

# Barn Owls of the Patuxent River 2023 Annual Report

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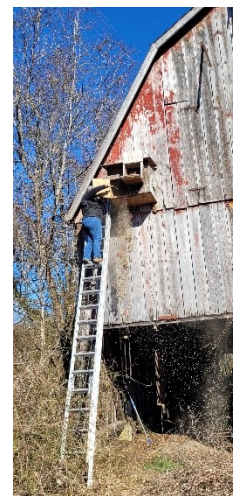


## PURPOSE

Calvert Steward volunteers participate in a variety of activities that increase and support maximum nesting potential for Barn Owls in the Patuxent River corridor of Maryland. The data collected by this project will increase the profile of the Patuxent River corridor as an important resource where continued conservation action will help increase barn owl survivorship as well as a wide variety of birds.

## SKILLS NEEDED

- Reliable transportation to nest box sites Ability to walk through fields, forests, and wetlands to access boxes
- Ability to lift and carry 25 pounds
- Ability to use small power tools and hand tools
- Ability to keep accurate records



*Box cleanout of nest  
from 2022*

## VOLUNTEER DUTIES AND EXPECTATIONS

- Assist with construction, installation and maintenance of wooden nest boxes on barns or on poles in appropriate open habitat.
- During the late spring, monitor the nest boxes via Go-Pro camera inspection and document the activity with photos and submit monitoring data via email to coordinators.
- Participate in our annual banding session where the Naturalist, with aluminum tags, band the young and adult birds and record their vital information.
- Assist with data recording and photo documentation during banding.
- Maintain confidential and sensitive information about locations of barn owl nests.
- Assist with any trapping and banding adult barn owls for ongoing morphology study.

## TRAINING AND QUALIFICATIONS

- Orientation or training to learn more about this program. Some activities are for volunteers who have been trained and have earned their Qualifications certificate. There is a separate training for participation in the morphology study.
- Qualifications: Once trained, volunteers will receive a certificate and can then respond to be a volunteer for nest box checks.

## SUMMARY OF 2023 ACTIVITIES

Volunteers performed the annual nest box checks of boxes in Calvert, Anne Arundel, Prince Georges, and Charles counties.

### **Key 2023 Activities**

- Continued project coordination with Anne Arundel and Prince Georges Counties
- Dedicated volunteers worked over 214 hours checking 65 boxes, among other activities
- Banded 3 chicks in Anne Arundel County
- Continued and expanded a study on adult owls – using key body measurements to help determine taxonomic status of barn owls in the U.S.
- Andy Brown presented summary of Barn Owl project at International Owl Conference in October



*2023 Chick after banding*

- Patuxent River Barn Owl Collaborative continued.
- In early 2023, boxes that had active nests in 2022 were cleaned out and fresh wood shavings added so they were ready for the 2023 nesting season.
- In February and March two marsh boxes were moved to upland locations on the edge of the marsh, one box was reinstalled on a barn, and other maintenance activities were completed.
- The Maryland Bird Conservation Partnership continued efforts to conserve Barn Owls throughout the state. Andy continued to assist with the Farmland Raptor Project Committee.
- During May, volunteers checked all 65 nest boxes to determine if there were any active nests. Only one active nest was found in Anne Arundel County. Additional boxes were checked in Prince Georges County but the data is unavailable.
- Data from the nest box checks was entered in to NestStory, an online nest data collection application; this is a repository for all standardized barn owl nest data throughout Maryland. Plans are to add historical data.
- A Barn Owl banding event was held for volunteers that helped with box checks on May 31 at Jug Bay Farm – Emory Waters; naturalist banded 3 chicks and volunteers recorded data.
- Adult barn owls at several active nest boxes were safely trapped, banded as needed, and had extensive body and feather measurements taken for the continuing study to help determine the taxonomic status of barn owls in the U.S. Ten new adults were captured in 2023, including a male and female at Jug Bay Sanctuary, as well as 8 adult owls on the eastern shore (Monie Bay).
- Andy, David Johnson, Karen Anderson, and Maggie Silverman measured barn owl study skins at the Smithsonian Natural History Museum to contribute data to the morphology study.
- In October, Andy presented a summary of the status of barn owls in the mid-Atlantic as well as information on the adult trapping efforts for the morphology study at the International Owl Conference in LaCrosse, Wisconsin.
- Also at the International Owl Conference, Rachael Daughtery, Master's student at University of Walla Walla, Washington, presented results of the morphology study, which included data from the adult owls measured in the Barn Owl project area as well as the museum study skins. Her analysis showed that barn owls in North America are a distinct species from those in Europe and other areas around the world.

## FUTURE PLANS AND GOALS

The mission of this project is to increase and support maximum nesting potential for barn owls in the Patuxent River corridor of Maryland. The overarching goal of this project is to create collaborative support among agencies within the targeted areas to accomplish project goals. Future plans and goals for 2021 aim to continue toward accomplishing the following specific goals activities.

### Specific goals and activities for the nesting box aspect of the project include:

1. Install and maintain new and old nest boxes.
2. Establish protocols for box monitoring and installation.
3. Develop standardized data collection procedures.
4. Expand and organize volunteer team efforts via recruitment, training and scheduling.
5. Pursue partnerships with private landowners for site selection, and with businesses for donated materials and installation assistance.
6. Provide guidance to Southern Maryland Audubon Society for expansion of the project into St. Mary's County.
7. Expand Barn Owl adoption fundraising program, with proceeds allocated to the project.

### Specific goals and activities for research aspects of the project include:

1. Band all nestlings and as many adult owls as possible.
2. Track reproduction and mortality of adults and nestlings through banding and report annual trends.
3. Continue to trap adult owls in Calvert County beyond the morphology study to gather data on population demographics.
4. Analyze habitat richness to determine relationship to breeding success.
5. Determine diet composition through pellet analysis.
6. Catalog nest box profiles, including: box type, location, photo documentation and habitat analysis to analyze most successful boxes over time.
7. Create a method for determining habitat composition within a one-mile radius of the nest site in order to establish parameters for the best locations for brood success.
8. Compare used and unused nest boxes, including box type and habitat composition to add to data on nest selection theory.
9. Create and employ standardized call back detection surveys at targeted locations.

### Specific goals for gaining a more detailed understanding of barn owl ecology of the Patuxent River corridor through radio-tracking technology include:

1. Deploy tracking tags on fledglings and adults.
2. Identify habitat usage and range for hunting and roosting.
3. Identify periods of maximum activity.
4. Determine natal dispersal.
5. Track seasonal movements.
6. Install MOTUS tracking towers for maximum Patuxent River corridor coverage.

### Specific goals for the continuation of the morphology study include:

1. Efforts will be focused on distinguishing subspecies of barn owl (*Tyto furcata*) in the Americas

### Work Activities to be accomplished in 2024 include:

- Clean out the box that had barn owl nest
- Move one marsh box (Idol)
- Move box off of Freeland barn – add to a pole downslope from the barn
- Repair boxes as needed (Cage, Watson marsh)
- Trim vegetation around selected boxes as needed

*Supporting Calvert County's nature parks and natural spaces*



# CALVERT STEWARDS

## VOLUNTEER PROGRAM

*A partnership between Calvert Nature Society and Calvert County Natural Resources Division*

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Calvert County Natural Resources Division:  
[www.calvertcountymd.gov/NaturalResources](http://www.calvertcountymd.gov/NaturalResources)

