

Endangered and Nongame Species Program
Monthly Report for 16 October – 15 November, 2020

Staff:

John Heilferty, Chief
Kathy Clark, Supervising Zoologist
Jeanette Bowers-Altman, Principal Zoologist
Christina “Kashi” Davis, Environmental Specialist II
Amanda Dey, Principal Zoologist
Gretchen Fowles, GIS Specialist
MacKenzie Hall, Environmental Specialist II
Emily Heiser, Biologist Trainee
Sharon Petzinger, Senior Zoologist
Bill Pitts, Senior Zoologist
Kris Schantz, Principal Zoologist
Robert Somes, Senior Zoologist
Brian Zarate, Senior Zoologist

Administration – J. Heilferty

As of 16 March, all ENSP staff are working from home and instituting social distancing in the course of our work to avoid contributing to the spread of novel coronavirus.

Landscape Project – J. Heilferty

No new report.

Habitat Change Analysis Project (HCAP) –S. Petzinger

No new report.

Technical Guidance & Policy/Planning – all staff

Staff consulted on DEP land-use project reviews as requested.

Staff submitted comments and success stories related to rule changes and NJ PACT.

Conserve Wildlife Matching Grants Program - M. Hall

As part of the 7-year rule readoption, we conducted an opinion survey of all previous and current grantees, past applicants, and other individuals on the matching grants email list to measure their satisfaction with the current rules (e.g., grant amount, match requirement, grant work period). A few changes to the current rules will be proposed in the coming months. The remaining grants from our 2019 funding cycle have been completed and are being closed out.

Biotics Database – G. Fowles

Biotics staff continued to work on developing the NJ Wildlife Tracking (online submittal application) in collaboration with the Bureau of GIS, that will work as seamlessly as possible with new customized batch upload tools for the Biotics database that staff completed this month in collaboration with NatureServe. A version of NJ Wildlife Tracker is now being used by ENSP biologists as the remainder of the backend of the application continues to be developed, including additional mobile friendly forms for the public to use and for biologist review. Multiple virtual meetings were held with BGIS to continue to discuss the development of the applications. Biotics

staff also finalized and released new survey templates for use by ENSP biologists and some consultants to expedite data submission, review, and upload of survey data into the Biotics database.

Biotics staff held a virtual meeting with the Bureau of Freshwater Fisheries to explain the new survey template so it can be used by BFF biologists to get ENSP survey data for freshwater fish species proposed for listing. This will be the first time that freshwater fish data are included in the Biotics database and SOA dataset.

G. Fowles had a virtual meeting with the Pinelands Commission to discuss getting back on track with a data sharing agreement that has been in place for many years, but which lapsed due to limited staff resources in both organizations. An updated agreement will be put in place along with new procedures to help streamline data sharing going forward.

ENSP continues to struggle with lack of staff and computers to adequately handle the incoming data flow.

Connecting Habitat Across New Jersey (CHANJ) – G. Fowles, B. Zarate, M. Hall

Staff completed an annual report for year 3 of our ongoing project to assess the functional connectivity of NJ's landscape via road transect surveys, culvert inventories and camera monitoring, and a genetics study of various mammal species across the state. A virtual meeting was held with the genetics lab to discuss the plan forward for the gene flow analyses.

An amphibian culvert (road-crossing) project is advancing to the final design stage; a pre-app meeting was held on Oct 26, led by staff from DEP Treasury and NHR Construction Management, to provide information to interested firms.

The CHANJ Team held virtual meetings with the Sourlands Conservancy and NJ Conservation Foundation staff to demo a new CHANJ Action Team Web Viewer and survey that will enable implementers to document habitat management projects. In the new CHANJ Action Team Web Viewer, this new layer is populated via the survey and is visible along with all of the other layers CHANJ layers, including the protected lands layer and Road Wildlife Mitigation layer, to make implementers aware of connectivity projects in areas where they work so that they can piggyback on those efforts. NRCS was also asked to pilot this new tool.

G. Fowles led the bi-monthly Roads & Wildlife Working Group meeting at the end of October, with participation from the CHANJ Team, DLRP, USFWS and DOT. Additional DOT staff attended, having participated in the NETWC conference for the first time in September. Four implemented road wildlife mitigation projects were reviewed to assess the final products and discuss improvements that could be made with the specs/plans, education, and communication. The group also talked about erosion control standards (avoiding plastic) and covering riprap with coir netting and soil to create a more functional walking surface for wildlife. The group plans to continue to review pre-app and completed projects to improve the final outcomes as much as possible, and invite more engineers to participate in the working group.

G. Fowles, B. Zarate, and K. Schantz held a virtual meeting with snake researchers to demo the CHANJ tools, get feedback on connectivity areas of concern for snakes in southern NJ, and discussed ways of documenting roadkill and conducting culvert inventories following CHANJ protocols to prioritize areas of concern for road mitigation efforts.

Habitat Conservation Management on Public Lands – All staff

Staff discussed drafting a new Wildlife Management Area planning document for Sparta Mountain WMA.

Species Status Review – K. Clark

No new report.

State Wildlife Action Plan – All staff

K. Schantz, K. Clark and J. Heilferty drafted request for assistance from OFWIS to finalize Conservation Focal Areas (CFAs) and to identify the CFAs and Counties where FSGCN are found.

HERPTILES

Snake Fungal Disease – K. Schantz

No new report.

Snakes – K. Schantz

K. Schantz has requested findings from Venomous Snake Response Team members.

K. Schantz is working with snake researchers to obtain the necessary supplies for their 2021 field season.

SGCN Turtles – B. Zarate and B. Pitts

No new report.

Eastern Tiger Salamander – B. Pitts

No new report.

Diamondback Terrapins - J. Bowers-Altman and B. Zarate

B. Zarate and J. Bowers-Altman reviewed several coastal projects for impacts to terrapins and possible use of dredged material to create/enhance nesting areas.

MAMMALS

Bobcat Project – G. Fowles

A bobcat was confiscated from an individual in Bergen County who held it for 2.5 years in a basement. DNA samples are being assessed to better understand the origin of the bobcat. It was determined that it could not be released back to the wild and so is in care at a NJ zoo.

A roadkilled bobcat was reported and confirmed with photos, but the carcass wasn't found.

G. Fowles has run detection exercises with Fly, the detection dog, on bobcat scat samples to start gearing up for surveys later this winter.

Bat Conservation – M. Hall

M. Hall had a web meeting with Dr. Dina Fonseca, Dr. Joan Bennett and Jim Occi of Rutgers University to follow up on our recent discovery of soft-bodied “bat ticks” in NJ, and future collaborations to learn more about these invertebrates’ distribution and possible impacts to bats.

A small working group of NABat coordinators (incl. M. Hall) began working on a standardized guidance document for conducting long-term mobile acoustic bat surveys.

Seasonal field tech E. Gilardi assisted shorebird project personnel with “winterizing” NJDFW Motus receiver stations in Delaware Bay and along the southern Atlantic Coast of NJ. Collaborators from the Northeast Motus Collaboration have now established three additional Motus stations in NJ (two in north and one in south) for the benefit of wildlife migration studies, including of bats, across NJ and eastern North America.

Allegheny Woodrat – G. Fowles

G. Fowles commented on a draft manuscript authored by the geneticist at Towson University with who ENSP collaborates on the woodrat work in NJ. The manuscript relates to the translocation efforts and genetics work conducted over the past few years on the Palisades woodrat population.

BIRDS

American Kestrel – B. Pitts

No new report.

Colonial Waterbirds – C. Davis

No new report.

Beach-Nesting Birds - C. Davis & E. Heiser

C. Davis and E. Heiser completed and submitted their 2020 annual report on the beach-nesting bird season. 103 pairs of Piping Plovers nested at 20 sites statewide and produced 1.29 fledglings per pair. NJDFW monitored 50% of the nesting sites and 23% of the state’s population. The majority of birds in the state continue to nest on federal lands (Sandy Hook’s Gateway National Recreation Area and the Holgate and Little Beach Units of E.B. Forsythe National Wildlife Refuge). Depredation was the leading cause of nest failure for the eighth consecutive year. Productivity has remained moderate to high over the last seven years but the population remains unstable.

Black Skimmer productivity was low to moderate this season with only four colonies active in the state. The majority of the population nested at one site in Atlantic County. Conversely, Least Tern distribution was fairly even throughout the state. Productivity has remained low for this species for several years. COVID-19 limited some cooperators ability to collect data on this species in 2020 so population and colony numbers may be underestimated. 152 pairs of American Oystercatchers were tallied, primarily on ocean beaches (marsh sites are not extensively surveyed so this is not a robust state-wide number the way the other species tend to be) at 44 sites. Productivity was moderate to low at 0.34 fledglings/pair.

Bald Eagle Monitoring - K. Clark

K. Clark and L. Smith (CWF-NJ) are nearing completion of the annual report of nesting and related eagle data. The count of active nests was 220 active nests and 307 fledglings documented.

K. Clark and L. Smith documented all the eagle encounters for the annual report, including birds found injured and dead, plus banded birds identified by photographers. Fifty-three eagles were recovered, and of those, ten were treated and released after injuries due to poor fledging (4), poisoning (2), illegal possession (2), vehicle strike (1), and fall from nest (1). The remaining birds were found dead, died while in care, or were euthanized for these reasons: electrocution (10), various impact/trauma (8), poisoning (4), fell from nest (4), eagle-eagle fighting (3), vehicle impact (2), avian pox (1); and unknown circumstances (11) (Table 4). Electrocution is a significant risk for bald eagles everywhere, because power distribution relies on smaller poles where “hot” wires are strung close enough that an eagle’s wingspan can cause the bird to make wire connections. ENSP works with the

electric suppliers (Atlantic Electric, PSE&G, and JCP&L) to retrofit poles and mark lines where they are high risk, and we use data on eagle nests, roosts, and foraging areas to identify priority sites for those corrections.

Peregrine Falcon Monitoring – K. Clark

The annual report will be completed by early December.

Osprey Monitoring – K. Clark

K. Clark reviewed problems with osprey bands (size 8 lock-on) with banders.

Other Raptors – K. Clark

K. Clark participate in a field review of barn owl nest boxes in Cumberland County with others who plan to create an Atlantic coast barn owl project. Barn owls are known to nest in some abandoned buildings in Cape May County, and the tidal marshes seem to provide important foraging habitat as suitable farmland has declined.

Migratory Shorebirds – A. Dey

A. Dey attended an annual meeting concerning intertidal structural aquaculture in Delaware Bay. Attendees, comprised of an Agency Working Group (NJDFW, NJDA, USFWS, USACOE) and Stakeholder Committee (non-profit conservation groups, academics, oyster growers) discussed conservation measures for red knot (federal threatened) and formation of an external science committee. This is year four of a 10-year adaptive management process implemented via a Programmatic Biological Opinion on the effects of structural aquaculture in Delaware Bay on federally-listed Red Knot.

(https://www.fws.gov/northeast/njfieldoffice/pdf/AquaculturePBO_20160401.pdf).

A. Dey provided comments on the Draft NJPACT Rule; primarily on benefits of ecologically-based coastal protection for threatened shorebirds and spawning horseshoe crabs.

A. Dey completed federal aid reports for 2020; a summary is provided here. In May 2020, ENSP conducted core management and field work under enhanced Covid-19 restrictions (exceeding State of New Jersey Executive Orders 107 & 122 and CDC guidance). Primary management includes seasonal restricted beach access at 13 sites on Delaware Bay to reduce disturbance to foraging shorebirds. Disturbance management improves foraging conditions and thus helps stabilize the red knot population, because sufficient weight gain prior to Arctic breeding increases adult survival and productivity. Overharvest of horseshoe crabs (1990s), particularly mature females, and loss of crab egg resources were causal in red knot decline and federal listing. Prior to overharvest, surface egg densities were higher (avg. 45,000 eggs/m², 1989-1991); after overharvest surface eggs declined and remain low (<10,000 eggs/m², 2000-2020). As a consequence, the red knot population in Delaware Bay remains 65-80% below historic peak abundance (>95,000 individuals in 1989).

In May 2020, high winds from an early tropical storm kept water temperature cool in Delaware Bay, curtailing horseshoe crab spawning until the third week of May. Few eggs (< 400 eggs/m²) were available for hungry shorebirds until late May/early June (~ 9,000 eggs/m²) when most birds had departed the Bay. In 2020, the peak number of red knots (19,397) and ruddy turnstones (23,822) were observed on May 24; birds found few eggs and many departed on or before May 26, (69% of knots; 40% of turnstones). The proportion of red knots gaining ≥180 grams (or “P180”) at time of normal departure (May 26-28) is a useful index of annual foraging conditions for shorebirds. Of the

red knots captured May 26-28, a low proportion (0.35) had gained sufficient weight. Since 2005, P180 has varied widely (0.28-0.56; min. 0.02, max. 0.80) and shows no sustained improvement. “*Adequate horseshoe crab egg resources to support red knot*” is a management objective of the Atlantic States Marine Fisheries Commission (ASMFC) and wildlife agencies. Current ASFMC management relies primarily on management of bait harvest quotas and does not include a direct measure of egg resources for red knot. The density of buried egg clusters, deposited at 6-inch depth by spawning female crabs, is a direct measure of female spawning output – useful to assess trend in crab productivity and surface eggs for shorebirds. Incorporating egg cluster density in ASFMC management would improve management outcomes for crabs and red knots.

Scrub-shrub/Open Field birds (GWWA) – S. Petzinger

No new report.

Secretive Marsh Birds– C. Davis & E. Heiser

No new report.

Monitoring Avian Productivity & Survivorship (MAPS) – S. Petzinger

Nothing to report.

Regional & National Bird Coordination – S. Petzinger

S. Petzinger virtually attended a NJ-specific AMJV meeting on October 20, 2020.

INVERTEBRATES & AQUATICS

Freshwater Mussels/Shortnose Sturgeon/Aquatics – J. Bowers-Altman

As requested by Division of Land Resource Protection, J. Bowers-Altman reviewed a mussel survey report ahead of a bridge replacement project in Burlington County.

J. Bowers-Altman attended a FWS-sponsored webinar on using environmental DNA as a tool for detecting freshwater mussel populations.

J. Bowers-Altman reviewed and processed listed freshwater mussel sightings collected by Biodiversity into the Biotics template and forwarded to appropriate staff.

J. Bowers-Altman participated in the monthly Brook Floater Working Group meeting.

J. Bowers-Altman reported the location of invasive Chinese mystery snails that were found in southern NJ by Law to the NJ Invasive Species Strike Force Team. R. Somes recently confirmed another population of mystery snails in Ocean County. The number of Chinese mystery snail populations appears to be increasing in many areas of the state.

Pollinator Conservation – R. Somes

R. Somes and seasonal staff worked together with State Park Service staff to create and enhance pollinator habitat at Swartswood State Park and Leonardo State Marina.

Lepidoptera / Odonata / Coleoptera – R. Somes

No new report