

**PENNSYLVANIA GAME COMMISSION
BUREAU OF WILDLIFE MANAGEMENT
PROJECT ANNUAL JOB REPORT**

PROJECT CODE NO.: 06723

TITLE: Wetland Research/Management

JOB CODE NO.: 72302

TITLE: Wetland Nesting Bird Surveys

PERIOD COVERING: 1 July 2016 to 30 June 2017

WORK LOCATIONS: Statewide

PREPARED BY: Patricia Barber and Douglas Gross

DATE: 10 July 2017

COOPERATING AGENCIES AND ORGANIZATIONS: Department of Conservation and Natural Resources (DCNR), U.S. Forest Service, and PA Department of Military and Veterans Affairs; Pennsylvania Society for Ornithology (PSO); Three Rivers Bird Club; Bucks County Audubon; John Heinz National Wildlife Refuge; Cornell Laboratory of Ornithology.

ABSTRACT Almost all Pennsylvania's wetland bird species have declined in recent decades as documented by the Second Atlas of Breeding Birds in Pennsylvania and the agency's surveys. Many bird species listed as state endangered and threatened in Pennsylvania breed in wetlands. During the 2014-15 breeding seasons, no formal wetlands were conducted. During non-survey years, wetland reporting is limited to accepting opportunistically-collected observations from volunteers and staff. Vocalizing American bittern males were found in SGL 57, Sullivan and Wyoming Counties, by agency staff but no nesting was discovered. In addition, American bitterns and least bitterns were reported by volunteers at 3 wetlands where they have been found previously, but only the least bittern observation at John Heinz National Wildlife Refuge was a confirmed nesting. No reports were submitted for the 2016 nesting season for secretive marsh birds to the Game Commission's wetland bird project for pied-billed grebe, black rail, king rail, Virginia rail, sora, common gallinule, or American coot. Marsh bird related pages on the Game Commission's web site were viewed over 500 times by members of the public.

OBJECTIVES

1. Inventory and monitor 9 species of wetland nesting birds in Pennsylvania, focusing on wetlands greater than 10 hectares (24.7 acres) in size with an emphasis on 11 historically important breeding sites in Pennsylvania, conducting surveys in at least 2 survey periods during the 6 week breeding season. Species surveyed included endangered, threatened and species of greatest

conservation need (SGCN) in the Wildlife Action Plan (Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission 2015).

2. Engage and educate the public about our SGCN wetland birds and how they can help monitor and protect these species for the enjoyment of future generations and the functioning of our ecosystems.

3. Use an ArcGIS online interface on the Game Commission website for wetland identification and online data entry.

METHODS

The Pennsylvania Game Commission has established website pages for the state endangered and threatened wetland species including American bittern, least bittern, common tern, black tern, king rail, sedge wren, northern harrier, and short-eared owl. These website pages increase the agency's ability to engage the public in these surveys and acquire more information about the target species and the wetlands including these surveys. Requests for assistance link to these pages as a resource to the interested public. Each page includes status, population trend, identifying characteristics, biology, natural history, preferred habitat, management programs, and supporting literature. The target audience for these pages is educators, students, and adults interested in wildlife and conservation.

RESULTS

Unlike 2015, the Game Commission did not conduct methodical marsh bird surveys in 2016, but some observations of the target species were made by staff and volunteers. During surveys of forested wetlands and peatlands in northern counties, Douglas Gross and Penn State student, Eric Zawatski, found vocalizing American bittern in State Game Land (SGL) 57 wetlands, the Meadows or Bowman's Marsh, Luzerne County, and nearby at South Brook Swamp, Wyoming County, but no evidence of nesting was found. American bitterns have nested at the Meadows as recently as 2013.

Volunteer birders contribute records of wetland birds to the eBird database that are useful to our wetland monitoring efforts. Some of these records are pertinent to management of endangered wetland species. American bitterns were observed during the 2016 breeding season at the following locations where they have been found previously: 1. Marsh Creek Wetlands "The Muck" (SGL 313), Tioga County; 2. Long Pond Preserve, Monroe County; 3. John Heinz National Wildlife Refuge, Delaware County section. None of these observations included nesting evidence, but they were well-documented including photos. Volunteer observers also reported least bitterns during the 2016 breeding season at the following locations: John Heinz National Wildlife Refuge (the impoundment), Philadelphia County; Custards at Geneva Marsh, SGL 213, Crawford County; and Presque Isle State Park, Erie County. Only the observation at John Heinz National Wildlife Refuge included confirmation of nesting with an adult seen feeding young. Considering the thousands of reports made to eBird, the paucity of records of these species are appreciated but indicate that these birds are rare breeding species in the state.

During 2016 the Pennsylvania Game Commission wetland endangered and threatened bird web pages were visited more than 544 times (Table 1). The website was moved to a new platform and counts reflect unique IP addresses from July to December.

RECOMMENDATIONS

1. Establish a long-term monitoring database of wetland birds.
2. Continue conducting wetland surveys for marshes 3-10 hectares as well as traditionally surveyed wetlands greater than 10 hectares, at least every 4 years. The next survey is planned for 2019.
3. Include management and conservation of wetland birds of conservation priority in comprehensive game lands management plans.
4. Work with other organizations to monitor, conserve, and manage wetland birds that are especially vulnerable due to their rarity, isolation and secretive nature.
5. Increase participation of the public in organized surveys and less formal monitoring projects like Pennsylvania eBird and increase the quality of those reports by educating the users about the use of eBird features like photographs, detailed notes, and breeding codes that increase the credibility and utility of these reports.
6. Continue and expand engagement and education of the public concerning wetland birds and their habitats.
7. Evaluate wetlands outside of the survey period to determine if the habitat is suitable, in order to more efficiently use the short survey period during the breeding season.

LITERATURE CITED

Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission. 2015. Pennsylvania Wildlife Action Plan, 2015-2025. C. Haffner and D. Day, editors. Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission, Harrisburg, USA.

Table 1. Wetland nesting bird web pages viewed during 2016, limited to July thru December due to website platform migration.

Common name	Scientific name	Status	Views
American bittern	<i>Botaurus lentiginosus</i>	Endangered	34
black tern	<i>Chilodnias niger</i>	Endangered	15
king rail	<i>Rallus elegans</i>	Endangered	27
least bittern	<i>Ixobrychus exilus</i>	Endangered	12
sedge wren	<i>Cistothorus platensis</i>	Endangered	10
short-eared owl	<i>Asio flammeus</i>	Endangered	45
northern harrier	<i>Circus cyaneus</i>	Threatened	8
rails			213
marsh bird survey			180
Total			544