



# Wildlife Diversity Program

# 2016

## Pennsylvania's conservation of all birds and mammals

Pennsylvanians value natural places, and wildlife add value to our outdoor experiences. The restoration of such iconic species as the bald eagle and osprey are acclaimed successes, as evidenced by the Game Commission's wildly popular eagle nest cam. However, many challenges remain – consider the ongoing threat of white-nose syndrome to bats. Between these extremes lies a spectrum of conservation actions, recently articulated in an updated Pennsylvania Wildlife Action Plan.

This summary showcases Game Commission Wildlife Diversity Program accomplishments in 2016, highlighting the array of actions underway. Additional details are available at the Game Commission's website, [www.pgc.pa.gov](http://www.pgc.pa.gov).

### 2015-2025 Wildlife Action Plan Approved

Pennsylvania's 2015-2025 Wildlife Action Plan, a comprehensive blueprint for 664 Species of Greatest Conservation Need – including 90 birds and 19 mammals and their habitats, was approved by U.S. Fish and Wildlife Service in January 2017. Wildlife Action Plans are congressionally required for states and U.S. territories to receive state and tribal Wildlife Grants Program funding. This updated 10-year plan, completed jointly with the Pennsylvania Fish & Boat Commission, uses the best available science and extensive input from agency personnel and partners to guide all Pennsylvanians toward the most effective conservation actions. Federal State Wildlife Grants, matched by non-federal dollars, are used to implement actions specified in the plan, which are intent on preventing species from becoming endangered and restoring declined populations.



Osprey by Jacob Dingel



## PENNSYLVANIA WILDLIFE ACTION PLAN

State Wildlife Grants funding provides the core support for the agency's Wildlife Diversity Program, which addresses 85 percent of the state's bird and mammal species. Guided by the Wildlife Action Plan, this work contributes greatly to an improved understanding of conservation status and management needs. For example, monitoring continues for a range of species, such as peregrine falcons and northern flying squirrels, and we are supporting conservation partner research to expand our knowledge of fine-scale habitat requirements of forest bird populations on public lands. We are also discovering links between breeding, migratory, and wintering areas for birds and bats using nano-technology. In addition, Game Commission regional wildlife diversity biologists continue to deliver conservation action on private and Game Commission-owned land. In 2016, management plans were written for 70 private properties covering 22,760 acres and for 41 game lands comprising 202,901 acres.

Download the Pennsylvania Wildlife Action Plan and learn more about State & Wildlife Grants projects at [www.pgc.pa.gov/Wildlife/WildlifeActionPlan](http://www.pgc.pa.gov/Wildlife/WildlifeActionPlan).

### Osprey Recovered

After more than 30 years of conservation efforts, a milestone was celebrated in January 2017 with the removal of the osprey from the state's list of endangered and threatened birds. This is the formal response to what we have learned from ongoing surveys: Osprey are making a strong comeback across the state. Osprey had declined early in the 20th century as a result of many pressures. But protection, improved water quality, and reduced contaminants set the stage for recovery. Many partners assisted by reintroducing osprey to abandoned watersheds over the years, and the Game Commission coordinated and monitored this recovery. Guided by a management and recovery plan, the osprey received, like the bald eagle, the celebrated status of 'recovered' from the brink.

**Citizens Contribute to Conservation Science:** The Cornell Lab of Ornithology and Audubon maintain an online portal for bird observations that birders around the world can use to contribute data to bird conservation science. In 2016, 6,229 Pennsylvania birders submitted 158,460 checklists that included over 2 million observations. This is the same number of sightings that came from all of Australia!

## Conservation Action Mapping Project to Guide Wildlife Action Plan Implementation

Strategic conservation planning is a spatial exercise. It is important to understand where the species or habitats occur on the landscape, and what stressors they are facing, to best target conservation actions. A new project started in 2016, administered jointly by Game Commission and Fish & Boat Commission and supported by State Wildlife Grants, aims to do just that. The Conservation Action Mapping project, currently in development and slated to launch in 2018, links conservation actions identified in the Wildlife Action Plan to the best areas in which to work across the Pennsylvania landscape.

## Understanding & Responding to a Devastating Disease

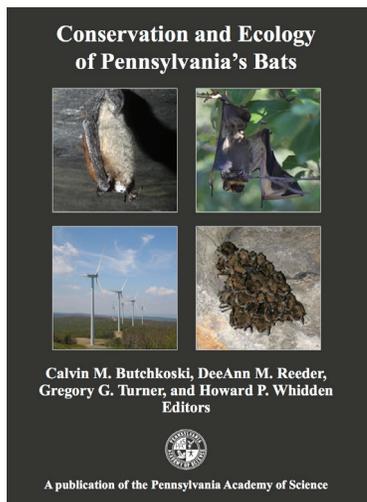
Ten years ago, we did not know what was killing bats in their hibernacula. Multiple states, federal agencies, non-governmental organizations, and academics worked together swiftly to determine it was a deadly fungus, now known as white-nose syndrome. In Pennsylvania, response to the sudden disease required extensive research to answer basic questions related to bat behavior, disease transmission, and detection before we could evaluate potential treatments.

Through this research, we have demonstrated that bats hibernating at colder temperatures (38-41°F) have lower incidence of disease. In hibernacula supporting these colder settings, bats arouse from hibernation less frequently, which saves energy reserves, and the disease grows more slowly, resulting in lower overwinter mortality for adults. We leverage this knowledge in some caves and mines by controlling airflow to adjust internal temperatures, thereby providing a tangible step in saving the surviving bats until treatments can be developed, such as direct and indirect application of a compound called PEG 8000. Applying this compound to roosts and directly to bats shows encouraging results. Bats roosting in locations treated with PEG 8000 did not become infected, thus offering a potential decontamination treatment for critical hibernacula.

## Biologists Contribute To Newly Published Bat Book

Pennsylvania has long been a center of research on bats, including leading roles by Game Commission biologists in evaluating and responding to the emergence of wind turbines and white-nose syndrome threats. The timely production of a new book by the Pennsylvania Academy of Sciences, *Conservation and Ecology of Pennsylvania's Bats*, summarizes that knowledge, and positions us to move into a new era of recovery. This book brings together

current knowledge on bats gained during the past decade and takes stock of these species at this time of crisis. Long-term data addressing these threats, not previously available, are summarized. Past and present Game Commission biologists contributed their extensive expertise, with other national leaders, to the production of this book, and served as co-editors. Now available, this serves as another landmark contribution to our knowledge.



## Unique Habitats Restored

Presque Isle State Park is a place of superlatives. It is the most-visited public park in Pennsylvania. It contains extensive beach habitat and its many unique habitats support a greater number of rare species than any comparable area in Pennsylvania. The apex of this peninsula, Gull Point, hosted Pennsylvania's only nest sites for common tern and piping plover, but their last successful nesting occurred more than 50 years ago. The distinctive features of Presque Isle bring with them huge challenges: invasive species, human disturbance, and changing water levels place obstacles to the viability of these ecosystems. A strong partnership including the Bureau of State Parks, the Western Pennsylvania Conservancy, Audubon Pennsylvania along with the Game Commission and U.S. Fish and Wildlife Service formed to address a range of threats to beach-nesting birds in this unique place. Invasive plants at Gull Point are being controlled to restore the beach conditions, and education reminds visitors of the area's sensitivity. A monitoring team yielded a landmark in 2016: remote cameras and careful observation indicate that a common tern chick hatched from one of two nests for the first time since 1966, although it did not survive. In addition, two male piping plovers performed courtship displays during the nesting season, a key first step to establishing a nest site there, for the first time in more than 20 years. Habitat enhancements and close monitoring will continue at Presque Isle as we work toward the restoration of this unique ecological community and rare birds it supports.

## Planting For Recovery

An historic icon of the Appalachian Mountains, effectively lost to disease more than 75 years ago, is being returned. The American chestnut produced a distinctive wood found in many 19th century structures that still comprises fine antique furniture. Its legendary annual production of nuts provided food for rural communities and wildlife species alike. Many now believe that chestnuts supported the unsurpassed populations of passenger pigeons, and the loss of this icon contributed to the pigeon's extinction. A more secretive nut-eating member of the Appalachian ecosystem, the Allegheny woodrat, hangs on in those hills, but gradually is declining without this productive food. So, after decades of crossbreeding by the American Chestnut Foundation, the advent of a new hybrid chestnut brings renewed hope for restoration of this key component of our mountain forests, and some of the wildlife with it. We planted the latest hybrid American chestnut seedlings and placed nuts as supplemental food in territories of surviving Allegheny woodrats last year. The Indiana University of Pennsylvania is monitoring these seedlings and Commission biologists deployed trail cameras to video-document the woodrats consuming and caching the nuts.



This story will take years to unfold; maturation of the trees, sufficient mast production to sustain the demand by a variety of eager species, and continued habitat loss and disease remain threats to the beleaguered woodrat. Meanwhile, habitat manipulations and translocations of young individuals to assist gene flow are additional strategies being deployed to enhance existing populations. With restoration of a reliable food supply, our hopes are raised that this denizen of rocky crevices will recover across the folded ridges of our central mountains.