

Barn Owls of the Patuxent River 2020



Project Leader: Andy Brown

Andrew.Brown@CalvertCountyMD.gov 410-535-5327

Volunteer Coordinator: Karen Anderson

r_otters1@msn.com 410-535-5327

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 affect 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

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 data sheets.
- Participate in our annual banding session, where our Naturalist with aluminum tags bands the young and adult birds and their vital information is recorded.
- Assist with data recording and photo documentation during banding.
- Maintain confidential and sensitive information about locations of barn owl nests.
- Dissect owl pellets and perform initial ID of bones or other items for diet 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.
- Qualifications: Once trained, volunteers will receive a certificate and can then respond to be a volunteer in different opportunities, particularly for nest box checks.



Replacement box installation; Jug Bay Farm February 2020

Summary of 2020 Activities

Unfortunately, due to Covid 19, some annual activities had to be cancelled, such as the volunteer orientation meeting and most pellet sorting and picking events. The annual nest box checks were somewhat modified with fewer volunteers able to participate. Despite this, the project continued with successful nest monitoring.

Key 2020 Activities

- Continued project coordination with Anne Arundel and Prince Georges counties
- Dedicated volunteers worked over 50 hours checking 59 boxes, among other activities
- Banded 6 chicks in Calvert county and 3 chicks in Anne Arundel county (Jug Bay Wetland Sanctuary)
- Initiated a study on adult owls – using key body measurements to help determine taxonomic status of barn owls in the U.S.



Barn owl chick banded May 2020

Other 2020 Activities

- Patuxent River Barn Owl Collaborative continued.
- A new marsh nest box was installed at Warrior's rest in Calvert County and a new box replaced an old box on a barn at the Jug Bay River Farm in Anne Arundel County. Other nest box removals and moves were postponed due to Covid.
- The Maryland Bird Conservation Partnership continued efforts to conserve Barn Owls throughout the state. Andy assisted in the formation of the Farmland Raptor Project Committee and drafted State-wide conservation goals that were adopted by the committee (see attachment).
- On January 27, the box at Smoky Rd was cleaned out; both adults were present in the box. While the male flew out of the box, the female was removed from the box for potential banding but it was discovered that she was previously banded at Jug Bay in 2019. This adds another piece of data on local barn owl movements. She was safely returned to the box.
- On February 24, volunteers sorted through barn owl pellets collected from the active nest at Smoky Rd in 2019. Two out of three bags were sorted but due to Covid, additional sorting work sessions were cancelled.
- During May, a more limited number of volunteers checked all 59 nest boxes to determine if there were any active nests. In Calvert County, two active nests with chicks were found; one in a box at Smoky Road and the other on the Ewalt property. An active nest with three chicks in Anne Arundel County (Jug Bay Wetlands Sanctuary) was also monitored.

- Data from the nest box checks was entered into NestStory, an online nest data collection application; this will be a repository for all standardized barn owl nest data throughout Maryland. Calvert County was the first to participate in the NestStory Program and Andy trained several volunteers to input the data on the site.
- A Barn Owl banding event was held with very limited numbers of volunteers on June 5 at Smoky road; naturalists banded 3 chicks and volunteers recorded data.
- Three chicks in the Ewalt property box were banded on June 4, 2020. One of these chicks was later found injured near the Baltimore inner harbor, providing some limited insights into juvenile owl dispersal movements in Maryland.
- Jug Bay Wetlands Sanctuary, River Farm– Anne Arundel County – in late May, naturalists banded 3 chicks that were present in the new box that was installed in February.
- Adult barn owls at several active nest boxes were safely trapped, banded as needed, and had extensive body and feather measurements taken for a new study to help determine the taxonomic status of barn owls in the U.S. Andy worked with David H. Johnson of the Global Owl Project to create a morphology study of Barn Owls in the Mid-Atlantic region (see attachment). This is the first of this kind of research conducted on Barn Owls in the United States. Andy also designed a new trap design and technique for this study. 8 adult owls were captured and measured for the study.
- Barn owl volunteer appreciation potluck picnic– September 26. A very small gathering of volunteers took place outdoors at Kings Landing Park. Lloyd Lewis was recognized for his dedication to this project, particularly at Jug Bay River Farm. Andy Brown discussed activities that were accomplished in 2020 as well as some project goals for the near future.
- Volunteers built a few additional nest boxes, using some materials from old boxes that had been removed from unproductive locations.
- Despite the limitations on holding work events, volunteers donated over 50 hours to the project.

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. Analyze habitat richness to determine relationship to breeding success.
4. Determine diet composition through pellet analysis.
5. Catalog nest box profiles, including box type, location, photo documentation and habitat analysis to analyze most successful boxes over time.
6. 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.
7. Compare used and unused nest boxes, including box type and habitat composition to add to data on nest selection theory.
8. 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

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

1. Trap and collect body measurements on a minimum of 30 pairs of owls from the Mid-Atlantic region.
2. Coordinate with other Barn Owl researchers for trapping activities at multiple nest box locations.

Activities to be accomplished in 2021 in order of priority as Covid restrictions allow

1. Relocate the Ewalt box
2. Clean out used boxes
3. Monitor boxes and band chicks
4. Proceed with the morphology study (identify locations for spring/summer trapping).
5. Repair roof on Lloyd Bowen Box
6. Install new boxes at Al Tucker's Farm in Lothian
7. Install box at Aquasco Farm
8. Relocate marsh boxes

Volunteer Summary

We had 22 volunteers contribute 199 hours in 2020.

Karen Anderson, Charles Andrews, Emma Auld, Wesley Auld, Jason Avery, Sharon Buckler, Mike Carpenter, Alan Christian, Kevin Donahue, Bob Field, Dale Hutchins, Martha Hyde, Craig Jeschke, Dawn Jones, Lloyd Lewis, Penny Moran, Bill Rummel, Carol Russell, Craig Simmons, Joanne Simmons, John Sullens, Alisha Sutton, Dona Wilson, and June Wurtz,

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

2020 Annual Report

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CALVERT STEWARDS VOLUNTEER PROGRAM
c/o Natural Resources Division
2880 Grays Road
Prince Frederick, MD 20678
(410) 535-5327

Volunteer Portal: <https://calvertstewards.galaxydigital.com/>

Calvert Nature Society: www.calvertparks.org

Calvert County Natural Resources Division:
www.calvertcountymd.gov/NaturalResources

