

Bird Boxes and Bogs

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I'd say the turning point for my obsession with birds happened after watching Rio, like any other normal 8 year old. An epic adventure, catchy music, and black market activity? My third grade self was so intrigued that she learned everything she could on the beautiful blue Spix's macaws, and subsequently endangered bird species. Turns out, declining bird populations weren't just a problem in the rainforests of Brazil. It was a widespread crisis, with negative effects felt even around our local community (Daley). As I got older (and after many reviewings of Rio), I decided that I needed to take action.

The Cranberry Bog near my house was the perfect place to enjoy a walk. Formerly a cranberry field, operations had halted when the adjacent river got too polluted ("Conservation Areas - Cranberry Bog"). It was now replaced with an overgrowth of vegetation, a rushing stream, and a cacophony of chirps and warbles. After investigating with an ornithologist, we discovered that this area was home to a whole host of characters, from the regal great blue heron to the delicate goldfinches. Unfortunately, we also identified some species of birds in decline and invasive birds like tree swallows and starlings. After learning about what aggressive little criminals these invasive birds are to birds in decline, wrecking eggs and stealing homes, I knew that I could do something to help.

Conveniently, the Massachusetts Audubon Society, a nonprofit dedicated to saving birds, was only a few minutes away. There was so much to learn about the ecosystem of our Cranberry

Bog. In addition to invasive birds, I also needed to tackle invasive plants. Garlic mustard, multiflora roses, and Japanese knotweed were overtaking natural plants that native birds eat. The food web is so intertwined that even confusing the weed dogbane for milkweed, food for the monarch butterflies that many birds eat, could become a huge problem.

The most interesting part of the meeting was learning how to actually build the boxes. Birds are apparently very picky about where they build nests. If I built bird boxes, I'd have to choose specific birds and cater to their measurements (Cornell Lab of Ornithology). I also learned from the ornithologists why it's more effective to attach birdhouses back to back. Since the invasive birds didn't like living near each other, they would inhabit one box while a native species lived on the other side. That way, there would be less aggression while both types of birds got a home (Perry).

Another complication I ran into was that building on public property required permission from the town council. I worked with birdwatchers and ornithologists to put together a detailed presentation of our plan for the Cranberry Bog. We decided to focus on building 10 house wren, screech owl, and tree swallow boxes. We also proposed to clear the overgrown trail for safer passage through the bog, and uproot invasive plants that caused problems for birds' food supplies. The very intimidating council put me on the hot seat, but the overwhelming statistics were on my side. Bird populations have dropped an alarming 29% in the last 50 years (Zimmer). Even though people focus on the more famous bald eagles or puffins, a decline in common species has much more of an immediate impact. They're vital to the ecosystem, acting as pest control, pollinators, and seed spreaders (Daley). Especially with a tighter knit area like the Cranberry Bog, the loss of a few keystone species can trigger the collapse of a whole food web (Mass Audubon Society 54). My bird boxes would provide stability in the birds' otherwise

turbulent situation of their loss of habitats, pesticides, and climate change. Additionally, clearing invasive plants will provide more food for the birds. I finally let out my breath when the overly stoic head councilman smiled and banged his gavel. We were approved!

After hours of hard work sourcing wood poles long enough and learning how to cut planks properly, we finally got the houses up. The 30 foot screech owl boxes were erected with a clever pulley system. We also had a town wide clean up day and cleared out the trail, uncovering the wild raspberries and milkweed.

The clean up day also brought more attention to the plight of the birds. I realized that I could capitalize on people's newfound interest by holding field trips to the Cranberry Bog. I made a curriculum for first graders to learn all about local birds, from their migration patterns to how they find food. After seeing how much fun the first group of kids had, a teacher from nearby elementary school borrowed my materials and decided to make it a yearly trip for her students. Hopefully this exposure to nature will inspire the kids to become more aware of environmental activism.

Although my project is now wrapped up, birds continue to decline at a worrying rate. Many people will take for granted the pigeons wandering around the city, or the chirps that wake us up, but without more human intervention, those things could disappear one day. In fact, Spix's macaws were declared extinct in the wild in 2018 (Dale). Birds are more important than we think. With billions of them worldwide, birds truly are the invisible backbone of our ecosystem. Their many different roles go unnoticed, but the fabric of life will unravel without them.

These numbers may seem too intimidating to comprehend, but the most important lesson I learned from this project was that even local projects like mine will make an impact. Noticing

an occupied birdhouse, getting a personal letter from the mayor, and seeing the excitement the kids had for the birds made all my effort worth it. I'm proud that I played my part helping reverse the environmental havoc caused by humans. In the future, I hope to continue conservation projects, and more importantly, inspire others to do the same.



House wrens need boxes at least 10 feet tall



A used bird box (opened after checking that there were no inhabitants)



Field trippers learning how birds build sturdy nests



Building birdhouses

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