**Why a Cavity-nesting Program?**

Thirty-five of the 185 species of breeding birds in Pennsylvania are cavity-nesters. More than half of these birds don’t excavate the cavity themselves. Instead, they rely on existing cavities found in the hollows of trees or wooden fence posts. These birds live in a variety of habitats from forest to wetlands to fields. The number of natural cavities for these native birds has declined due to changing landscapes throughout the commonwealth and competition; especially from non-native, aggressive birds like European starlings and English house sparrows.

Nest boxes have proven to be an effective way people can provide sites for cavity-nesters. In the late 1980s, a national effort began to provide nesting habitat for declining bluebird populations. As part of that effort, Pennsylvania Bureau of State Parks developed a volunteer nest box monitoring program. The success of this endeavor led the Pennsylvania Bureau of State Parks to expand the program to include additional cavity-nesting birds, such as chickadees, wrens, tree swallows, purple martins, wood ducks, barn and eastern screech owls, and kestrels. To date, the program has successfully fledged (young that leave the nest) more than 123,000 individual birds and 19 different species.

The Cavity-nesting Trail Program would not be successful without our dedicated, volunteer nest box monitors. These volunteers are a dedicated group of individuals. Their season begins in March with cleaning and repairing boxes; continues with monitoring through July, or whenever nesting is complete; and ends after their data has been compiled and sent to the statewide Cavity-nesting Program Coordinator for compilation and sharing. This process has happened thousands of times. Because of the volunteers’ vigilance, Eastern bluebirds and other cavity nesting species, have grown or stabilized their populations.

**Common Cavity-nesting Species in Parks**

Many species of cavity-nesting birds spend their breeding season in Pennsylvania. The species listed below are commonly monitored through the Cavity-nesting Trail Program and their preferred habitat. Knowing the specific habitat of species gives monitors an idea of where to place nest boxes.

- **American kestrel** – open areas with short vegetation and few trees
- **Black-capped chickadee** – areas with trees or woody shrubs
- **Carolina chickadee** – forested areas
- **Common merganser** – northern forests near rivers and lakes
- **Eastern bluebird** – open areas surrounded by trees
- **Hooded merganser** – small bodies of fresh water
- **House wren** – open forests, forest edges, and areas with scattered trees
- **Purple martin** – live in colonies near water with open areas for feeding
- **Tree swallow** – open areas near water
- **Tufted titmouse** – eastern woodlands
- **Wood duck** – wooded wet areas (marshes, ponds, etc.) with trees or cattails

*By the numbers*

In 2019, over 130 volunteers monitored 2,041 nest boxes at 50 Pennsylvania State Parks and 7,848 birds were fledged.

- 3 Flycatchers
- 9 Wood ducks
- 9 American kestrels
- 14 Mergansers
- 16 Tufted titmice
- 25 English house sparrows
- 82 Wrens (other)
- 150 Chickadees
- 530 Purple martins
- 1773 House wrens
- 2409 Eastern bluebirds
- 2828 Tree swallows

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Volunteer Responsibility

1. Construct and erect nesting boxes. Complete and submit nesting box maps to the park volunteer coordinator.
2. Check and record activity at each nesting box weekly during the nesting season. Monitoring may be done by several participants following a coordinated schedule.
3. Submit reports to the park volunteer coordinator at end of nesting season.
4. Check all nesting boxes before the nesting season begins (mid-March). Clean, repair, or replace as necessary.
5. Assist park staff in educating park visitors about the Cavity-nesting Trails Program.

State Park Responsibility

1. Park manager or volunteer coordinator assists in providing materials and information to volunteers. Materials may include reporting forms, materials to build boxes, and printed information on cavity-nesting species or park maps.
2. Park maintenance assists as needed to maintain nest boxes sites beyond general pruning.
3. Park manager or volunteer coordinator maintains a file containing all information pertinent to the program.
5. Statewide program coordinator refers inquiries from other interested groups or individuals to the park volunteer coordinators.
6. Statewide program coordinator organizes an annual cavity-nesting meeting open to all volunteers and park staff involved in the program.

Monitoring Challenges and Issues

Weather can be a challenge to both monitors and birds. Unusually cold, wet, hot, or dry weather can make checking boxes difficult for you and generally tough for the birds. In hot weather, we can ensure boxes have enough ventilation to keep the birds from overheating.

Blowfly larvae cause death of nestlings if not caught and managed right away. The larvae use the young as a food source, feeding off their blood. Proper treatment can rid a nest of larvae.

Predation will happen. Bears will knock over boxes and get into nests. Snakes and raccoons will take eggs and nestlings. Adding predator guards to the poles can help deter predators.

Invasive species, such as English house sparrows, will take over nests or kill nestlings of songbirds. As a non-native, invasive species, they are not protected by the Migratory Bird Treaty Act, therefore nests and eggs of these species may be removed to keep populations from increasing.

Resources and Educational Opportunities

Many of our parks offer bird related programs and activities, which can be found online at events.dcnr.pa.gov. More information can be found at:

National Audubon Society – www.audubon.org
Bluebird Society of Pennsylvania – www.thebsp.org
Purple Martin Conservation Association – www.purplemartin.org
All About Birdhouses – http://nestwatch.org/learn/all-about-birdhouses
NestWatch – http://nestwatch.org
The Great Backyard Bird Count – http://gbbc.birdcount.org

More Information

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