

BUREAU OF WILDLIFE MANAGEMENT

MONTHLY REPORT

March 2023

Carole Stanko, Chief

NEW JERSEY WILDLIFE RESEARCH AND MANAGEMENT

GRANT NO. W-68-R

STUDY PLAN I. WHITE-TAILED DEER

Jodi Powers, Principal Wildlife Biologist

Megan Mills, Biologist Trainee (Northern Region)

Megan McCafferty, Biologist Trainee (Southern Region)

Brian Schumm, Biologist Trainee

Annual Deer Harvest (Job I-A)

J. Powers downloaded the final 2022-23 hunter harvest dataset. The dataset was sent to M. Mills and M. McCafferty for final error corrections and edits.

M. Mills and M. McCafferty prepared all Council binder materials and forwarded to J. Powers, who is began to analyze the data in preparation for the upcoming Council meeting. Data is being compared to prior years to determine the impact of consecutive EHD outbreaks and the increase in harvest during the 2020-21 season due to the “Covid Bump”.

Hunting and Fishing Digest

Project staff continues to review and receive updates for the next editing cycle of the 2023 edition.

Special Areas

Project staff continued open communication with Special Areas while beginning to review 2022-23 harvest data and results.

Extension Activities

Project staff attended the NJ Soybean Producers Meeting as representatives of NJ Fish and Wildlife, presenting preliminary harvest information and guidance regarding deer depredation permits.

M. McCafferty, B. Schumm, and J. Powers presented to local leadership representatives from Burlington County and discussed new hunting program.

B. Schumm attended Farm Bureau meeting to discuss deer abundance issues in agriculture.

B. Schumm presented as a panelist for the Passaic County Board of Agriculture.

B. Schumm made updates to a Fish & Wildlife brochure for communities with deer abundance issues.

B. Schumm made updates to a Fish & Wildlife brochure on deer management for farmers.

Other Activities

M. McCafferty and M. Mills delivered the approximately 1,000 CWD samples collected from the 2022-23 harvest season to be tested at The University of Pennsylvania's Wildlife Futures Program lab.

Project staff conducted spotlight count surveys in Galloway, Millstone, and Hopewell townships to help determine deer density estimates.

B. Schumm aided J. Sloan with furbearer beaver and otter check station.

B. Schumm began analysis investigating Multi-Zone Permit purchaser behavior.

Community Based Plan for Management of Suburban Deer Populations: Job I-C

Nothing to report.

STUDY PLAN III. UPLAND WILDLIFE AND FURBEARERS

Ted Nichols, Supervising Biologist

James Sloan, Senior Biologist

Joseph R. Garriss, Wildlife Technician I

Peter Stark, Biologist Trainee

Alexandrea Nickel, 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.

Hunter and Trapper Harvests

For the length of the 2022-23 season, year to date (YTD), a total of 454 coyotes have been reported through the Automated Harvest Report System (AHRS) or by calls placed to NJ Fish & Wildlife offices. The YTD total is the second-highest recorded (second only to the 2021-22 season). However, since coyotes may be legally harvested incidental to the spring turkey season, mortalities will continue to be recorded until the end of this fiscal year (FY), June 30, 2023.

During the reporting period, a total of 79 coyote mortalities were reported through the AHRS. Of that total, 64 were harvested through legal trapping (cable restraint), and 15 were taken during the Special Permit Coyote/Gray Fox season.

Of the 15 coyotes harvested during the Special Coyote Permit season, one was harvested by bow and arrow during daylight hours, 4 were taken by modern rifle during daylight hours, and 10 were harvested while hunting with shotgun (4 at night, 6 during daylight hours).

Coyote harvests were reported from Atlantic (9), Burlington (4), Cape May (16), Cumberland (4), Gloucester (1), Hunterdon (10), Middlesex (3), Monmouth (1), Morris (1), Salem (8), Somerset (9), Sussex (4), Union (1), and Warren (8) counties.

For the length of the 2022-23 season, year to date, a total of 56 gray foxes have been reported through the AHRS or by calls placed to NJ Fish & Wildlife offices. During the reporting period, a total of 17 gray foxes were reported through the AHRS. Out of this total, 6 were harvested by cable restraint and 11 were taken during the Special Permit Coyote/Gray Fox season. During the special permit season, 2 were taken by bow and arrow, 6 by modern rifle, and 3 by shotgun. Of the 3 shotgun harvests, 1 was taken during daylight hours and 2 at night. Gray fox harvests were reported from Atlantic (3), Burlington (1), Cape May (1), Cumberland (3), Gloucester (3), Hunterdon (1), Ocean (2), and Somerset (3).

The 2022-23 NJ Trapper Harvest Survey was mailed to all licensed trappers during the segment. Results will be compiled during April and May.

Beaver and River Otter

The beaver and river otter trapping season ended on February 9, 2023. The mandatory beaver and otter check station was conducted on February 25, 2023 at the following locations:

Flatbrook WMA Office (Sussex County)
Central Region Office, (Monmouth County)
Clinton WMA Office, (Hunterdon County)
Newfoundland Firehouse (Passaic County)
Southern Region Office, (Camden County)
Tuckahoe WMA Office, (Cape May County)

A total of 705 beavers and 51 otters were harvested statewide. Of the total beaver harvest, 24 were taken on special damage/nuisance permits. A total of 51 river otter carcasses were surrendered to project staff at the beaver/otter check stations. Morphometric measurements were taken on each carcass, and a lower canine tooth was extracted for aging.

Northern Bobwhite

No report

American Woodcock

J. Sloan worked with Becky Rau, National Woodcock SGS Coordinator for U.S. Fish and Wildlife Service, on singing-ground survey material for this upcoming monitoring period. New Jersey will have nine routes spread throughout the State that will be monitored throughout the next reporting period.

Ruffed Grouse

No Report

Wild Turkey

J. Sloan and other project personnel have been dealing with nuisance turkey reports. Two trap sites will be ready for nuisance removal during the next reporting period.

Fisher

The project had to be postponed until 2024 because several equipment orders remained unfulfilled because of supply chain issues. Thankfully, during the reporting period all delayed shipments have been received. Staff will now work during the next few months to program and calibrate equipment in preparation for the project launch.

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 (NGBI)

J. Sloan participated virtually in a webinar on March 9th from the Wildlife and Sport Fish Restoration Program about recent accomplishments and issue control in the State agency agreements with the National Bobwhite and Grassland Initiative.

Northeast Fur Resources Technical Committee (NEFRTC)

P. Stark traded correspondence with committee members about several nuisance wildlife issues, and on survey methodologies for elusive carnivores.

Northeast Upland Game Bird Technical Committee (NEUGBTC)

No report.

National Wild Turkey Federation Technical Committee

J. Sloan received correspondence from Heather Tally, Upland Game and Migratory Game Bird Coordinator for Utah Department of Natural Resources, on individual state regulations pertaining to airguns and minimum requirements. Information was forwarded from 38 States and assessed into a user-friendly spreadsheet for future reference.

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 received numerous phone calls during this reporting period pertaining to 2023 Spring Gobbler Season and the permit process.

J. Sloan attended the monthly meeting of the Ocean County Federation of Sportsmen's Club on March 15th as a representative of NJDEP Fish & Wildlife. Discussions included upcoming trash clean-up, possible dog training area on Greenwood Wildlife Management Area, and membership recruitment.

J. Sloan and project personnel participated, on March 25th, in Ocean County Federation of Sportsmen's Club annual trash clean-up on Whiting, Manchester, and Greenwood Wildlife Management Areas.

P. Stark attended the annual New Jersey Trapper's Association fur sale on March 18 at Space Farms, Wantage, NJ and answered several questions from constituents on furbearers in New Jersey. The volume of fur sold was greatly reduced from previous years, but sale prices saw an uptick, particularly for beaver and red fox.

WATERFOWL - STUDY PLAN IV

Ted Nichols, Supervising Biologist
Lisa Clark, Senior Biologist
Austin Damminger, Biologist Trainee

Objective 1 – Migratory game bird monitoring programs

Postseason Mallard Banding

During the winter of 2023, New Jersey participated in a postseason (1 January – 20 March) mallard banding program with other Atlantic Flyway states. Although preseason banding provides harvest and survival estimates that are used in management and regulatory decisions this sample for adult female mallards has declined over time subsequently reducing precision in survival estimates. Postseason banding can reduce variance in survival estimates. Atlantic Flyway states are exploring postseason banding for the next several years and set state-specific quotas to band 3,000 mallards during winter.

During 2023, 117 mallards and 1 mallard-black duck hybrid were banded between 3 February and 6 March. 72 birds were females (36 juvenile (SY), 36 adult (ASY)) and 106 were males (43 SY, 63 ASY). A total of 59 previously banded ducks (39 mallards and 20 black ducks) were also recaptured. Mallard bandings were done in companion with telemetry studies of both mallards and black ducks. Ducks were captured at 12 banding stations in 7 counties.

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

Objective 2 – Atlantic Flyway Council and Joint Ventures

T. Nichols prepared a recommendation and letter for the AFC meeting concerning the Duck Stamp Modernization Act of 2023.

Objectives 3 and 4 – Research studies

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 3 February - 6 March, staff trapped and instrumented 33 females (19-adult (ASY), 14-juvenile (SY)) black ducks at 5 locations in Atlantic, Cape May, Monmouth, and Morris Counties with GSM-GPS transmitters. In total, 304 black ducks; 97 females (71-ASY, 26-SY) and 207 males (167-ASY, 40-SY) were leg banded ancillary to telemetry trapping.

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.
- 5)

During 2023, 24 mallard hens (11 ASY, 13 SY) were instrumented with GSM backpack units from 3 February to 6 March. Additionally, 40 mallard hens (21 ASY, 19 SY) were instrumented with geolocators. Birds were instrumented with these devices at 9 sites from Cape May to Warren County.

Atlantic brant research

Program staff completed the 2023 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.
5. Compare breeding propensity estimates from geolocators with recruitment estimates from color-banded birds associating with young to develop a more complete measure of annual productivity.

From 2-15 February, 88 Atlantic brant were captured and fitted with various markers at three locations spanning 100 miles of coastline from Cape May to Shark River. 8 adult (ASY) males and 20 adult females were outfitted with Global System for Mobile Communication (GSM) backpack transmitter units which communicate through cellular networks. 2 of the transmitters were one (n=1) or two-year (n=1) old units reused from birds harvested or found dead during the past year. 25 of the GSM-marked birds also wore uniquely-coded, blue tarsal band combinations on each leg; the remaining three specimens only received federal bands. 59 (14 ASY-F; 24 ASY-M; 13 juvenile [SY] females; 8 SY-M) birds were outfitted with a uniquely-coded, blue tarsal band combination on each leg. Juveniles comprised 24% of birds captured. 6 previously marked brant were recaptured. Birds were captured with rocket nets using decoys and an electronic calling device to lure birds to capture nets.

Staff continued to collect transmitters and geolocators from brant shot by hunters. Collaborators received 16 geolocators shot during the 2022-23 hunting season. 105 geolocators obtained since 2018 are being analyzed by staff at the University of Manitoba.

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

T. Nichols and L. Clark participated in a virtual meeting with the Canadian Wildlife Service, NYDEC, and University of Manitoba on final plans for analyzing and publishing results from geolocators attached to Atlantic brant as part of a cooperative study among NJFW, NYDEC and CWS.

T. Nichols commented on and wrote sections of the first draft of a manuscript, “Temporal variation in survival of Atlantic brant and its relation to hunter harvest”. Lead author is Kevin Dufour (CWS), with contributions by J. Leafloor, (CWS) and J. Dooley (USFWS).

Tuckahoe WMA Waterfowl Hunt Program 2022

Tuckahoe WMA has 6 impoundments totaling 941 acres that were built in the 1940s and refurbished through a North American Wetlands Conservation Act grant in 2017. At that time, consideration was given to starting a special waterfowl hunt program at Tuckahoe WMA. To gather baseline data under a “status quo” (e.g. no restrictions) scenario, hunter surveys were administered during the duck season for 3 years (2018-2021). These 3 hunting seasons serve as ‘Control’ years (hereafter, control) to measure hunter metrics during Pre-Hunt Program implementation. Surveys were also administered during 2021 and 2022 during the special Hunt Program (Hunt Program). The sampling frame included hunters who secured a spot and were intercepted by a NJDFW employee after their hunt (Control years) and participants of the Hunt Program in 2021 and 2022.

645 surveys were administered since 2018, although no effort was made to sample hunters from Corbin City during 2022. Control years attracted twice as many nonresident hunters (21%), when compared to Hunt Program years (~11%). Hunters during the Control years were younger ($x = 34$ vs. $x = 40$; Table 2), traveled less distance, and were more familiar with hunting at Tuckahoe when compared to Hunt Program years. Hunters during the Control years were more avid waterfowl hunters when compared to Hunt Program participants. The Hunt Program seemed to attract hunters who were willing to travel greater distances and had less waterfowl hunting experience to get the opportunity hunt Tuckahoe WMA for the first time.

When considering only the Tuckahoe side, hunter satisfaction was favorable concerning the number of ducks seen but was lowest during 2022. Hunter satisfaction for the number of ducks shot was relatively similar across years. The overall experience (with 0 = poor and 10 = excellent) from hunters on the Tuckahoe side varied by period but was generally higher during Control years.

Hunt Program participants indicated a desire to continue (~89%) the program. Note, however, that this approval rating does not include hunters who failed to get drawn during the lottery in either year. Participants indicated (1 = poor and 5 = excellent) an improved lottery and hunt logistics experience from 2021 to 2022.

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

Waterfowl Stamp Advisory Committee

T. Nichols served as Fish & Wildlife liaison to the New Jersey Waterfowl Stamp Advisory Committee (WSAC) who met in a hybrid fashion (in-person at CRO and virtual) in March. WSAC were updated on the Land Acquisition Review Committee by Fawn McGee (Green Acres), property closures over the past year, and account finances. There were no new offers to review at this meeting.

Other

2023-24 Migratory Bird Season Regulations

T. Nichols and A. Dammingier met with the Migratory Bird Season Selection Committee at the CRO to select 2023-24 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.

T. Nichols participated in a meeting with NJFW administration and various stakeholders concerning potential restrictions on nonresident waterfowl hunters in NJ and potential regulations for hunting guides.

A. Dammingier and T. Nichols editing and updated season dates and regulations for the 2023 Hunting Season Issue Digest.

L. Clark participated in a virtual meeting of the NJ Aquatic Invasive Species Management Plan working group meeting.

L. Clark participated in a virtual meeting with Refuge and Ducks Unlimited staff to discuss a potential wetland project on the Wallkill River NWR.

T. Nichols coordinated with L. DiPiano (I&E) and B. Stoff (Licensing) to send an e-mail blast to samples of migratory bird and non-migratory bird hunters to test different marketing strategies to motivate hunters to register (migratory bird hunters) or not register (non-migratory bird hunters) for HIP. The Wildlife Management Institute is coordinating this marketing strategy and targeting various hunters across the US.

T. Nichols participated in hiring interviews for a new Senior Wildlife Worker for the Black Bear Project/ Wildlife Control Unit.

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

Bear Control: Lethal and Non-Lethal

The black bear unit received a total of 9 bear calls from February 20, 2023 to March 21, 2023; this compares with 42 calls from the same time period in 2022.

The black bear unit received 1 Category I calls, 5 Category II calls and 3 Category III calls for the time period February 20, 2023 to March 21, 2023; this compares to 7 Category I calls, 20 Category II calls and 15 Category III calls for the same time period in 2022.

The black bear unit received a total of 23 bear calls from January 1, 2023 to March 21, 2023; this compares with 85 calls from the same time period in 2022.

The black bear unit received 2 Category I calls, 9 Category II calls, and 12 Category III calls for the time period January 1, 2023 to March 21, 2023; this compares to 12 Category I calls, 41 Category II calls and 32 Category III calls for the same time period in 2022.

As of March 21, 2023, the total number of calls received by the Division decreased 72.9 percent from the same time period in 2022. Category I incidents decreased 83.3 percent, Category II calls decreased 78.0 percent and Category III calls decreased 62.5 percent for the same time period in 2022. 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 and conduct winter den research.

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

Wildlife Nuisance Complaints/ Technical Guidance (Federal Aid Project)

BREAKDOWN OF COMPLAINTS BY SPECIES

Bear	9	Mink or Fisher	1
Beaver	9	Mountain Lion	1
Bird	2	Pig	1
Bison	1	Porcupine	1
Cockatoo	1	Raccoon	10
Cormorant	1	Skunk	3
Coyote	14	Squirrel	2
Deer	27	Turkey	4
Fox	24	Unknown	5
Fox or Coyote	1	Vulture	2
Geese	5	Weasel	1
Goose	3	Woodpecker	1
Hawk	4		

124 calls for the Federal Aid Project.

Total calls: 133 (*black bear calls are not included in this project).