

WILDLIFE RESEARCH UPDATE

Research, Analysis, and Inventory Section - Wildlife Division



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New turkey brood surveys off to a hot start

by Luke Meduna

The 2020 Turkey Brood survey was a huge success!

The National Wild Turkey Federation Technical Committee had recently written national standards for addressing turkey brood surveys so that brood data could be compared across states and Nebraska decided to restart our turkey brood survey in 2019 after a 15 year hiatus. The initial year saw 70 observers contribute 558 turkey observations. In 2020, we invited the general public to participate and nearly doubled our data collection with 138 observers contributing 1033 total turkey observations. With the NWTF Tech Committee protocol which censors duplicate observations and other observations that meet certain criteria, this left us with 579 brood observations which was more than double the combined totals from the other 5 Great Plains states (KS, ND, SD, OK and WY) that reported. Not that we should brag too much, Missouri led the charge with 5,478 brood observations. Prior research has shown that about 200 brood observations are needed to detect significant changes between years, so while we had a sufficient total statewide, detecting changes between regions in Nebraska will require increased samples.

Turkey Continued..

Production for the past 2 years is in the same window as previous survey data in Nebraska (Figure 1) and in the upper 30% nationwide (Figure 2). The 2020 Turkey Survey Report is available at <http://outdoornebraska.gov/wildturkey/>.

The 2021 Turkey Brood Survey data collection period will run the months of July and August, so please consider participating if you are out and about and observe any turkeys. All turkeys should be reported, not just broods. The entire survey is incidental so there are no specified routes and participation is easy. Simply go to <http://outdoornebraska.gov/turkeybroodsurvey/> on your smartphone, access the survey link (only active in July and August), follow the instructions and submit your observation. Thank you to all who participated, this truly is a group effort and couldn't be done without everyone's assistance! With all your help we can continue to keep Nebraska as a great place to chase longbeards!

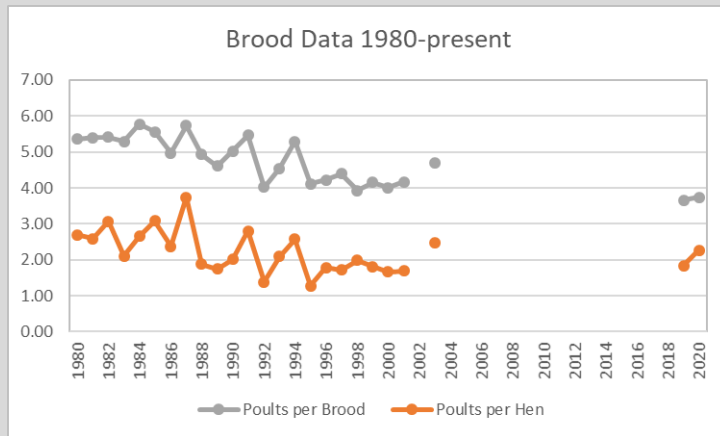


Figure 1. Historic Average Brood Size and Poults per Hen.

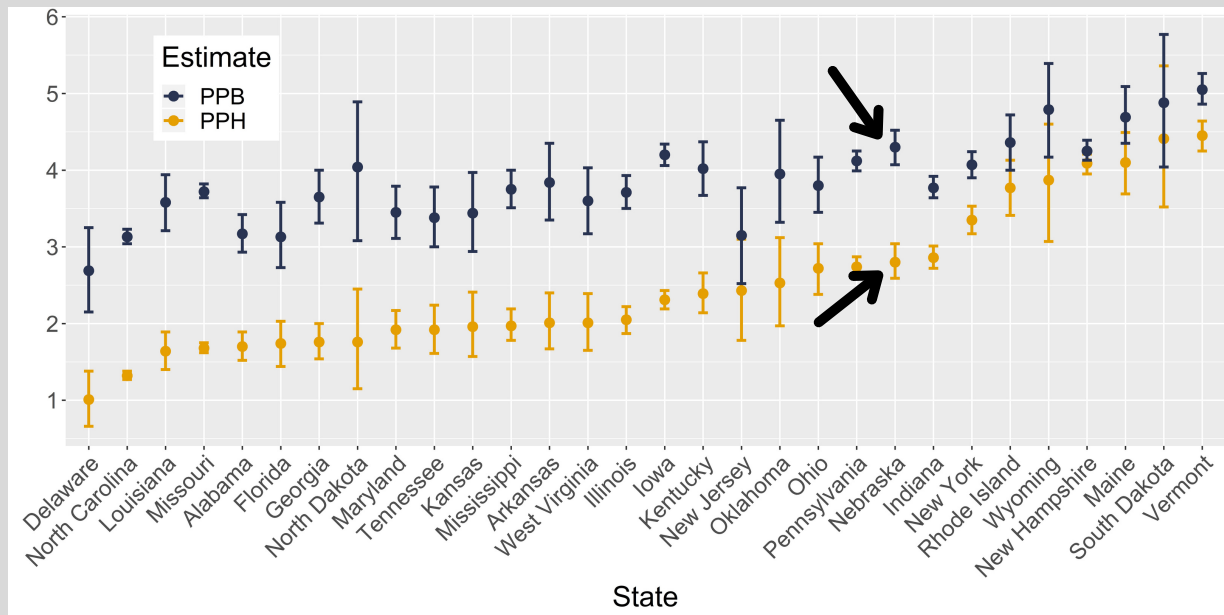


Figure 2. Results of turkey brood surveys in 30 states participating in the NWTf technical committee brood survey data analysis. PPB=Poults per brood, PPH=Poults per hen

New Annual, Special, and On-going Surveys

by Jeff Lusk

As the information needs of the Division change, it occasionally becomes necessary to find new ways to meet those needs. For example, the pandemic of 2020 impacted every aspect of society and we were interested in how those impacts might affect outdoor recreation. So at the end of the spring turkey season, we added several questions about how COVID-19 affected hunters' spring turkey hunts. A manuscript detailing our results was recently accepted for publication in the Journal of Wildlife Management.

The past year also saw the addition of an annual deer hunter survey. Since harvest data is collected via check station, the deer hunter survey will focus more on hunter satisfaction and opinions on various aspects of deer harvest management. The past year also saw the addition of an annual deer hunter survey. Since harvest data is collected via check station, the deer hunter survey will focus more on hunter satisfaction and opinions on various aspects of deer harvest management. This survey is currently in its second year. Information from the deer hunter survey can provide additional support for management recommendations that can sometimes rigger vocal debate. The results of the 2020 deer hunter survey can be found [here](#). Some information needs are more periodic in nature, such as when waterfowl zones change and season-dates preferences for the new zones are assessed.

Such as assessment was carried out this past fall after zone changes were approved under federal frameworks. In this case, the survey results were combined with an analysis of harvest-through-time to develop recommendations for season dates.

Results of this survey can be found by clicking [here](#). Occasionally, we are asked by partners outside the agency to assist them in gathering information to address issues of national or regional importance. Recently, the Commission was approached by researchers from the University of Georgia to assist them in assessing the level of awareness among Nebraska's small game hunters of rabbit hemorrhagic disease, its spread, and precautions that can be taken to prevent its spread. The survey is currently under development and should be ready to deploy in June. Finally, our annual harvest surveys for small/upland game and waterfowl, spring and fall turkey, and mountain lions continue, and results can be found for these posted on the NGPC website on each species group page.



2020 Deer Hunter Survey

The Nebraska Game & Parks Commission is conducting this survey of deer hunters who purchased a deer permit for a 2020 deer season. We are interested in your experiences and harvest success during the 2020 deer season. Your response is important in informing management of deer hunting in Nebraska. Please answer the following questions to the best of your recollection.

Pronghorn research in the Panhandle

by Dr. Andrew Little

In February 2021, Dr. Andrew Little at the University of Nebraska-Lincoln, Dr. Ranglack at the University of Nebraska at Kearney, and biologists with the Nebraska Game and Parks Commission began a two-year study designed to identify critical ranges, temporal and spatial distribution, habitat use, migration corridors and survival of pronghorn in western Nebraska. This project is a collaborative effort amongst the University campuses, Nebraska Game and Parks Commission, and more than 300 private landowners.



This research is being conducted across three hunting units of the Nebraska Panhandle — Banner South, Box Butte East and Garden — that were recommended by Nebraska Game and Parks Commission biologists who have relationships with landowners and knowledge of management issues there. Researchers captured and GPS collared 80 male and female pronghorn. Additionally, researchers collected data on pronghorn age and genetics.

Drs. Little and Ranglack co-advise, Katie Picora, a graduate student in the School of Natural Resources at the University of Nebraska-Lincoln. During the next 2 years, Katie will analyze the GPS data collected from the collars. This data will be used to answer the major aims of this study and help the Nebraska Game and Parks Commission manage a unique species in the Great Plains. Our long-term goal is to establish effective management strategies for pronghorn in the Nebraska Panhandle.

**"We shall never achieve harmony with the land, any more than we shall achieve absolute justice or liberty for people. In these higher aspirations, the important thing is not to achieve but to strive."
- Aldo Leopold**

Reconfirming Old Records In The Heritage Database: Rose Creek WMA

by Colleen Rothe-Groleau

The Nebraska Natural Heritage Program team is responsible for collecting and curating data on Species of Greatest Conservation Need (SGCN) across the state. Documenting viable populations and their habitats helps to target conservation efforts. The data we see come from several sources: biologists, community science efforts, museums, contractor surveys, and even from interested members of the public. We spend a great deal of time refining Heritage data by actively searching for new publications and survey data as well as keeping up-to-date on the latest taxonomy. We continue reaching out to the network of professional biologists, Master Naturalists, students and instructors, partner agencies and private landowners and managers. For much of the year, these things keep us glued to our desks. Occasionally though, we get to go outside and refresh our own field skills.

Many of the records in the Natural Heritage Database are decidedly older and may no longer reflect the current conditions in the area. Several of these records are not part of a continuing survey effort. Where feasible, the Heritage team has been attempting to return to certain older occurrences and assess the likelihood that a population persists in the area.

In 1991 and again in 1992, a copperhead (*Agkistrodon contortrix*) and a timber rattlesnake (*Crotalus horridus*) were observed at Rose Creek WMA in Jefferson County, southwest of Fairbury. Heritage staff have collected no further reports for either species on this WMA. Near the end of April 2021, Heritage staff visited the eastern section of Rose Creek WMA looking for rattlesnakes and copperheads. Only a single black rat snake was found. While the habitat was excellent for snakes, with ample access to prey and water, there did not appear to be any appropriate hibernacula access on this section of the WMA. A hibernaculum may have existed on adjacent private lands or there may have been access to openings in the bedrock at some point in the past that have since closed over. Another trip is planned to visit the western section later in the year.

If you're curious about what records are in your area and the surveys that are ongoing, please feel free to contact Caroline Jezierski (caroline.jezierski@nebraska.gov) at the Nebraska Natural Heritage Program.



New Faces



Kylie Sinclair, Big Game Disease and Research Bio II in Lincoln, is originally from Wyoming. She recently graduated with her Master's degree from Utah State University where she studied bighorn sheep demography following disease events. Prior to that, Kylie was working for the Wyoming Game and Fish Department's Wildlife Health Laboratory.



Brad Nichols, Temporary Mt. Lion Bio I in Valentine, is originally from SE Ohio. He earned his Bachelor's degree in Wildlife resources in 2005 from the University of Idaho and his Master's degree from Utah State University in 2017 while researching mountain lion prey composition, kill rates, and resource selection in the Sierra National Forest, CA. Brad also spent time researching several other predator species such as lynx, fishers, bobcats, coyotes and red wolves. His main area of interest is carnivore research and conservation including public outreach regarding the importance of predators for healthy ecosystems.



Ashley Hodge, Temporary Mt. Lion Bio I in Chadron, received her bachelor's degree at James Madison University and proceeded to work on various wildlife jobs including a carnivore project in Utah and as a wildlife technician in Colorado. She spent 5 years on a predator project in South Africa that primarily focused on the black-backed jackal. Most recently she completed her master's degree in wildlife biology at Utah State University on dietary shifts related to water availability and the demographic response to changing prey abundance of carnivores in the West Desert, Utah.

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