How are Turkeys in My Neck of the Woods?

MISSISSIPPI WILD TURKEY REPORT

MISSISSIPPI DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS

2014
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2014 Mississippi Wild Turkey Report

Mississippi Department of Wildlife, Fisheries, and Parks
1505 Eastover Drive | Jackson, MS 39211
Mississippi Wild Turkey Population Statistics

Based on Spring Gobbler Hunting and Brood Surveys

The Spring Gobbler Hunting Survey (SGHS) was initiated in 1996 to provide the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) biological information about the state’s wild turkey resource. Each year, cooperating hunters record information about their spring gobbler hunts. The database obtained from this survey assists the MDWFP in monitoring populations and making management decisions in the best interest of the turkey resource and turkey hunters. The Agency appreciates the data collection efforts and comments from all individual hunters and hunting clubs who participate in the SGHS. All turkey hunters, regardless of their ability or experience, are encouraged to participate. This is an opportunity to be directly involved in the conservation and management of the wild turkey in Mississippi. An application for participation in the SGHS is provided in this report.

Private land data from the 2005 – 2013 SGHSs are presented graphically in the following statewide and regional summaries. The remainder of this introduction describes how the data were collected and summarized, along with important points to consider during interpretation. Most parameters are expressed as an average number per every 10 or 100 hours of hunting. Standardizing values by a specific number of hours hunted allows the rates to be compared among regions and years even though hunter effort varies.

Reproduction

During June, July, and August, the annual wild turkey brood survey (initiated in 1994) is conducted by personnel from the MDWFP, Mississippi Forestry Commission, U.S. Forest Service, and other cooperators. Brood surveys provide indices to reproduction and are valuable in monitoring turkey population trends. Hens observed with at least one poult are considered successful. Hens without poults are considered unsuccessful and either did not attempt to nest, abandoned their nest, lost their nest to predation or human disturbance or had no poults survive. Average brood size is the total number of poults divided by number of successful hens and is an index to poult survival. “Poults per total hens” is defined as the number of poults observed divided by total number of hens seen. “Poults per total hens” is the most practical reproductive index because it considers successful hens, unsuccessful hens and poult survival.

Turkey Observations

Turkey observations are classified as gobblers, jakes, hens, or unknowns. Observation rates are reported as the average number of gobblers, jakes, or hens seen during 100 hours of hunting. Total observations combine all turkeys seen, including unknowns. Observation rates provide indices to sex ratios, gobbler age ratios, population size, and population trends. Jake observations reflect the recruitment of males into the population from the previous year’s hatch and provide an index to the potential number of 2-year-old gobblers in the population during the next spring turkey season.

Gobbling Activity

The number of individual gobblers heard and the total number of gobbles heard are used as indices to gobbling activity. Gobbling activity is reported as the average number of gobblers (and gobbles) heard during 10 hours of hunting. Gobbling activity is considered an indicator of hunting quality and may show a trend reflecting the number of gobblers in the population.

Harvest Rates and Age Structure

Harvest rates provide an index to hunter success and population size. Spur lengths generally increase with age and therefore provide an index to age structure of harvested gobblers. Spur lengths are classified into four length categories based on the longer of the two spur measurements for each harvested gobbler. Spurs less than half an inch long are classified as jakes or 1-year old gobblers. Lengths between a half and one inch are generally 2 years old. Gobblers with spurs one to one and a quarter inch are considered 3 years old, while birds with spur lengths over inch and a quarter are considered four plus years of age. Monitoring spur length distribution should reflect changes in gobbler age structure over time. If age structure is increasing, a higher percentage of the gobblers harvested should be in the larger spur length categories. Spur length distributions are used to monitor the impact of harvest on the gobbler population and to evaluate season lengths and bag limits.
STATEWIDE PRIVATE LAND DATA WERE COLLECTED DURING THE 2013 season by more than 50 hunting clubs and approximately 500 individual hunters participating in the Spring Gobbler Hunting Survey.

Reproduction

During the 2013 brood survey period, a total of 1,336 hens were observed across the Magnolia State. Of these hens, 367 (27%) successfully produced at least one poult. A total of 1,379 poults were observed, and average brood size was 3.76 poults which was down from 2012. The average number of poults per total hens was 1.03 (Figure 1), which was down significantly from 2.05 observed in 2012. During the past 8 years, poults per total hens statewide has averaged 1.59 poults, and has ranged from a high of 2.05 poults in 2012 to a low of 1.03 poults in 2013. As usual, we observed some regional variation within the 2013 hatch, but all regions of our State saw reproductive parameters decrease during this year.

Harvest Rates & Age Structure

Statewide harvest rates from the spring 2013 season were lower than those reported in 2012. On average, hunters harvested 3.6 gobblers for every 100 hours hunted (Figure 2). Over the past 8 years, harvest rates have averaged 3.2 gobblers per 100 hours hunted. Of the gobblers harvested, 47% of the birds harvested were in the 2-year old age class with spurs between 0.5” and 1.0”, and 52% of the birds harvested statewide were 3 years old or older, with spurs at least 1-inch in length (Figure 3).

Gobbling Activity

During 2013, seasonal gobbling activity was lower than observed during 2012. Hunters heard an average of 4.8 gobblers and 56.4 gobbles for every 10 hours of hunting (Figure 4). The number of gobblers heard was highest during the week of youth season (Figure 5), and number of gobbles heard was highest during week 4.

Turkey Observations

During the 2013 season, hunters observed an average of 33.6 adult gobblers, 16.9 jakes, 47.6 hens and 12.0 unknowns for every 100 hours of hunting (Figure 6). Overall, total turkey observations in 2013 were higher than observed during 2012, which was expected since the 2012 hatch was considerably higher than the 2011 hatch. As expected, jake observations (16.9 per 100 hours) were higher than observations from 2012 (Figure 7).

2014 Season Forecast

Hunters should expect to encounter more 2-year old gobblers during the 2014 season as compared to 2013, which should equate to increased gobbling activity and higher harvest rates. Overall, our data suggest that Magnolia State turkey hunters should look forward to an outstanding 2014 season.
Turkey Region 1

This region consists of 21 counties in north-central and north-east Mississippi. The two primary forest types in Region 1 are oak-hickory and oak-pine. The oak-hickory forest type is located on the western side of the region and in association with the Blackland Prairie. While this forest type is dominated by various oaks and hickories, it also includes beech, black cherry, and yellow poplar. The oak-pine forest type runs along the Alabama line and in the central portion of the region. Here, upland oaks comprise about 50% of the forest community and are mixed with minor amounts of loblolly and shortleaf pines.

Reproduction
During the 2013 brood survey, we observed 0.94 poults per hen in Region 1 which was down considerably from the 1.88 observed in 2012 (Figure 1). A total of 499 hens were observed, of which 127 (25%) successfully raised at least one poult. Successful hens had an average brood size of 3.69 poults, which was down from the average brood size observed in 2012.

Harvest Rates & Age Structure
Hunters harvested 3.6 gobblers for every 100 hours of hunting during the 2013 season, which was similar to the 2012 season (Figure 2). Age structure of harvested birds showed 57% of the birds falling into the 2-year old age class (Figure 3). Forty-three percent of the harvested birds were at least 3-years old with spurs greater than 1.0 inch.

Gobbling Activity
During the 2013 season, hunters heard an average of 3.6 gobblers and 40.9 gobbles for every 10 hours hunted (Figure 4). Gobbling activity was down significantly from 2012 for Region 1. The number of gobblers and gobbles heard was highest during week 4 during the 2013 season (Figure 5).

Turkey Observations
Turkey hunters observed an average of 126.6 turkeys per 100 hours hunted in 2013 (Figure 6) which was up from 2012. Jake observations (18.0 per 100 hours) were down some during 2013 (Figure 7).

2014 Season Forecast
Our brood survey suggests that the 2012 hatch in region 1 was significantly better than recent hatches in this region, but jake observations were down slightly during the 2013 season. Still, we expect that hunters will encounter good numbers of 2-year old gobblers during the 2014 season, and that harvest rates should be comparable to recent seasons.
Turkey Region 2

This region comprises the ten Delta counties and is subject to extensive, annual Spring flooding that has a major impact on turkey reproduction. The dominant forest type in the Delta is oak-gum-cypress. This region can be subdivided into the batture lands (west of the mainline Mississippi River levee) and the interior floodplain. The batture area is dominated by sugarberry, sycamore, cottonwood, sweetgum, elm, and cypress. Pecan is the only hard mast producer of any significance. The interior Delta consists of extensive agricultural areas containing fragmented hardwood forests interspersed with cypress swamps. The major tree species include overcup oak, Nuttall oak, water oak, green ash, sweetgum and cottonwood.

Region 2 is unique in that most of the turkey habitat in the interior Delta is on public lands (national forest, wildlife management areas, and wildlife refuges) and the vast majority of the private land habitat is located in the batture lands west of the Mississippi River levee. Therefore, data from the annual brood survey is biased by the majority of turkey observations coming from public lands in the interior Delta, while all the other information in this section is almost exclusively from private lands between the levees.

Reproduction

Flood waters have limited turkey reproduction in this region for 3 of the past 6 years (2008, 2009, and 2011). Fortunately, Region 2 had a good hatch during 2012, with 2.3 poults observed per total hen, but we had no brood data collected during 2013 due to reduced numbers of staff and cooperators in the region.

Harvest Rates & Age Structure

During the 2013 season, an average of 1.5 gobblers were harvested for every 100 hours of hunting (Figure 2), which was down significantly from 2012, likely due to the low hatch in 2011. Spur length data suggested a complete lack of 2-year old birds in this region during the 2013 season. Eighty percent of the birds harvested in Region 2 were in the 3-year old class with spurs between 1.0 and 1.25 inch long (Figure 3). The remaining 40% of the gobblers harvested in Region 2 were at least 4 years old, with 9% having spurs over 1.25 inches in length.

Gobbling Activity

As expected, gobbling activity for 2013 was lower than that recorded in 2012 for Region 2 (Figure 4). Hunters in this region heard an average of 1.9 gobblers and 30.4 gobbles per 10 hours of hunting. The number of gobblers heard peaked in week 4, while number of gobbles heard was highest in week 5 in Region 2.

Turkey Observations

Overall turkey observations were up significantly from the previous year during 2013, which was expected following a solid hatch in 2012. Hunters saw an average of 162.1 birds per 100 hours of hunting (Figure 6). Jake observations also increased significantly up to a whopping 59.7 per 100 hours in 2013 (Figure 7).

2014 Season Forecast

The Mississippi Delta seems to be set on a boom and bust cycle during recent years. The good hatch of 2012, as indicated by both brood survey data and excellent jake observation numbers from last year, should mean good numbers of 2-year old birds and good success rates in this region for the 2014 season.
Turkey Region 3

Region 3 is the 21 county area located in East-Central Mississippi. The two major forest types in this region are loblolly-shortleaf pine, which occurs on the drier, more sandy soils, and oak-pine. Loblolly and shortleaf pines constitute more than 50% of the commercial trees in this forest type. Upland hardwoods, primarily various oaks and hickories, make up the rest of the forest community. In the oak-pine type, upland oaks make up more than 50% of the trees with the remaining species including hickories, sweetgum, black gum, loblolly and shortleaf pines.

Reproduction

An average of 1.0 poults per total hen were recorded for Region 3 in 2013 (Figure 1) which was down from 2.27 in 2012. A total of 157 hens were seen in this region during the 2013 brood survey, and 103 (29%) of the hens successfully produced at least one poult. Average brood size was 3.48 poults per successful hen, which was up from 2012.

Harvest Rates & Age Structure

Hunters harvested 2.9 gobblers per 100 hours of hunting in Region 3 during 2013 (Figure 2) which was down from 2012. Forty percent of harvested gobblers were considered 2-year old birds with spurs of 0.5 to 1.0 inches, while 59% were considered at least 3 years old (Figure 3).

Turkey Observations

Hunters averaged observing 91.9 turkeys per 100 hours hunting during the 2013 season (Figure 6), which was up compared to 2012. Jake observations also increased to 15.7 per 100 hours hunting (Figure 7).

2014 Season Forecast

Broad survey data and jake observation agree that Region 3 hunters should encounter increased numbers of 2-year old gobblers in 2014 compared to recent seasons, which should mean more gobbling activity and increased success rates.
Turkey Region 4

Twelve counties in the southwest portion of the state comprise Region 4. The oak-hickory forest type is located along the loess hills bordering the Mississippi River floodplain. Adjacent to the loess hills is a narrow transition zone consisting of the oak-pine forest type. The eastern and southern section of the region is made up of the loblolly-shortleaf pine forest community. Descriptions for these forest types are provided in previous regions.

Reproduction

A total of 0.98 poults per total hens were observed for Region 4 during the 2013 brood survey (Figure 1) which was much lower than the observed hatch in 2012 in this region. Twenty-four percent of the hens observed successfully reproduced, and average brood size was 4.06 poults for Region 4, both down from 2012.

Harvest Rates & Age Structure

Region 4 turkey hunters harvested 3.2 gobblers per 100 hours of hunting in 2013 (Figure 1) which was down from 2012. The percentage of older gobblers (with spurs at least 1-inch long) was 52% (Figure 3) while the percentage of 2-year old birds in the harvest was 44%, which was similar to 2012.

Gobbling Activity

Gobbling activity for Southwest Mississippi was down slightly during the 2013 season (Figure 4) as hunters heard fewer gobblers (6.5) and gobbles (73.3) per 10 hours of hunting. The number of gobblers heard in this region peaked during youth week, while the number of gobbles heard was highest during the third week of the regular season (Figure 5).

Turkey Observations

Turkey hunters observed 74.5 turkeys per 100 hours of hunting in 2013 (Figure 6) which was up some from 2012. Hunters observed 14.7 jakes per 100 hours hunting (Figure 7) which was up from the 13.1 observed in 2011.

2014 Season Forecast

Hunters in Region 4 should expect to find more 2-year old gobblers to chase during the 2014 due to a decent hatch in 2012. Overall outlook is very bright for this region which continues to be a regional hotspot for Mississippi turkey hunters.
Turkey Region 5

This region consists of 18 counties in southeast Mississippi. Forests in Region 5 are dominated by longleaf and slash pine. This habitat type includes the pine flatwoods of the coastal counties and the adjoining, rolling, pine hills. Longleaf pine and slash pine compose at least 50% of the forest community. Other common tree species include dogwood, beech, magnolia and sweet bay along creek bottoms and blackjack oak, post oak and southern red oak on the drier sites.

Reproduction

A total of 1.33 poults were observed per hen during the 2013 brood survey (Figure 1), which was down from 2012 in Region 5. A total of 34% of the hens observed successfully reproduced, and average brood size was 3.90 poults, both down from 2012.

Harvest Rates & Age Structure

Region 5 hunters harvested 2.5 gobblers per 100 hours of hunting in 2013 (Figure 2) which was down from 2012. Fifty-eight percent of the birds harvested had spurs between 0.5 and 1.0 inches, while 42% had spurs longer than 1 inch (Figure 3).

Gobbling Activity

During 2013 hunters in this region heard 3.7 gobblers and 36.7 gobbles per 10 hours, which was down from 2012 (Figure 4). The number of gobblers and gobbles heard peaked during the fourth week of the season (Figure 5).

Turkey Observations

Total turkey observations increased during 2013 to 73.1 birds per 100 hours hunting (Figure 6), and jake observations were 12.8 per 100 hours, which was up from 2012 (Figure 7).

2014 Season Forecast

Region 5 hunters should expect an increase in the number of 2-year old gobblers they find during the 2014 season. This should result in increased gobbling activity and harvest rates since 2-year old birds tend to be more vocal and susceptible to harvest.
Join Our Spring Gobbler Hunting Survey Team
Help the MDWFP with the conservation & management of turkeys in Mississippi.

The Spring Gobbler Hunting Survey (SGHS) was initiated in 1996 by the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) to fill the need for a long-term dataset that would aid in monitoring and managing the state's turkey population. It is one of the sources of data that makes this report possible every year.

The driving force behind the SGHS is Mississippi's turkey hunters. Every day of the season, hundreds of turkey hunters throughout the state take to the woods and record information about the amount of turkey activity they saw and heard while hunting. The MDWFP then gathers this information from its hunting cooperators at the end of each season and analyzes it to gain insight into gobbling activity, hunter effort, harvest rates, age structure, sex ratios, and characteristics of harvested birds. This dataset allows the MDWFP to learn about trends in the Mississippi turkey population on a local, regional, and statewide basis. Ultimately, this knowledge helps the MDWFP make management decisions that link the interests of the sportsmen with the wise use of the state's turkey resource. Participation in this process allows Mississippi hunters a unique opportunity to directly contribute to the conservation and management of turkeys in Mississippi. All sportsmen who hunt turkey anywhere in Mississippi, on public or private lands, are eligible and encouraged to participate.

In appreciation for the collection efforts of the dedicated hunters that participate in our survey, the MDWFP shares the results with the state's sportsmen in our annual turkey program report, entitled Spittin' & Drummin'.

There are also other ways that hunters can benefit:

Benefits of Participating in the SGHS

- The information you collect will be made available to you within the MDWFP Turkey Program's annual report, Spittin' and Drummin'. This report discusses turkey population trends in each region. It also includes insightful articles that discuss turkey biology and management.
- You'll receive an individualized report that summarizes the data you sent us. These reports will allow you to see trends in activity from the time you, or your hunting club, spent turkey hunting. This information can be used to tailor management decisions for your specific property.
- Your name will be entered into a special shotgun raffle aimed at increasing participation in the SGHS.
- You can improve your turkey hunting knowledge and skills by keeping track of your own hunting experiences and habits throughout the season. The MDWFP will provide you with analysis of various topics that will be highlighted for you in special reports and articles.
- Management decisions of the MDWFP that directly affect your recreational opportunities as a sportsman and conservationist will be made using the best available data. You will become a part of our natural resource's history by gathering evidence that stands for or against questions such as should season dates be set earlier, later, or left the same? Should we allow a controlled fall season in areas with high turkey densities? Will certain regulations improve hunting quality, carry-over more gobblers, or increase gobbling activity?

How can I Participate?
If you turkey hunt anywhere in Mississippi, you are eligible and encouraged to participate. There will be absolutely no cost to you to take part in the program. The only thing that we will ask of you is to take approximately a minute or two of your time following every hunt to record information on what you observed. Before turkey season starts, we will send you a data collection booklet that will make it easy for you to document your hunting experience. If you have never participated in the SGHS, but would like to become involved, please fill out and return the application provided in this report, or contact one of the MDWFP Turkey Program biologists. You can also apply at www.mdwfp.com/turkey. Your efforts will assist the MDWFP in monitoring Mississippi's turkeys and making decisions in the best interest of the resource and hunters.

New SGHS Participants can enroll online at www.mdwfp.com/turkey

Steve Gulledge
MDWFP
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The 2014 Mississippi Wild Turkey Report is a cooperative effort between the MDWFP Turkey Program and the Mississippi Chapter of the NWTF.

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