partial nest building but no eggs/chicks), or "complete" (nest built with eggs and/or chicks). The "complete" designation also applies to nests where the chicks had fully fledged and left the nest. The species of the nestbox occupants are marked as BB (Bluebird), TS (Tree Swallow), CC (Carolina Chickadee), TT (Tufted Titmouse), or HW (House Wren). The age of the chicks is recorded by the number of days, judged heuristically by how developed the coat of feathers and other features were on the chicks: 0-7 days (mostly pink skin), 8-14 days (mostly feathers), 15 + days (full coat, eyes open, ready to fledge). The methods for identifying the species occupying

the nests (by nest material, egg shape etc), aging of the offspring, and nestbox maintenance procedures were provided by the Bluebird Nestbox Volunteer Guide (Draft v2; March 2021)

In 2023, all of the nest boxes were either empty or occupied by bluebirds. In 2022, there were tree swallows and Carolina Wrens at several nest boxes.

Results:

This was a rewarding citizen science project for the participating volunteers as there were always bluebirds at some stage of development (from eggs to almost ready to fledge) in at least some of the boxes on every visit. Even as late as August 25, 2023, Box #1 at Glendening had four recently hatched bluebirds.

Out of the 7 nest boxes at Glendening, Box #4, Box A, Box E, and Box G had at least one successful brood during the season; Box #1, Box #2, and Box B, had two successful broods. Every box at Glendening had at least one successful brood.

Out of the 8 nest boxes at River Farm, Box #8 and Box #F2 had at least one successful brood during the season; Box #3, Box #4, Box #9, Box #F14 had two successful broods. Only two boxes (Box 10 and Box 13) had no bluebirds or other bird species nesting in them during the monitoring season.

Impact:

The Jug Bay Bluebird Nest Box Monitoring demonstrates that bluebirds are doing well at the two properties monitored. Many boxes had two successful broods and one box (Box #1) even had a third brood (although the second brood at Box #1 ended with all hatchlings dead). However, most eggs seemed to hatch successfully. The predator guards seem to be successful in protecting against snakes, raccoons etc. There were no mentions by monitors of non-native birds such as house sparrows occupying the nest boxes. During the 2023 monitoring season, there did seem, however, to be a disturbing amount of ant infestation.

Challenges:

1. Some nest boxes are in poor shape. Some example comments- a) Nest box impossible to close; b) Rotting door; c) Missing screws, nails and/or pins; d) box door ready to fall off; and e) Encroaching foliage around boxes
2. Ant infestations (seemed to be the most common infestation in 2023)
3. Blowfly infestation/wasps
4. Dead hatchlings (most distressing sight for volunteers)
5. How many hatchlings are there really? Not always easy to count
6. Changing access codes at River Farm

Recommendations:

1. Repair/replace nest boxes, where needed, prior to 2024 season

2. Continue this Citizen Science Program into the future with new volunteers being recruited as needed
3. Allow all volunteers access to weekly updated datasheet site to know the status of the nest boxes previous weeks

Volunteer Acknowledgments:

The Bluebird Nest Box Monitoring Team- a committed group of volunteers who are also very nice people with whom to work. Working in pairs (with an occasional third person) made each visit much more enjoyable and also almost certainly improved data quality.

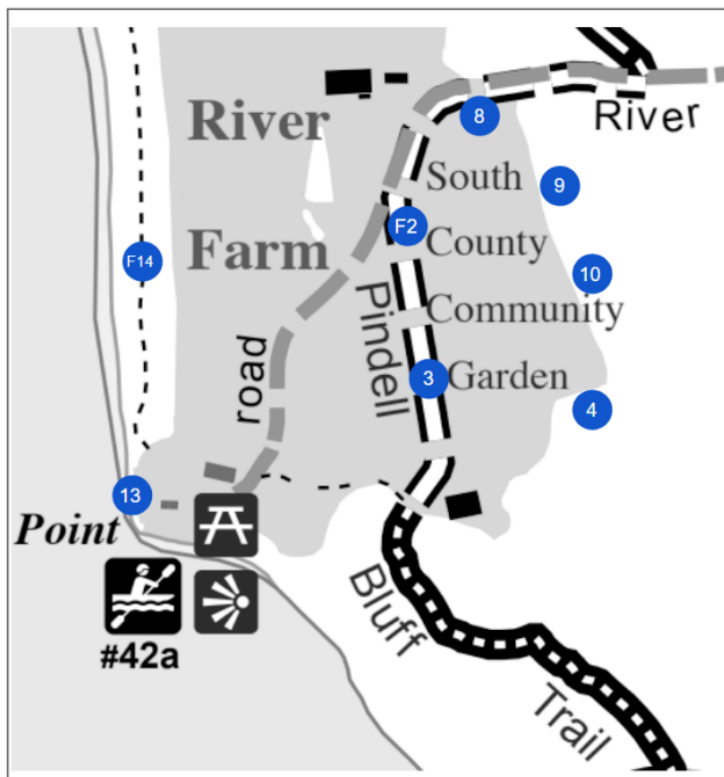
Acknowledgments:

Liana Vitali for all her guidance and assistance

Appendix:

Map of 2023 Bluebird Nest Box Sites at Glendening Nature Preserve and River Farm

River Farm Nest Boxes



Glendening Nest Boxes

