GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

Wild Turkey Production and Population Survey Results for 2014

The 2014 hunting season was the 36th year of our annual turkey population survey. The continuing cooperation between turkey hunters and staff has made the survey possible. Your assistance is vital to managing wild turkeys in Georgia. We appreciate this partnership.

Turkey Production Index Survey

Historically, this survey was conducted from May-August from 1978-1990. Beginning in 1991, the annual survey period was shortened to June-August. Field personnel of the Game Management and Fisheries management sections along with personnel from the Law Enforcement division participate in the survey. All observations of turkey broods, gobblers, and hens with and without poults are reported.

During the summer of 2014, 347 broods were observed, which represents an 18% decrease from 2013(424). The average brood size of 5.2 poults observed in 2014 was 12.3% less than 2013 (6.0) and 27% less than the 5 year average (8.0). The statewide production index poults/observer was 10.3, which was a 21% decrease from 2013 (13.1) and 24% below the 5 year average (13.6). The production index 'poults + hens' was 3457 in 2014, which was 21% lower than 2013 (4376) and 27% less than the 5 year average (4573). Statewide, the average number of poults per hen was 1.1 in 2014, down 19% from 2013 (1.3). Recent years suggest that 2.0 poults per hen or slightly less have been able to maintain our current populations. A production index of 1.1 poults per hen is low and will have a noticeable effect during the hunting season.

Reproduction data does suggest that a couple areas in Georgia had better reproduction in 2014 than 2013, however, most did not. The Ridge and Valley area of the state saw the highest poults/ hen index (pph) of 1.7, which was a 109% increase from 2013 (.80pph). This region also saw a 41% increase in 'total poults+hens' and the number of broods observed more than doubled. The lower coastal plain was mostly stable. This region experience a 6.7% increase in poults/hen index from 1.4 to 1.5, but saw decreases in numbers of broods, average number of poults/ brood and 'total poults+ hens'. The upper coastal plain saw a 3% decrease in number of broods, 34% decrease in the number of poults/brood, and a 38% decrease in the poults/hen index (1.1). The Piedmont continued to underperform with a poults/hen index of .85 in 2014, which is 33.1% lower than 2013 (1.27). There was also a 41% decrease in the number of broods counted, 3% decrease in poults/brood, and a 30% decrease in poults/observer. Finally, the Blue Ridge lost ground again in 2014 with a poults//hen index of .90, which was a 34% decrease from 2013(1.4). This region also saw 60% less broods, and had a 45.3% lower 'total poult+hen' index.

Hunting Population Index Survey

For the 2014 hunting season, usable hunt data was supplied by 504 cooperators (which is 7% above the 5-year average of 467 [2009-13]). Of these, 445 came from the permanent cooperator list and 59 from the DNR quota list which resulted in a reporting rate of 35.1% from the permanent and 9.5% from the DNR quota list, respectively. These cooperators reported spending a total of 18,856.3 hours hunting, which is 13% above last year (16,354.25). The average seasonal hunter effort was 10.6 trips, which is 8% more than last year (9.7) and 3% less than the 5-year average of 10.3. Trips totaled 37.4 hours, which is12% more than last year (33.0) and 5% more than the 5-year average of 35.4. They reported observing 11,784 turkeys, which is 13% more than last year (10,253) and 14% more than the 5-year average of 10,162. They also heard 9,139 gobblers, which is 8% more than last year (8,375) and 12% more than the 5-year average (8024). The statewide population index of 1.6 was the exact same as last year and the 5-year average (1.6). The effort per gobbler heard of 2.1 was 5% worse than last year (2.0), but the same as the 5-year average (2.1). The index hours/turkey harvested (24.7) was 10% worse than last year (22.3) and 6% worse than the 5-year average (231). The least hunting effort per turkey seen occurred in the Ridge and Valley along with the Upper and Lower Coastal Plain (third year in a row for RV and LCP). The effort per gobbler heard was least in Upper and Lower Coastal Plain and greatest in the Blue Ridge Mountains (same as last year). This year's harvest effort was up 2.4 hours from last year, 5.9 hours from 2012 and 1.6 hours above the 5-year average. The least effort was observed in the Upper and Lower Coastal Plain, while the greatest effort was in the Blue Ridge Mountains and Piedmont.

This was the second season we asked cooperators to report gobblers and hens seen separately. From this, we observed that statewide the hen:gobbler ratio was 1.5 up slightly from last year (1.3). This ratio varied from 1.4 (Piedmont & Upper Coastal Plain) – 2.3 (Blue Ridge Mountains) hens:gobbler across the 5 physiographic regions. You would expect fewer hens to be seen during the harvest season because as the season progresses hens leave the gobblers to nest. Statewide hours hunted per gobbler seen was 4.0 (3.8 in 2013), while it took 2.7 hours (2.8 in 2013) to see a hen (Hours per gobbler seen varied from 3.0 (Lower Coastal Plain) – 5.1 (Piedmont) across the regions. Hours per hen seen varied from 1.7(Lower Coastal Plain) – 3.7(Piedmont), across the regions.

Statewide peak gobbling activity (2.7, 2.6, 2.0, and 2.3 gobblers heard per trip) occurred during the youth (March 15-16), first (March 22-23), third (April 5-6) and fourth (April 12-13) weekends. Opening weekend was better than the 5-year average of 2.3. This season statewide there were 4 periods with greater than or equal to 2.0 gobblers heard per trip which is better than the last two years (3 periods each). In most years, the greatest gobbling activity was the first 7 days of the season however this year was the youth and first weekend. For 2.0 gobblers heard per trip or greater we observed the following for each region: Ridge and Valley – third (April 5-6, 2.3) and fourth (April 12-13, 2.2) weekends (2 periods this year compared to 4 periods last year); Blue Ridge Mountains – youth (March 15-16, 3.5) and fourth (April 12-13, 2.3) weekends

(2 periods this year compared to 1 period last year); Piedmont – youth (March 15-16, 2.1), first (March 22-23, 2.5) and fourth (April 12-13, 2.0) weekends (3 periods this year compared to 6 periods last year); Upper Coastal Plain – youth (March 15-16, 2.9), first (Mar. 22-23, 3.1), third (April 5-6, 2.3) and fourth (April 12-13, 2.1) weekends and also the second (March 31 – April 4, 2.7) week (5 periods this year compared to 4 periods last year); and Lower Coastal Plain – youth (March 15-16, 4.0), first (March 22-23, 2.4), second (March 29-30, 2.1), third (April 5-6, 2.4) and fourth (April 12-13, 2.0) weekends (5 periods compared to 4 periods last year. The youth weekend numbers are deceiving because there was very little data across the state for that weekend. Gobblers heard per trip, from this year compared to last year, was the same for the Ridge and Valley, up for Blue Ridge Mountains, down for the Piedmont, and up for both the Upper and Lower Coastal Plains.

The statewide gobbler harvest during the first seven days (excluding the youth weekend) of the season amounted to 26% of the total season harvest (which is less than the 5-year average of 30 %). Peak harvest was generally seen within the first seven days of the season (excluding the youth weekend) in all parts of the state except for the Ridge and Valley and Blue Ridge Mountains which had the same greatest 7 day period of March 31-April 6 (which was also the same as last year for Blue Ridge Mountains).

Hunter success (64.1 %) was almost identical as last year (64.2%). So, the hunter success was worse than two years ago (2012 = 68.5 %) and the 5-year average 66.3 % (2009-2013) with 323 of 504 hunters reported taking or assisting in taking at least one gobbler. Of the successful hunters, 129 (25.6 %, 5 year average was 24.2 %) took or assisted in taking one bird, 78 (15.5 %, 5 year average was 18.0 %) took or assisted in taking two birds, and 116 (23.0%, 5 year average was 24.1 %) took or assisted in taking three birds. Cooperators reported 233 gobblers harvested by companions which is more than last year (196 = 2013) and the 5-year average of 188.

The predictive model analysis uses Poults+Hens of the reproductive season during the current year to predict the following years harvest season population index of Hours Hunted/Turkey Seen, where the predictor model (1978-2013) is:

Constant + (Slope *2013 Total Poults+Hens) = 2014 Hours Hunted/Turkey Seen

Therefore:

3.3123 + (-0.000345*4,376) = 1.8 Hours Hunted/Turkey Seen in 2014.

After the production data from 2013 was entered in the model, the prediction for the 2014 harvest season was 1.8 hours hunted per turkey seen. However, the hunters observed 1.6 hours hunted per turkey seen which is 11% better than what was predicted. A relatively high inverse correlation r = -0.89 was obtained from the comparison of the new nesting season population index versus the following years harvest season population index.

2015 Season Forecast

What should you expect this spring in the turkey woods? Let me say that reproduction has been poor the last 3 years in many parts of the state. Reproduction in 2014 ties the lowest years on record 2007 and 2009 with poults per hen ratios of 1.1. That is going to result in hunters having to work harder to harvest a turkey in those areas. The good news is that Georgia has a lot of wild turkeys and while we are definitely on a lower population cycle after 3 years of poor reproduction, we still have a lot of turkeys to hunt.

Where you hunt in the state may be more important in 2015. The Lower Coastal Plain saw an increase in reproduction indices the last 2 summers and there should be a good supply of 1 and 2 year old gobblers this spring.

The Upper Coastal Plain had solid reproduction in 2012 and 2013, but poor reproduction during 2014. I think this spring will be as good or better as last season with plenty of 2 and 3 year old gobblers. Hopefully we will have good reproduction in this area in 2015, and never notice the effects of the poor 2014 reproduction.

The Ridge and Valley area of Georgia could be hit or miss. This area saw fair reproduction in 2012, poor reproduction in 2013, and good reproduction in 2014. So there should be some older and younger gobblers around, but the vocal 2-year old gobblers may be in limited supply.

The Piedmont of Georgia has traditionally been the bread and butter of the turkey population. Traditionally, it accounts for the largest percentage of the turkey population and the greatest harvest. Poor reproduction the last 3 years will have hunters scratching their heads a bit and working harder. The poults per hen ratios in this region the last 3 years have been 1.19, 1.27, and .85 poults per hen, respectively. Again, hunters will notice a difference in numbers of gobblers seen and heard in this region.

The Blue Ridge mountain region of the state typically records some of the lowest reproductive indices. The last 3 years have been very low with .65, 1.36, and .9 poults per hen, respectively. The lack of nesting and brood-rearing habitat in the mountains can make reproduction and recruitment difficult. As bad as it sounds, I am a little optimistic about this region. Small movements in our reproductive indices in this region tend to mean more than in other regions. So thinking of it that way, we had poor reproduction in 2012, fair to good reproduction in 2013, and fair-poor reproduction in 2014. So we could have a few more 2-year old gobblers than in recent years. We also had a bumper mast crop in 2014 that should have turkeys in good condition entering spring with the energetics for gobbling and breeding activity.