

North Carolina Deer Hunter Observation Survey Results

2014-2017



Thank you! - To all the deer hunters from across the state for taking an active part in wildlife conservation and filling out the observation survey! This information helps biologists detect changes in wildlife populations and provides valuable data that can be used for management and potential regulatory purposes.

The following is a short summary of statewide results from the North Carolina Deer Hunter Observation Survey (DHOS) that was conducted during the 2014-2017 hunting seasons. To view more detailed survey results, please go to our deer webpage, www.ncwildlife.org/deer, and click on Deer Cooperator Programs for a full report. This survey documents where species occur and can provide an index of how wildlife populations can change over time (increase, decrease, or remain stable). A few highlights from the first four years of the survey are noted below:

- Approximately 1,000 deer hunters each year recorded the wildlife they saw on 105,683 hunting trips encompassing 364,238 observation hours.
- Hunters recorded an average of 19.5 hunts per year, averaging 3.4 hours per hunt.
- Gray squirrels and deer were the most commonly sighted species (Table 1).
- Statewide, hunters averaged seeing 0.7 deer per hunting hour, but varied across the state (Figure 1).
- Hunters recorded approximately 0.6 fawns per every doe, but varied across the state (Figures 2 & 3).
- The observed sex ratio for deer was 2.5 adult does to every 1 antlered buck.
- Fox squirrels were observed in many counties across the state (Figure 4).
- Turkey were sighted in all 100 counties. The ratio of bearded turkeys to turkeys without beards will help us understand success of nesting and brood rearing each year.

Table 1. Statewide observation rates by species group listed in descending order, North Carolina Deer Hunter Observation Survey, 2014-2017.

Animal Type	Animals seen per 1,000 hours
Gray Squirrel	765.6
All Deer (<i>including unknown age/sex</i>)	745.2
Doe Deer	367.6
All Turkey (<i>including unknown beard status</i>)	334.4
Non-Bearded Turkey	169.0
Fawn Deer	161.0
Antlered Buck	147.4
Bearded turkey	59.0
Raccoon	27.2
Fox Squirrel	17.7
Coyote	14.1
Adult Bear	11.7
Gray Fox	8.3
Cub Bear	5.7
Red Fox	3.4
Bobcat	3.4
Swine	2.6
Doe/Buck	2.45
Fawn/Doe	0.58
Bearded/Non-Bearded Turkey	0.36
Fox Squirrel/Total Squirrel	0.04

Deer Observation Rates

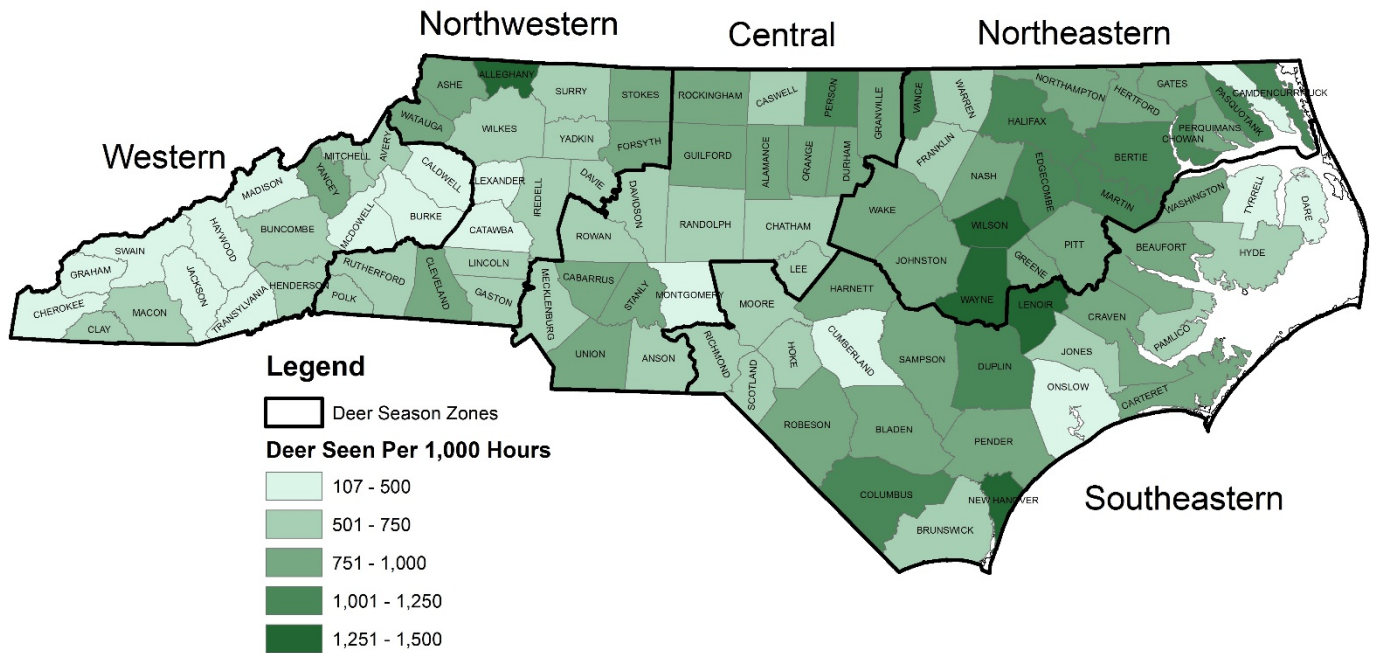


Figure 1. Deer observation rates by county (number of deer seen per 1,000 hours), North Carolina Deer Hunter Observation Survey, 2014-2017. The highest observation rates for deer occurred in the northeastern season zone (935.2 deer per 1,000 hours) and the lowest occurred in the western season zone (461.9 deer per 1,000 hours). However, several counties on the coast and mountains exhibited a high amount of annual variation due to small sample sizes.

Fawn Per Doe Ratios

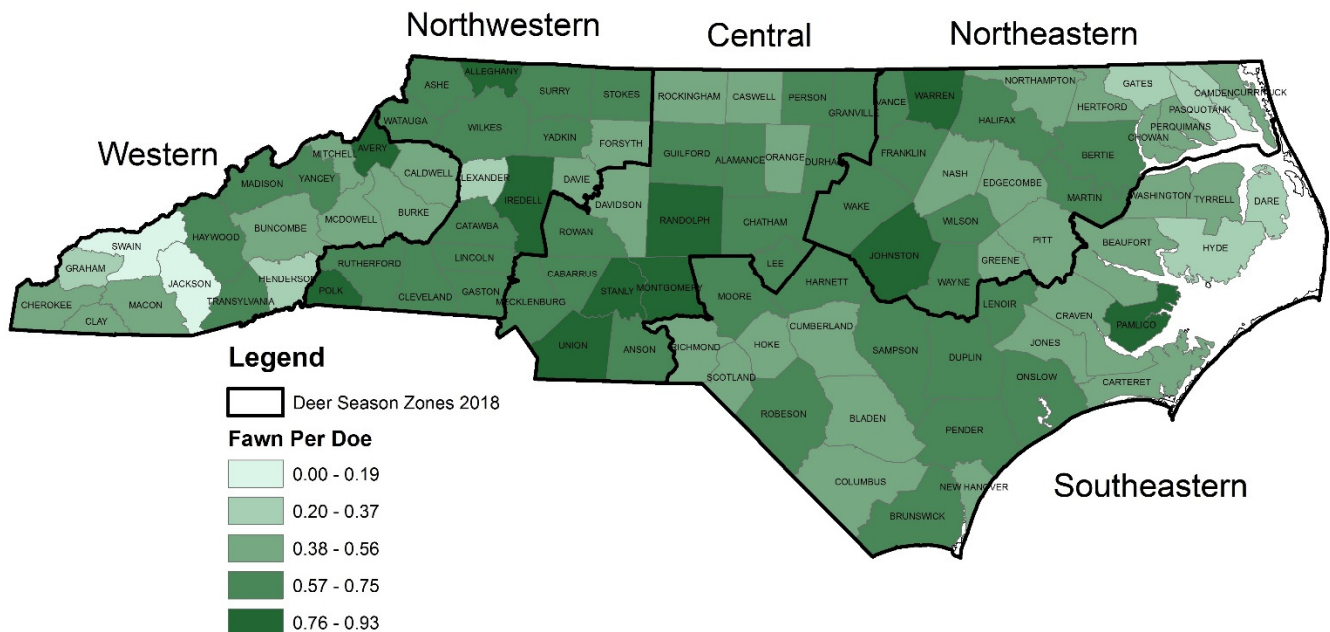


Figure 2. Fawn per doe observation ratios by county, North Carolina Deer Hunter Observation Survey, 2014-2017. This ratio offers insight into deer population recruitment. The two main influences on this ratio are doe reproductive output and fawn mortality.

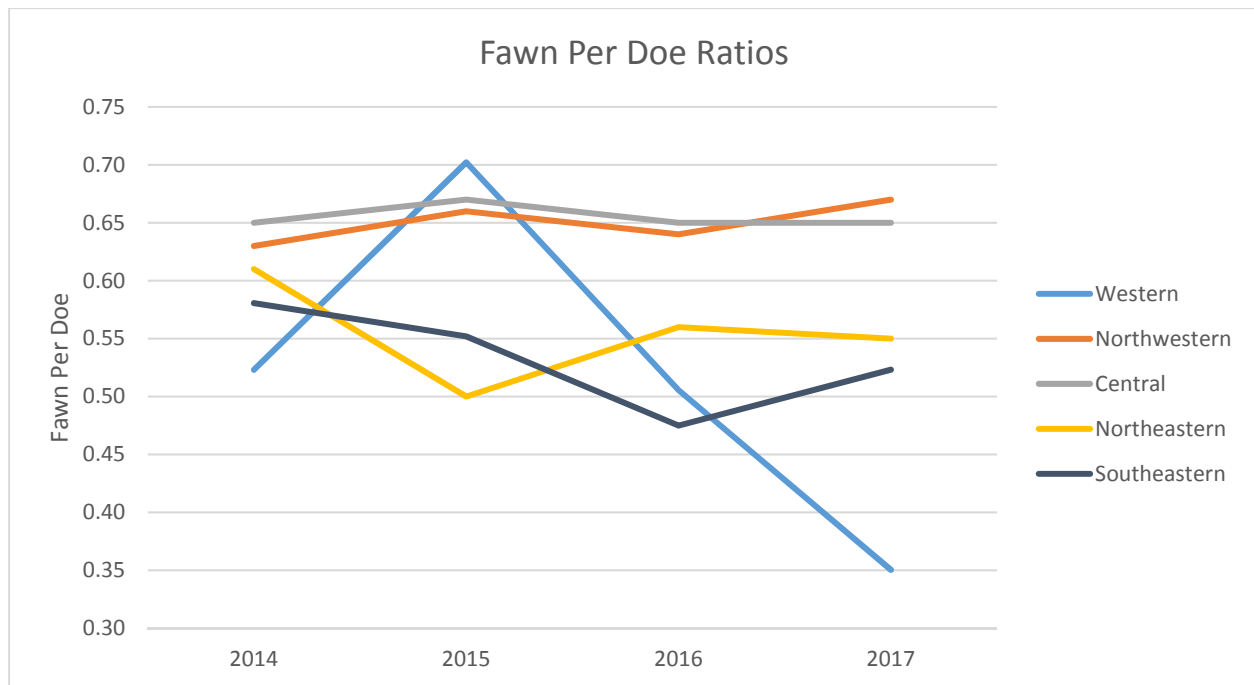


Figure 3. Fawn per doe observation ratios by season zone and year, North Carolina Deer Hunter Observation Survey, 2014-2017. Statewide, hunters observed an average of 0.58 fawns for every adult doe. This varied widely between areas but on average is similar to ratios reported in other southeastern states. The observed fawn/doe ratio were highest in the Central and Northwestern zones. Statewide ratios appeared to be relatively stable across years and within most season zones, except the Western zone. When changes in the ratio are observed over time, it will never be entirely clear which factors might be responsible, i.e. habitat quality, doe age/health, disease events, predation, parasite loads and weather events, however this ratio is extremely valuable and provides a more comprehensive assessment into deer population dynamics.

Fox Squirrel Notes:

One purpose of the Deer Hunter Observation Survey is to learn more information on the distribution and population status of multiple wildlife species where agency monitoring is limited. Fox squirrels are one species that are not found statewide, although information suggests that they may be slowly expanding their range and the Commission is very interested in accurately documenting fox squirrel observations.

In some cases, fox squirrels may be confused with their smaller relative, the gray squirrel, especially in those areas where fox squirrels are relatively rare, and hunters are unfamiliar with the species (see Figure 5, back page). We urge hunters to carefully record observations of fox squirrels and become familiar with the distinguishing characteristics of fox squirrels. On the back page are some hints for distinguishing differences in gray squirrels and fox squirrels. In addition, red squirrels may also be observed in western areas of North Carolina. Red squirrels are about half the size of gray squirrels and have reddish fur with a white underbelly.

***New for the 2018-19 Season:** Observers now have the option to enter their observations online at: www.ncwildlife.org/HunterObservationSurvey. Users can save this survey link to the home screen on their mobile phone for easy access to enter their observations real-time, instead of recording observations on the paper forms.

If you have any questions, concerns, or know of another deer hunter that would like to participate, please contact us anytime. Please contact Ryan Myers by email at ryan.myers@ncwildlife.org, by mail at 1723 Mail Service Center, Raleigh, NC 27699, or by phone at (919) 218-3376.

Fox Squirrel Observation Rates

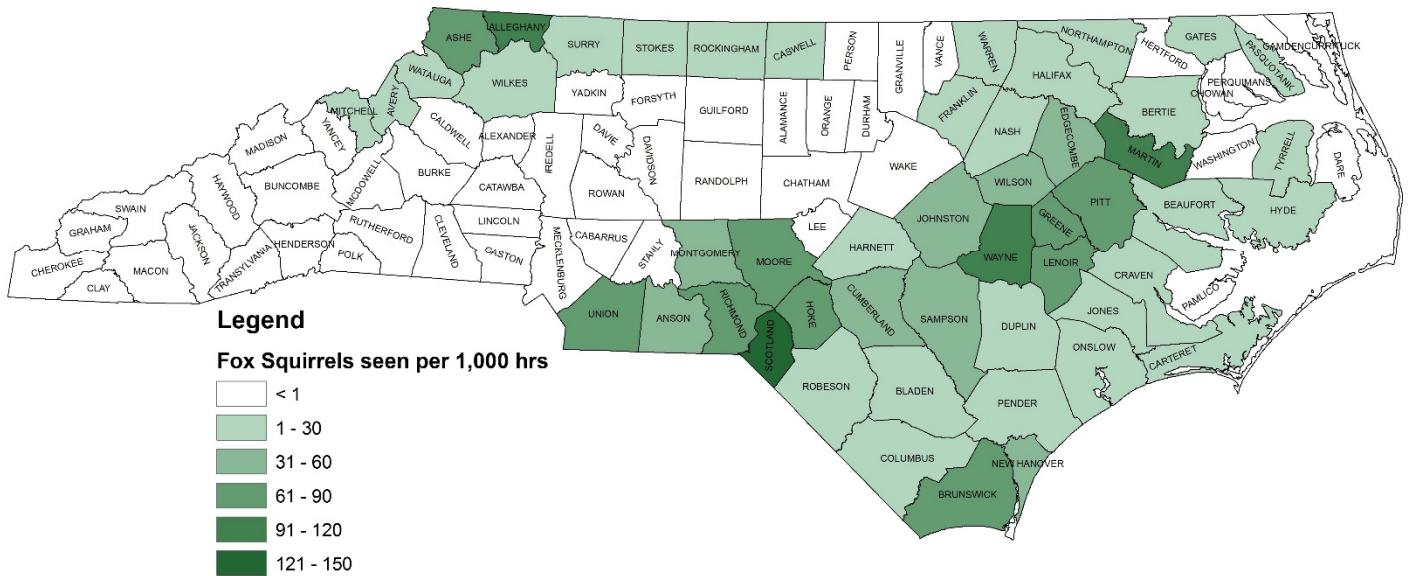


Figure 4. Fox squirrel observation rates by county (number of fox squirrels seen per 1,000 hours), North Carolina Deer Hunter Observation Survey, 2014-2017. Fox squirrels were a relatively uncommon animal type (17.7 squirrels per 1,000 hours) and were reported in 65 counties. Highest observations rates occurred in the Sandhills region and the central coastal area of the state.

Fox Squirrel	Gray Squirrel
<u>Total length</u> (including tail): 20 to 26 inches long	<u>Total length</u> (including tail): 15 to 20 inches long
<u>Tail</u> : 12 inches long and appears much larger than the tail of gray squirrel	<u>Tail</u> : 7 to 10-inches long
<u>Weight</u> : Typically, 2¼ - 2¾ pounds	<u>Weight</u> : Typically, ¾ - 1½ pounds
<u>Fur color</u> : Black, tan, silver, gray, orange or reddish, ...all of which could be grizzled or mixed in color. The head can be marked with black. They can have white, black or gray noses and white ears and feet.	<u>Fur color</u> : Typically, grayish-brown or yellowish-gray to silvery gray fur. Undersides are whitish.



Figure 5. Various color phases of the Fox Squirrel. Note the much smaller gray squirrel on the right.