

**BUREAU OF WILDLIFE MANAGEMENT**

**MONTHLY REPORT**

**March 2024**

**NEW JERSEY WILDLIFE RESEARCH AND MANAGEMENT**

**GRANT NO. W-68-R**

**STUDY PLAN I. WHITE-TAILED DEER**

Jodi Powers, Principal Wildlife Biologist

Megan Mills, Assistant Biologist (Northern Region)

Megan McCafferty, Assistant Biologist (Southern Region)

Brian Schumm, Assistant Biologist (Deer Outreach)

**Objective 1 – To determine the composition, size, distribution, productivity, and other aspects of the annual deer harvest mortality by deer management zone, unit, county, municipality, land ownership, date, and season.**

J. Powers downloaded the final harvest database from Insights.

The Deer Project Team is reviewing the complete deer harvest for errors as the last seasons have closed and has been organizing the data for future analysis.

M. McCafferty and M. Mills completed error corrections as the seasons closed, while providing Law Enforcement with potential violations at the end of the harvest as well as during the active seasons.

**Objective 2 – To coordinate a statewide Suburban Deer Management Program for management in areas of high human density where standard hunting practices are not feasible.**

J. Powers, B. Schumm, and M. Mills met with Morristown National Historic Area NPS staff to discuss deer management at the park.

**Objective 3 - To participate in business meetings and monitoring programs of the Northeast Deer Technical Committee, and other related meetings and conferences.**

No report.

**Objective 4 - To conduct one white-tailed deer research study.**

*Nothing to report*

**Objective 5 – To disseminate accurate and appropriate information on white-tailed deer and habitat management to sportsmen, public, local, and state agencies, and other organizations.**

The Deer Project Team began reviewing material and season dates for the 2024-25 Hunting and Trapping Digest.

The Deer Project Team has continued to work on a Deer Hunter Survey to distribute to the public regarding general hunting questions and questions regarding potential regulation changes.

The Deer Project Team met with BIE to discuss the website and improvements to the deer webpages.

**Objective 6 – Develop, maintain, and make adaptive changes to a white-tailed deer Chronic Wasting Disease (CWD) Response Plan.**

All samples collected and have been submitted for testing.

**Extension Activities**

The Deer Project Team has received reports for injured or sick deer from the public and continues to work with USDA Animal Control to decide the best course of action for these deer.

M. McCafferty and P. Connelly presented regarding deer disease, focusing on EHD and CWD, and population dynamics to CU Maurice River in Millville.

M. McCafferty and B. Schumm presented at the Cumberland County Sportsman Federation Chapter meeting, discussing the 2025 Game Code Considerations ahead of the launch of the Deer Hunter Survey.

B. Schumm and M. Mills attended the annual New Jersey Soybean Producers meeting to discuss the options farmers have for deer management to help mitigate crop damage.

J. Powers and B. Schumm attended the NJ Federation of Sportsmen Clubs Annual Convention with the Deer Classic.

J. Powers presented the Deer Regulation Changes that are under consideration at the NJ Federation of Sportsmen Clubs Annual Convention.

### **Other Activities**

J. Powers attended an RFP kick-off meeting to discuss the contract for the ELS and AHRS.

Deer Project Team met with the OGIS about the Deer Disease Sighting Form to discuss improvements for the upcoming year.

Deer Project attended meetings with the Game Committee to discuss the upcoming hunter survey and continue open communication about the Game Code changes that are under consideration.

The Deer Project team has planned and organized deer density surveys via spotlight counts in several locations in the state including Pequest and Peaslee WMAs and Hopewell Twp. Mercer County.

The Deer Project Team, GIS Team, and Warren County Community College partnered together to launch a drone survey at Pequest WMA to evaluate an additional method of deer density surveys.

M. Mills attended the Northern Region Bureau of Law Enforcement's meeting to discuss the upcoming Game Code changes that are under consideration.

### **STUDY PLAN III. UPLAND WILDLIFE AND FURBEARERS**

Ted Nichols, Supervising Biologist  
James Sloan, Senior Biologist  
Joseph R. Garris, Wildlife Technician I  
Peter Stark, Biologist Trainee  
Alexandrea Nickel, Seasonal Technician  
Shelby Gravatt, Seasonal Technician  
Richard Strittmatter, Seasonal Technician

**Objective 1 – Conduct annual or periodic monitoring programs of the upland game and furbearer resource, their users, and the habitats on which they depend.**

#### *Coyote Harvest*

To date, a total of 488 coyote harvests have been reported to the Automated Harvest Reporting System (AHRS) during the 2023-24 hunting and trapping seasons.

A total of 142 coyote mortalities were reported through the AHRS for the segment. Twelve of the 142 coyotes were taken by shotgun, 2 were taken with muzzleloading rifle, and 1 was taken with archery equipment. Five of the coyotes killed by shotguns were taken at night during the special coyote/fox permit season. A total of 112 were harvested by cable restraint.

Coyotes during the reporting segment were harvested from the following counties: Atlantic (12), Burlington (11), Cape May (19), Cumberland (15), Gloucester (1), Hunterdon (5), Middlesex (1), Monmouth (2), Morris (3), Ocean (8), Salem (14), Somerset (18), Sussex (2), Warren (28) and unknown county (3).

By sex, the harvested coyotes were Male (72), Female (67) and unknown sex (3). By pelt color: Black (3), Blonde (17), Typical (114), Red (5) and White (3). A total of 19 (13.4%) of the 142 reported coyotes had mange.

For the fiscal year, two coyotes have been recorded as vehicle mortalities.

#### *Gray Fox*

To date, a total of 42 gray fox harvests have been reported to the AHRS during the 2023-24 hunting and trapping seasons. Fifteen gray foxes were recorded during the segment. Of these, 1 was taken with archery equipment, 6 were taken with cable restraints, 1 by cage trap, 1 by modern rifle, and 6 with shotgun. Eight of the fifteen were harvested during the special coyote/fox permit season. Two of these were taken at night.

#### *Beaver and River Otter*

Project staff successfully operated six locations on February 24 for the mandatory beaver and river otter check stations. The total statewide harvest of beavers during the 2023-24 beaver/otter permit season (Dec. 26-Feb. 9) was 773, a record high harvest. (The previous record was in 2017 when 764 beavers were harvested).

A total of 40 river otters were taken during the 2023-24 season. Otter carcasses were collected at check stations on February 24. Project staff then collected morphometric measurements and extracted 1 canine tooth from each carcass for aging. Teeth were sent to Matson's Lab in Montana for cementum annuli analysis.

#### *Fisher*

Project staff have successfully caught and/or handled and released three adult male fishers this season. Two of these individuals have been outfitted with GPS collars to assess home range size and habitat use.

Live trapping efforts will continue until the end of March, at which time traps will be removed to minimize the chances of catching and overly-stressing heavily pregnant females.

Trail camera monitoring efforts will continue until the first week in April. Preliminary analysis of camera footage has yielded detections of fishers in Sussex, Warren, Morris, and Passaic Counties.

To date, two roadkill fishers have been collected since the start of the project. These animals (1 adult male, 1 adult female) will be necropsied and liver samples will be submitted for rodenticide testing.

#### *Trapper Harvest Survey*

The 2023-24 Trapper Harvest Survey mailing was dropped off at the Trenton DEP mailroom for distribution through the US Postal Service.

#### *Hunter Harvest Survey*

Staff coordinated with L. Clark (Waterfowl) and L. DiPiano (I&E) to plan for the distribution of the 2024 New Jersey Hunter Harvest Survey. This online survey, conducted every other year, seeks to gain information from firearm and archery hunters on species pursued during the 2023-24 season, time spent afield, and the dollar amount spent on gear, clothing, and other expenditures. The survey will be sent out on or around March 18.

#### *Northern Bobwhite*

No report.

#### *American Woodcock*

#### *Ruffed Grouse*

No report.

#### *Wild Turkey*

J.Sloan and program staff had 2 successful captures of wild turkeys on March 13<sup>th</sup> in Northern New Jersey. Trapping has commenced and female trapping quotas were met.

All biological samples were delivered to the University of Pennsylvania on March 26<sup>th</sup>. Disease testing is being paid by NJ National Wild Turkey Federation.

Staff continues to track hen wild turkeys in both study areas twice per week. It will change to three times per week after April 1<sup>st</sup>.

**Objective 2 – To participate in business meetings and monitoring programs of the National Bobwhite Technical Committee (NBTC), Northeast Fur Resources Technical Committee (NEFRTC), Northeast Upland Game Bird Technical Committee (NEUGBTC), and Short-leaf Pine Initiative (SPI).**

*National Bobwhite and Grassland Initiative (NBGI)*

No report.

*Northeast Upland Game Bird Technical Committee (NEUGBTC)*

no report.

*National Wild Turkey Federation Technical Committee*

*no report.*

*Northeast Fur Resources Technical Committee (NEFRTC)*

P. Stark traded correspondence with several committee members about trapping rules on public lands and common practices for trapping small mustelids.

**Objective 4 – To provide technical guidance to landowners interested in providing wildlife habitat on their lands.**

No report.

**Objective 5 – To disseminate accurate and appropriate information on upland game and furbearer programs to sportsmen, public, state, and local agencies, and other organizations.**

J. Sloan attended the NJ Wild Turkey Federation state board meeting virtually on March 17<sup>th</sup> to discuss suggestions on the game code and superfund spending on the current research project.

P. Stark attended a meeting of the New Jersey State Federation of Sportsmen’s Clubs Trapping Committee on March 11.

Staff answered numerous questions and provided input to identify various species of wildlife and scat from pictures/videos/audio and conversations with constituents.

**Other**

No report.

## **WATERFOWL - STUDY PLAN IV**

Ted Nichols, Supervising Biologist  
Austin Damming, Assistant Biologist

## **Objective 1 – Migratory game bird monitoring programs**

### *Postseason Mallard Banding*

During the winter of 2024, New Jersey participated with other Atlantic Flyway states in a postseason (1 January – 21 March) banding effort for mallards. Annual preseason banding (1 July – September 30) for all age and sex cohorts (adult-female, adult-male, juvenile-female, juvenile-male) provides harvest and survival estimates that are used in management and regulatory decisions. However, the preseason sample of adult female mallards has declined over time and has subsequently reduced precision in annual survival estimates. Implementation of a two-season (i.e. preseason and postseason) banding program can reduce variance in annual survival estimates. Since 2021 Atlantic Flyway states agreed to use postseason banding and set state-specific quotas to achieve a Flyway goal of approximately 3,000 mallards banded.

In 2024, 178 mallards and 1 mallard hybrid were banded between 27 January and 6 March. Of those banded, 72 were female (38 juvenile (SY), 34 adult (ASY)) and 106 were male (39 SY, 67 ASY). A total of 73 (19 mallards, 45 black ducks, and 2 mallard black duck hybrids) previously banded ducks were also recaptured. Ducks were captured at 10 banding stations in 6 counties. Ducks were mainly marked along the eastern half of the state from Cape May through Morris counties.

All banding and recapture data were entered into computer files and sent to the Bird Banding Laboratory for processing.

## **Objective 2 – To participate in programs of the Atlantic Flyway Council and Joint Ventures**

### *Atlantic Flyway Council Technical Section*

T. Nichols and A. Damminger participated in the AFC Technical Section meeting in Niagara Falls, NY.

## **Objectives 3 and 4 – Research studies**

### *American woodcock migration ecology study*

During the fall of 2018 and 2019, NJFW worked with several state agencies, universities, and non-government organizations and study leader Erik Blomberg (University of Maine), using GPS satellite telemetry units on a study of the migration ecology of woodcock in eastern North America.

T. Nichols contributed as coauthor by commenting on a revision of a draft manuscript which uses this telemetry data entitled: "*Unconventional life-history in a migratory shorebird: desegregating reproduction and migration*". Lead author is Slezak, Colby, Doctoral student at University of Rhode Island, and other coauthors include several other state and provincial collaborators. The paper was accepted for publication in the Proceedings of the Royal Society B: Biological Sciences.

Abstract: Conventional life history theory predicts that energy-demanding events such as reproduction and migration must be temporally segregated to avoid resource limitation. Here we provide the first direct evidence of 'itinerant breeding' in a migratory bird, an incredibly rare breeding strategy (<0.1% of extant bird species) that involves the temporal overlap of migratory and reproductive periods of the annual cycle. Based on GPS-tracking of over 200 female American Woodcock, most female woodcock (>80%) nested more than once (some up to 6 times) with short re-nest intervals, and females moved northward on average 800 km between first and second nests, and then smaller distances (ca. 200 + km) between subsequent nesting attempts. Reliance on ephemeral habitat for breeding, ground-nesting, and key aspects of life-history that reduce both the costs of reproduction and migration likely explain the prevalence of this rare phenotype in woodcock and why itinerant breeding so rarely occurs in other bird species.

#### *American Black Duck Research*

Program staff collaborated with 8 other Atlantic Flyway states, 4 Mississippi Flyway states, CWS, USFWS, and lead investigator Mitch Weegman and his PhD student Ilsa Griebel (University of Saskatchewan) on a study funded by the Black Duck Joint Venture entitled: *Quantifying the influence of environmental conditions and American black duck behavior and movements throughout the full annual cycle on subsequent productivity using state-of-the-art tracking devices*. This study uses backpack transmitters on black ducks captured on the wintering grounds for 3-4 years. The study began in 2021 as a pilot year. Objectives of the study are to:

1. Quantify black duck movements and wetland use during the breeding season.
2. Develop a baseline data set to classify accelerometer (ACC) data from wild birds and develop detailed time activity budgets of black duck behavior throughout the annual cycle.
3. Quantify recruitment metrics such as reproductive attempts, full-term incubation, and brood-rearing in black ducks.
4. Assess the extent migration characteristics (e.g. number and duration of stops), proportion of time feeding, energy expenditure and habitat used during wintering, staging and the reproductive period to explain variation in reproductive output in black ducks.

5. Examine the extent to which precipitation and temperature explain variation in behavior and energy expenditure during wintering, staging and breeding periods.

From 27 January - 6 March, staff trapped and instrumented 40 female (21 adult [ASY]; 19 juvenile [SY]) black ducks at 6 locations in Atlantic, Burlington, Cape May, and Monmouth Counties with GSM-GPS transmitters. 88 black ducks; 43 females (22 ASY; 21 SY) and 45 males (29 ASY, 16 SY) were leg banded ancillary to telemetry trapping. An additional 45 (13 females, 32 males) previously banded ducks were recaptured.

Edwin B. Forsythe NWR and Great Swamp NWR provided logistical support to conduct fieldwork at their sites. Multiple WCC volunteers and cooperators assisted with scouting, baiting, and banding process.

All banding and recapture data were entered into computer files and sent to the Bird Banding Laboratory for processing.

#### *Identifying Limiting Factors of Eastern Mallards.*

The breeding population of Eastern mallards declined 40% in Atlantic Flyway states in the past 25 years. Managers need reliable estimates of productivity and seasonal survival at the sub-population scale to guide management actions for this declining population. Understanding demographic rates of eastern mallards and potential important differences between populations in eastern Canada and eastern U.S. is important for managers to effectively model population dynamics and subsequent harvest strategies. Further, understanding biases within current datasets (e.g. banding data) is needed to develop useful population models used in harvest management. This project will answer questions that will improve the understanding of bird movement during the pre-season banding window.

To address this knowledge gap, Atlantic Flyway Council member states, federal (US and CWS) and University cooperators instrumented female mallards both in eastern Canada and the US with Global Positioning System (GPS)-Global System for Mobile communication (GSM) transmitters to better understand demographic rates, migration chronology, and habitat use differences between the two sub-populations throughout the annual cycle. A sample of hens were also marked with geolocators (light-level loggers) mounted on tarsal bands to assess nesting attempts and success. Study objectives are:

- 1) Quantify and compare recruitment metrics including nesting attempts, full-term incubation, and brood-rearing between mallards in the northeast US and eastern Canada, and the extent to which behavior and weather explain variation in recruitment metrics.
- 2) Estimate seasonal survival rates of female mallards in Eastern Canada vs. Northeastern US.
- 3) Quantify and compare female mallard movements and habitat use and selection throughout the annual cycle in the northeastern US and Eastern Canada
- 4) Assess nesting attempts and nest success between mallard hens marked with GSM units versus geolocators.

During 2024, 21 mallard hens (12 ASY, 9 SY) were instrumented from 27 January to 6 March at 8 sites from Cape May to Morris County. Additionally, 40 mallard hens (18 ASY, 22 SY) were instrumented with geolocators period at 7 sites.

#### *Atlantic brant research*

Program staff completed the 2024 trapping and marking phase in collaboration with New York DEC, Canadian Wildlife Service, University of Saskatchewan, and University of Delaware on 2 interrelated studies.

Study objectives are:

1. Determine if the Mid-Winter Waterfowl Survey is representative of the wintering population.
2. Determine fidelity of brant to wintering and breeding areas
3. Determine breeding propensity and variables related to age and body condition to breeding success.
4. Determine key spring and fall migration staging areas.

From 30 January to 9 February, 13 adult females were outfitted with Global System for Mobile Communication (GSM) backpack transmitter units which communicate through cellular networks. Study birds were marked at 3 locations from Cape May to Shark River. 3 of the transmitters were two-year old units reused from birds harvested or found dead during the past year. 9 of the GSM-marked birds also wore uniquely coded, blue tarsal band combinations on each leg; the remaining 4 specimens only received federal bands. 64 additional Atlantic brant captured ancillary to study birds were leg banded. Juveniles comprised 48% of birds captured, reflecting the above average recruitment seen in 2023. 3 previously marked brant were recaptured. Birds were captured with rocket nets using decoys and an electronic calling device to lure birds to capture nets. All banding and recapture data were entered into computer files and sent to the Bird Banding Laboratory for processing.

**Objective 5 – To provide technical guidance for enhancement and acquisition of migratory game bird habitats.**

**Waterfowl Stamp Advisory Committee**

T. Nichols served as NJFW liaison to the New Jersey Waterfowl Stamp Advisory Committee (WSAC) who met in a hybrid fashion (in-person at CRO and virtual) in March

**Objective 6 – Outreach**

**Other**

*2024-25 Migratory Bird Season Regulations*

T. Nichols and A. Dammingier met with the Migratory Bird Season Selection Committee at the CRO to select the upcoming year’s migratory bird hunting seasons to develop a recommendation for the Fish and Game Council. The Committee is comprised of sportsmen’s representatives from NJ Ducks Unlimited, NJ Waterfowlers Association, and the NJ Federation of Sportsmen’s Clubs. Proposed season dates were posted on NJFW website for public comment.

T. Nichols sent L. DiPiano (I&E) materials developed by The Wildlife Management Institute to promote hunters’ compliance with the Harvest Information Program.

A. Dammingier assisted in capturing wild turkeys for the telemetry study.

**Black Bear Research Project**

Mike Madonia, Principal Wildlife Biologist

Joe Burke, Wildlife Technician

Emilia Topp, Biologist Trainee

Michael Patrick, Wildlife Technician

Peter Stark, Biologist Trainee

Maureen Kinlan, Biologist Trainee

Ryan Ferraro, Biologist Trainee

Benjamin Laubach, Senior Wildlife Worker

Christian Nitko, Senior Wildlife Worker

Amy DeCheser, Wildlife Technician

Grace Johnson, Senior Wildlife Worker

**Bear Control: Lethal and Non-Lethal**

The black bear unit received a total of 25 bear calls from February 20, 2024 to March 21, 2024; this compares with 16 calls from the same time period in 2023.

The black bear unit received 1 Category I calls, 15 Category II calls and 9 Category III calls for the time period February 20, 2024 to March 21, 2024; this compares to 1 Category I calls, 11 Category II calls and 4 Category III calls for the same time period in 2023.

The black bear unit received a total of 41 bear calls from January 1, 2024 to March 21, 2024; this compares with 31 calls from the same time period in 2023.

The black bear unit received 1 Category I calls, 19 Category II calls, and 21 Category III calls for the time period January 1, 2024 to March 21, 2024; this compares to 2 Category I calls, 15 Category II calls and 14 Category III calls for the same time period in 2023.

As of March 21, 2024, the total number of calls received by the Division increased 32.2 percent from the same time period in 2023. Category I incidents decreased 50.0 percent, Category II calls increased 26.6 percent and Category III calls increased 50.0 percent for the same time period in 2023. This data does not include calls made to local police departments.

**Research**

Project personnel continue to edit and input research data into the bear database.

**Damage/Nuisance Control**

Project personnel continue to provide technical advice for damage complaint incidents and set traps for Category 1 behavior.

**Cooperative Research**

Project personnel continue to work on cooperative research projects with East Stroudsburg University.

**Wildlife Nuisance Complaints/ Technical Guidance (Federal Aid Project)**

**BREAKDOWN OF COMPLAINTS BY SPECIES**

Bat	2	Owl	3
Beaver	25	Pig	1
Bird	2	Pigeon	1
Bear	25	Raccoon	11
Bobcat	4	Rat	1
Coyote	15	Skunk	1
Deer	34	Squirrel	6
Duck	3	Swan	1
Eagle	2	Turkey	6
Fox	34	Unknown	5
Goose	7	Vulture	1
Hawk	1	Woodchuck	2
Opossum	1	Woodpecker	1
Otter	2		

**173 calls for the Federal Aid Project.**

**Total calls: 198 (\*black bear calls are not included in this project).**