

2011 SPRING GOBBLER SURVEY



***WEST VIRGINIA DIVISION OF NATURAL RESOURCES
WILDLIFE RESOURCES SECTION***

***WEST VIRGINIA CHAPTER NATIONAL
WILD TURKEY FEDERATION***



Federal Aid Project

funded by your purchase of

hunting equipment

2011 Spring Gobbler Survey

West Virginia Division of Natural Resources
Wildlife Resources Section

and

West Virginia Chapter
National Wild Turkey Federation

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DEDICATION

The 2011 Spring Gobbler Survey is dedicated to William K. “Junior Biologist” Igo. Bill officially retired in 2011 after 35+ years of service with the West Virginia Division of Natural Resources’ Wildlife Section. Bill has been a productive member of the Spring Gobbler Survey staff and a Technical Committee member for the West Virginia Chapter of the National Wild Turkey Federation since the start of the Spring Gobbler Survey 29 years ago.

Bill Igo –The Biologist

Bill was raised in the big city of Charleston. He quickly gravitated to the West Virginia state sport of hunting and ended up attending West Virginia University where he received his B.S. and M.S. in Wildlife Management. For his M.S. Thesis, Bill studied the ecology and movement of the newly released wild boar population in Boone and Logan County. His living quarters on the Spruce-Laurel drainage are still talked about by residents today. They consisted of a 4 by 6 foot plywood box in the dead of one of West Virginia’s worst winters. Rather shabby living conditions even for graduate student standards in Appalachia. He also still holds the record for getting a Ford Pinto the farthest distance up Spruce-Laurel Creek. Bill also attended the University of Alberta but was deported from Canada for shooting teal and trying to claim them as “real ducks.”



Bill held various wildlife biologist positions with the DNR working as the legendary leader of Game Management Jim Ruckel’s assistant, also as a biologist on the National Forest Project, leader of the black bear research project and ended his career as the upland gamebird project leader. Bill was a talented field biologist and is one of the foremost naturalists in the State.

We of the Spring Gobbler Survey Technical Committee hereby award “Willie”, “Bill”, “Junior Biologist” Igo with the “Honorary Longbeard Award” for his dedication, commitment and entertainment (story telling) skills above and beyond the call of duty.

James Evans
WV DNR Biologist, Retired

Bill Igo – The Servant

Throughout the history of the DNR, there has never been a biologist that has devoted more hours working for the sportsmen of West Virginia than Bill Igo. Space here does not allow one to describe all his attributes, but a few of them are he listens, shares, loves, helps, and most importantly serves his fellow man without ever expecting anything in return.

Bill was a key participant in all the wild turkey, ruffed grouse, wild boar, black bear, and woodcock research from the 1970's until his retirement. He mainly worked on wild turkeys during his career and was an author of the Gobbler Survey from its onset. He wisely supervised the Division of Natural Resources' wildlife habitat work on the southern portions of the Monongahela, Jefferson, and George Washington National Forests in West Virginia for many years. Bill was admired and earned respect from all who worked with him on these three national forests.

Years ago wildlife manager Arlie White best described Bill when he told me that if he was in a hole cleaning out a latrine, Bill Igo would jump in and help.

The sportsmen of West Virginia never had a better friend and servant than my best friend, William K. Igo.

James C. Pack
WV DNR Biologist, Retired

Bill Igo – The Mentor

Everyone has someone in their lives they could call to help them out of a jam no matter the day, time or situation. For many people, that man is Bill Igo. Bill's enthusiasm for his job was only outdone by his caring nature to help others. When the ox was in the ditch the first man called to pull him out was Bill.

Bill used a wide array of field knowledge to work on and lead many projects. It always seemed like Bill was assisting on a project from butterflies to bears and everything in between. Although he was never a man for personal glory, many of these projects would not have been completed without his long hours and expertise. He worked on many projects but one of his most important roles, that went largely unnoticed, was the training of our young biologists and wildlife managers.

I first met Bill while I was a graduate student at Virginia Tech and he was a research biologist for the DNR. However, it was during my time working as a grouse technician for him and living at Bear Branch that we became really close. Bill went out of his way to teach, mentor and help a young biologist learn many of the skill sets that

can't be taught in a classroom or learned from a book. The impact of his mentoring will have a long lasting impact on the DNR for years. The DNR and the sportsmen of West Virginia owe a huge debt of gratitude to Bill for his time and service to them and the wildlife of the State.

Chris Ryan
Supervisor Game Management Services

Bill Igo – The Editor



Just about every biologist and field manager has been helped by Bill at some time or another. He is the consummate field biologist. I know Bill primarily from office work but his enthusiasm did not end when he left the field. His skills as an excellent writer and editor were always appreciated, especially when deadlines were tight. Although technology was not his forte, at times he could be seen with a phone or even a computer, but never without his tennis shoes!

Randy L. Tucker
Wildlife Biologist

Bill Igo – The Naturalist

Turkey hunting with Bill Igo is always a field trip. Sometimes the hunt is forgotten as he pauses to identify plants, birds, etc. I've always been impressed at his vast knowledge. Bill also is a great friend to the person in need. His concern for his friends, his generosity, and willingness to assist in good times or bad are commendable. I am proud to have worked with him on the Gobbler Survival Study and the Woodcock Habitat Demonstration Area, as well as the annual Gobbler Survey. I felt a great sense of loss as he told me he was finally retiring. I only hope this means he will have more time to visit old friends. The WVDNR may find a person to fill the vacant position Bill left behind, but they will never fill his shoes! After each phone call, I look forward to hearing his final goodbye, "Tally Ho!" Bill, I wish you the best in your retirement.

Delbert J. Vandevander
Wildlife Manager

Bill Igo – The Storyteller

I was lucky to have met Bill early in my career with the WVDNR. What immediately impressed me was Bill's dedication to the job, his strong principles, and his enthusiasm for every project that he worked on. I can honestly say that I learned something every time that I worked with him. Bill was someone who I could always call (and still do) when I had a question or problem, especially if it dealt with radio-telemetry. His simple advice of, "If you can hear the signal, you can find the transmitter," is always in the back of my mind when I'm searching for a lost transmitter. Food was a part of every project and you never knew where you might end up eating. However in the case of emergencies, there was always a Dr. Pepper and a pack of nabs in Bill's vehicle. Bill is also an expert storyteller, and his detailed and well-acted stories kept me laughing nearly every time we worked together. Thanks for being a mentor and a friend.

Colin Carpenter
Wildlife Biologist

Bill Igo -- The Poet



laughed lots.

Most of us know William K. Igo as the wildlife biologist extraordinaire that he is. I've had the pleasure of working for/with "Wild Bill" on projects that included turkey, river otter, grouse, black bear, and woodcock; to name a few. However, our working relationship extended far beyond the daily paperwork grind. We've shared 25+ years of friendship. His story telling would make me laugh so hard I would cry. I've watched him be a mentor, a father figure, an uncle, a brother, a son, and a friend to so many of our comrades (including me). We've worked hard, and

"Yesterday this Day's Madness did prepare. Tomorrow's Silence, Triumph, or Despair; Drink! For you know not where you go, nor why . . . " Drink! For you know not why you go, nor where . . . "

For all that you've taught me, and for the memories we share, "Thanks, Willy".

Tammie Thompson
Secretary

TABLE OF CONTENTS

INTRODUCTION	1
METHODS	1
DAILY RECORDS	2
Hunting Statistics.....	2
Gobbling Intensity.....	3
Gobbler Harvest	3
Relationship of Gobbling and Harvest	4
Gobbler Ages, Spur Lengths, Beards, and Weights.....	4
Time of Kill	4
Crop Contents	5
Mathematical Projection for the Spring 2012 Harvest	5
Hens Called In and Seen.....	5
Other Species.....	6
Coyotes	6
Winter-Killed Deer	6
Winter-Killed Turkeys	7
Ruffed Grouse	7
HUNTING QUESTIONNAIRE	8
Hunter Interference.....	8
Flushing Hens from the Nest and Broods Seen	8
Illegal Hunting and Baiting	9
Pre-season Scouting	9
Timber Cutting in Hunt Areas	9
Fall Hunting	10
Favor All Day Spring Hunting	10
Does Landowner Feed Turkeys.....	10
Do You Feed Turkeys.....	11
COMMENTS	11
HIGHLIGHTS . . . AND . . . LOWLIGHTS	12
HONORS AND AWARDS	13
THANKS	15
APPENDIX	33
AGE YOUR SPRING GOBBLER	36

INTRODUCTION

The “year that forgot winter” has been the phrase that best describes the winter of 2011-2012. Although the 2011 mast crop was down considerably from 2010, gobblers have had a mild winter to find the food resources necessary to survive. The mast crop should have allowed the gobblers to survive the winter at a high nutritional plane which will hopefully translate to higher gobbling activity this spring.

The 2011 harvest of 9,190 was 11 percent lower than the 2010 harvest (10,209). Based upon brood reports for 2010, the expected harvest for 2012 should be approximately 7,000 birds. Of course weather and many other factors may contribute to the overall harvest, but the outlook looks lower than last year.

We continue to need additional cooperators throughout the state. Many hunters express interest in the survey but fail to return their survey for analysis and unfortunately that is effort lost that could be applied to the survey results. This year we have included a business reply envelope so our cooperators need not pay a postage charge. As always, we encourage everyone to recruit new cooperators.

We sincerely appreciate the input from our cooperators and recognize that it is the cooperators who have made this survey a success. We hope you enjoy the results that follow. We especially enjoy your comments and suggestions just like all of those who read the report. Keep up the good work!

METHODS

Daily records and observations returned by gobbler cooperators during the 2011 spring gobbler season were compiled and analyzed by the Gobbler Survey Committee. This report is a summary of their findings. The survey instrument consisted of a list of instructions, daily hunting record, and a questionnaire of hunting experiences and observations (Appendix). Daily observations reflect the date, county hunted, number of hours hunted, gobblers heard, called in, adults seen, jakes seen, gobblers killed, gobblers crippled, gobblers missed, gobbling intensity, hens heard, hens seen, hens called in, grouse flushed, grouse drumming, coyotes seen, and winter kills of deer and turkey. Weather conditions (ambient temperature, relative amount of precipitation and wind) were recorded for each trip.

Daily hunting reports began on April 25, 2011 and were collected until the close of season on May 21, 2011. The duration of the season was four (4) weeks. Daily

records were excluded from the compilation if hours hunted were left blank. Otherwise, all variables were assumed to be zero if a value for the corresponding variable was missing.

The questionnaire portion of the survey was analyzed by generating frequency distributions for each interest variable. Remarks and suggestions were compiled by reviewing each survey for content and then categorizing them into similar groups. **Filling the daily record out completely and thoroughly is extremely important when compiling the results for each survey.**

DAILY RECORDS

Hunting Statistics

One-hundred sixty-eight cooperators (177 in 2010), on 1,446 hunting trips, supplied data to be used to compile the 2011 hunting statistics (Fig. 1). These cooperators heard 2,382 wild turkey gobblers and averaged hearing 14.2 per hunter (Table 1). When examined by trip, the number of gobblers heard decreased, and the number of gobblers called in increased slightly from the level observed in 2010 (Table 2). The number of gobblers called in per trip by cooperators has remained relatively unchanged for the past 5 years. Gobblers seen remained the same as the 2010 survey and the 5-year average, while jakes seen increased above the 2010 survey.

The statewide gobbling rate decreased in 2011 (Fig. 2). Spring gobbler survey cooperators heard 42 gobblers per 100 hours in 2011 (47 per 100 hours in 2010). As in 2010, gobbling rates were highest during the Saturday of the youth hunt and decreased steadily throughout the remainder of the season (Table 3). Gobbling rate during the first week of the season in 2011 (48 gobblers heard per 100 hours) was well below the rate recorded in 2010 (60 gobblers heard per 100 hours) and below the 5-year average. The 2011 statewide gobbling rate of 42 gobblers heard per 100 hours was below the 5-year average (45 per 100 hours).

Statewide, cooperators hunted a total of 5,626 hours during the 2011 season (Table 4). As in 2010, the Central Region led the state with 1,348 hours of hunting. The Southwestern and Western regions followed with 1,044 and 965 hours, respectively. The region with the fewest hours hunted in 2011 was the Eastern Panhandle (593).

Gobbling rates by region did not follow the same trend as for hours hunted. In 2011, the Southwestern Region reported the highest gobbling rates with 82 gobblers heard per 100 hours (Table 4). The Western (66 gobblers heard per 100 hours) and

Central (48 gobblers heard per 100 hours) regions had the second and third highest reported gobbling rates by region. The Mountains Region had the lowest reported gobbling rate for all regions of the state (25 gobblers heard per 100 hours).

In 2011, gobbling rates increased between weeks 1 and 2 of the season in the Eastern Panhandle, Mountains, and Central regions (Table 5). The Southern and Western regions recorded slight increases in gobbling rate between the second and third weeks of the season. The Southwestern Region was the only region of the state where gobbling rate decreased each week of the season.

Spring gobbler survey cooperators killed 26 gobblers per 1,000 hours during the 2011 season (Table 6), which is the second highest kill rate reported since 2003. Youth hunters had an opportunity to harvest a spring gobbler on the Saturday preceding the opening of the regular spring gobbler season for the seventh time in 2011. On April 23, 2011, youth cooperators reported killing 4 turkeys in 78 hours of hunting for a harvest rate of 51 gobblers killed per 1,000 hours.

Gobbling Intensity

Statewide, the percentage of cooperators who reported fair or good gobbling activity in 2011 increased slightly over the rates reported in 2010 (Table 7). On a regional basis, the Southwestern and Western regions led the state in fair and good gobbling rates. The Mountains and Eastern Panhandle regions had the lowest rates of fair and good gobbling activity. The data collected on gobbling intensity mirrors the gobbling rate per 100 hours.

Gobbler Harvest

Harvest per unit area of land is one of the simplest and easiest measures of wild turkey population trends to acquire. It is important to remember that this index is influenced by both hunter participation and weather conditions on a yearly basis. The 2011 gobbler harvest per 100 square miles was 38 (Table 8), which is less than the rate reported in 2010 (41 gobblers per 100 square miles). The total kill in 2011 was 9,190 which is 10% below the kill of 2010 (10,209).

Hancock, Brooke, and Mason Counties with legal spring harvests of 121, 101, and 100 gobblers per 100 square miles, respectively, were the only counties in the state with a kill greater than or equal to 1 gobbler per square mile. The other 2 counties in the top five in kill per 100 square miles in 2011 were Ohio (84) and Marshall (80). By region, the Southwestern (56) and Western (56) regions led the state in harvest per 100 square miles. Harvest in the other regions were Central (49), Southern (37), Eastern Panhandle (21), and Mountains (16).

Relationship of Gobbling and Harvest

For the fourth year, we examined harvest success as related to gobbling. In 2011, the ratio created by dividing the gobbling rate per 100 hours by kill per 100 square miles resulted in a statewide ratio of 1.23 (Table 9). This is higher than the ratio of 1 reported in 2010. The highest ratio occurred in 2010 in the Mountains (2.01). In 2011, the Eastern Panhandle region led the state with a ratio of 1.64. The lowest ratios in 2011 were in the Central (0.97) and Western (0.87) regions.

Gobbler Ages, Spur Lengths, Beards, and Weights

In 2010, we asked cooperators to measure spur lengths of the gobblers they bagged to the nearest $1/16^{\text{th}}$ of an inch instead of the nearest $1/8^{\text{th}}$ as in previous years. We did this because $1/16^{\text{th}}$ of an inch is closer to the metric scale that was used to develop the spur aging technique. Using this refined technique, the percentage of jakes (13%) was higher than the percentage reported in 2010 (8%) but equal to the 5-year average. Two-year old birds accounted for 9% of the birds harvested with 3-year old gobblers making up the highest percentage (50%) of any age class (Table 10). With the change in measurements to improve precision, better age data should be forthcoming in future years.

The average spur length of 139 gobblers measured by our surveyors was 1 inch which was slightly shorter than the $1 \frac{1}{16}$ inch last year. The average age of gobblers harvested was 3 years which was the same as for 2010.

Beard length averaged $8 \frac{15}{16}$ inches and was $\frac{1}{4}$ inches shorter than the $9 \frac{3}{16}$ average measured in 2010.

Whole weight of gobblers in 2011 was 18.55 pounds. However, this average was only 2.3 % lower than the 2010 average of 18.9 pounds.

In summary, it appears that gobblers harvested in 2011 were slightly younger, weighs less and had shorter beards that in 2010. The harsh winter could have certainly influenced the physical condition of the birds over winter.

Time of Kill

The saying “the early bird gets the worm” also applies to the Spring Gobbler hunter in 2011. A total of 129 gobblers were reported on the survey forms with the time of kill. Percentages of gobblers harvested by hour in 2011 were as follows: 6:00-7:00 (34.1%), 7:00-8:00 (20.9%), 8:00-9:00 (21.7%), 9:00-10:00 (9.3%), 10:00-11:00 (4.6%), 11:00-12:00 (7%) and 12:00-1:00 (2.3%). It is clear from these statistics that the majority of hunters (76%) harvest their bird before 9:00 a.m. This compares favorably to 2010 where 72% harvested their bird before 9:00 a.m.

Crop Contents

Crop contents from 179 gobblers were reported by survey participants in 2011. Of the 5 top contents, green vegetation was found most often (47%), followed by insects (12%) and acorns (11%). Other contents were found in 7% of crops. The percentage of corn in crops remained low, only 1%.

The higher presence of acorns was undoubtedly due to the abundant mast crop of 2010 (Table 11). We hope the percentage of corn remains low in the future. Baiting to attract gobblers shows a lack of sportsmanship, is illegal, and can lead to increased predation and disease in our wild turkey population.

Mathematical Projection for the Spring 2012 Harvest

Since the spring gobbler harvest normally follows the trend of brood counts two years prior to the season, a formula has been developed to predict the spring kill based on this relationship. The formula uses 42 years of harvest and brood data, and it is constantly updated as new information is obtained. Last year the mathematical projection was off about 400 birds. The formula for the 2012 forecast is as follows:

$$\text{Spring Harvest} = -1674.273 + (44.990699 \times \text{BCTYP}) - 0.0523107 \times (\text{BCTYP} - 217.377)^2.$$

Where: BCTYP = Brood Count Two Years Prior to Estimate.

The formula has an R^2 value of 0.74 where R^2 is a measure of correlation. Inserting the 2010 brood count (187) in the formula, the 2012 predicted kill is 6,643.

Hens Called In and Seen

Spring gobbler hunters reported calling in and seeing more hens in 2011 than in 2010 (Table 12). However, the number of hens called in and seen were well below the 5-year average. The Western and Southwestern regions had the largest increases in the number of hens called in and seen.

The number of hens seen per week decreased from week 1 through week 4 of the season (Table 13). However, there was a slight increase in the number of hens seen per trip during the third week of the season. The number of hens called in decreased throughout the season except for a slight increase during the third week of the season. It appears that many hens began incubating during the second week of the season during 2011 based on the large decrease in hen sightings between weeks 1 and 2 of the season.

Other Species

This is the eighth year that cooperators have been documenting the sightings of other wildlife species while they are turkey hunting. Sighting rates for other wildlife species are reported by county and region in Table 14 for 2011. The utility of the sightings documented by cooperators is in the trend information that they provide. Three-year wildlife sighting trends for selected species are reported by region in Table 15.

Deer sightings have decreased each year for the past 3 years in each region of the state. This decreasing trend has been a result of multiple factors, which include liberal antlerless seasons in many counties and decreased recruitment rates caused by below-average mast conditions. Cooperators will most likely see more deer during the spring 2012 gobbler season due to higher recruitment rates following the bumper oak mast crop of 2010.

Squirrel observations statewide were twice as high in 2011 as they were in 2010. Mast conditions were below normal in 2009, which led to fewer squirrel observations in 2010. The bumper mast crop of 2010 led to a statewide rebound in the bushytail population in 2011. Cooperators will most likely see fewer squirrels in 2012 than they did in 2011 due to a poorer mast crop during fall 2011.

Bear, fox, and bobcat populations have all shown slight increases in sighting rates during the past 3 spring gobbler seasons. Sighting rates for these 3 species are lower than for more abundant and visible species like deer and squirrels.

Coyotes

In 2011 our cooperators saw 45 coyotes while spring gobbler hunting (Table 16). This is up from the 32 coyotes saw in 2010. The number of coyotes observed during this period has ranged from last year's 32 to 90 observed in 2004 and averages about 58 coyotes seen per year. This year the Southern Region was the best place to see a coyote with an average of 1.3 coyotes seen per 100 hours. The Central and Western regions tied for second place with an average of 1.0 coyotes seen per 100 hours. The Southwestern and Eastern Panhandle regions tied for third with an average of 0.7 coyotes seen per 100 hours. No coyotes were seen in the Mountains Region this year.

Winter-Killed Deer

The number of winter-killed deer found by cooperators in 2011 (31) decreased 73% over the 116 found in 2010 (Table 17). The number of winter-killed deer found per cooperator in 2011 was 0.18 (0.65 in 2010). In 2010, we predicted that cooperators would find fewer dead deer during the winter of 2010-2011. Oak mast during the fall of 2010 was the highest ever recorded by mast survey cooperators. Abundant mast crops

help wildlife populations maintain physical condition throughout winter and increase reproductive output the following spring.

Winter-Killed Turkeys

Spring gobbler survey cooperators reported 8 winter-killed wild turkeys in 2011 (Table 18). This is a decrease of 1 turkey from the 9 reported in 2010. This is a tie for the second lowest rate reported during the past 10 years. The abundant hard mast crop of 2010 likely benefitted turkeys in the same way that it helped deer.

Ruffed Grouse

The statewide drumming rate for 2011 (3.8 per 100 hours) is an increase over the rate of 2010 (2.4 per 100 hours) and is the second highest rate recorded in the past 5 years (Table 19). The 2011 flushing rate (0.9 per 100 hours) is a decrease over the 1.3 birds flushed per 100 hours in 2010.

Flushing rates for Grouse Cooperators (hunters participating in the annual grouse hunting survey) in 2010-2011 increased slightly from the rates reported in 2009-2010 (1.07 flushes per hour in 2010-2011 and 1.03 flushes in 2009-2010). This slight increase in flushing rate was contradictory to the 2010 brood reports, which were 43% below the number of broods reported in 2009, and 42% below the 5-year average.

Ruffed grouse brood reports for 2011 were 38% higher than the number of broods reported in 2010, and only 5% below the 5-year average. The Mountains Region accounted for 59% of grouse broods reported, followed by the Eastern Panhandle (28%) and the Western (9%) regions. The Appalachian Cooperative Grouse Research Project highlighted the importance of oak mast in the diet of ruffed grouse. Hens that enter the breeding season in better condition have more success in raising broods. The impact of the bumper mast crop of 2010 was evident in the number of ruffed grouse broods reported in 2011.

The Mountains (13.4 drummers per 100 hours) and Southern (3.2 drummers per 100 hours) regions led the state in drumming rates (Table 20), followed by the Eastern Panhandle (2.5), Central (2.3), Western (2.1), and Southwestern (1.7) regions. Spring gobbler survey cooperators in the Mountains Region should hear and see the most grouse again in 2012, and the number heard and seen will likely be higher than in 2011.

HUNTING QUESTIONNAIRE

Hunter Interference

We have monitored the incidence of hunter interference since the survey began in 1983. In 2011, the incidence of hunter interference jumped from an all time low of 19% to 27%. The last time we asked this question in 2007, 27% of hunters reported some type of interference. Through the years the rate has ranged from 19% to a high of 58% in 1988. We had postulated that the declining hunter interference is related to a declining number of spring gobbler hunters. This may indicate that there are still a substantial number of turkey hunters out there.

Flushing Hens from the Nest and Broods Seen

Six percent of our hunters reported flushing a hen off the nest during the 2011 spring gobbler season (Table 21). The flushing rate has averaged 7% during the last five years and has been decreasing over the period of the survey. Over the 26 years of recording this data the flushing rate has averaged about 10%. This year's flushing rate of 6% is less than last years 8% and continues the downward trend in flushing hens from their nests. Do older hunters make shorter hunting forays?

Hunters were also asked to report the dates that hens were flushed from their nests. Normally the flushing rates increase each week until the fourth week when hens are later in incubation and setting tighter on the nests, and this year the flushing rate continued that trend (Tables 22-23). The large flushing rate during the youth season is a result of only one hen being flushed and shows the limited data reported during that season.

Hunters should always strive to avoid flushing hens off their nests, especially early in the incubation period when they are more likely to abandon their nests. Staying away from heavy cover and fallen timber where hens are likely to nest will lessen the chance that you disturb a nesting hen.

Three hunters (1.8%) reported seeing hens with broods during the season. This was down from the 5 hunters (2.7%) reporting seeing broods last year. Although through the years hunters have reported seeing broods from the first day of season until the last day, broods usually are seen during the later 2-weeks. In the last 10 years about 2 – 5 % of hunters have reported seeing broods.

Illegal Hunting and Baiting

Fifteen of 168 (9%) cooperators observed illegal hunting activity in 2011. This is a 3% decrease from the 2010 survey when 21 violations were reported. The most common violation was illegal ATV use (4%) followed closely by baiting (3%) and other illegal activities (3%). Three incidents of hunting before the season were reported. The high incidence of illegal ATV activities last year is disturbing. Committee members have observed radioed turkey hens rapidly dispersing when ATVs approached them during the hen mortality study. ATVs may reduce the potential nesting range of wild turkey hens and shows the necessity of gating roads on our public lands during the turkey nesting season. The committee believes that baiting continues to be a problem in hunting. In addition to being illegal to hunt turkeys and bear, baiting is an insidious abuse of our hunting heritage and fair chase doctrine. Hunters should be aware that the use of bait in hunting results in the spread of disease to our wildlife and degrades our hunting ethics. Surveys show that the non-hunting public (the majority of voters) opposes the use of bait while fair chase hunting is generally supported. Hunters that persist in using bait may be endangering our hunting heritage.

Eight of 169 hunters (5%) reported seeing baited areas in 2011, up slightly from the 4% observed in 2010. The 5-year average for discovered bait sites is 4.6%. Baiting was reported from nine counties and, as in past surveys, most baited areas were from the Southwestern Region (4), Southern Region (4), and Central Region (2).

Pre-season Scouting

Due to insufficient sample sizes, the "Scouting Questionnaire" has been dropped from the Spring Gobbler Survey. However, this and future surveys will monitor pre-season scouting among cooperators to determine short and long term trends for this activity. Also, the question, "Did you observe timber cutting in the area you hunt?", previously asked in the "Scouting Questionnaire", will continue in the "Hunting Questionnaire." This should provide long term trends in timbering operations and its effects on spring turkey hunting. Fifty-one percent of hunting respondents stated they pre-season scouted for gobbling and other turkey activity prior to the 2011 spring hunt.

Timber Cutting in Hunt Areas

There were 37 (22%) of 171 respondents who observed logging activities in areas they liked to hunt. This compares to 25% of 2010 cooperators reporting timbering in hunting sites. Of these 37, 41% (15 respondents) stated that such activity altered their pursuit of spring toms.

Fall Hunting

For 2011, only 76 (43%) of 170 spring survey respondents stated they hunt during the fall season for turkeys. This is quite a decline from the 58% of 2008 Spring Gobbler Survey cooperators who reported they participated in fall turkey hunting. This is not unexpected, as road surveys and field observations by wildlife personnel have indicated fewer fall turkey hunting activity over time. Fall hunting for turkeys can be a demanding, challenging venture, requiring many successful hunters be in good physical shape for extensive walking often through rough terrain. As our average age of cooperators has increased from 41 years old in 1988 to 55 years old in 2010, many are unable or unwilling to partake in the rigors of fall hunting. Also, as older cooperators (many who are traditional fall turkey hunters) drop out of the Spring Gobbler Survey, they are being replaced by younger hunters who have never experienced fall turkey hunting; many are avid bowhunters. The fall hunting decline would probably have been more pronounced if the recent fall turkey hunting strategy that opened up “new” fall counties based on spring turkey harvests had not been implemented. Nearly 51% of fall hunt counties listed by 2011 cooperators were “new” counties, outside the traditional fall hunt counties in the Mountain and Eastern Panhandle regions.

Favor All Day Spring Hunting

Support for an all day gobbler season ten years ago was not overwhelming – only 52% of 2001 survey cooperators were in favor of all day hunts. Preference for such a season is still lukewarm, with a similar 51% of 2011 Spring Gobbler Survey participants favoring spring hunting from ½ hour before sunrise to ½ hour after sunset. Although all day hunts are in effect in other states, particularly in the South, most spring hunting is permitted with shotguns only. There is concern with overharvest of gobblers, increase in illegal killing of hens, and safety issues in areas where rifles are allowed. Wildlife biologists throughout the eastern United States are alarmed at declining wild turkey numbers in their respective States – some states apparently are experiencing population declines of over 50%. This concern has recently led wildlife agencies to form a multi-state, multi-regional task force to study possible causes of turkey population declines. Included as possible factors are changes in habitat, predation and disease, and effects of hunting seasons. Biologists have recommended a very cautious approach in further liberalization of turkey hunting until the study produces some insight to the declining turkey population problem. West Virginia has been very involved in this joint venture—proactive in the initial study planning process and dedicating monies for a multi-regional funding pool for this important study program.

Does Landowner Feed Turkeys

Feeding and baiting are always a concern because these practices tend to congregate birds and enhance the chance to spread diseases. We were curious how many landowners actively feed turkeys during the year. Twelve (12) of our respondents (7%) hunted on property where landowner feed turkey. To no one’s surprise, corn is the

feed of choice and dominates (75%) the types of feed used. Other types of feed include blackoil sunflower and clover/buckwheat food plots.

Do You Feed Turkeys

We also asked gobbler hunters if they feed during the non-hunting season. Six percent of our cooperators indicated they feed turkeys during the year. Once again corn was the most common feed used and was present in 80% of types of feed. Other types include clover/ oats/rye food plots and soybeans.

COMMENTS

The comments section of The Spring Gobbler Survey is important to the technical committee, as well as the survey participants. Here is the opportunity for you-the turkey hunter to let us know how you feel about issues regarding gobbler season. And, tell us how you did! Many participants have reiterated, on numerous occasions, their desire for change and their displeasure with certain aspects of spring turkey season. This year was no exception. Twenty-three of the 169 surveyors expressed a desire to have an earlier season. Additionally, 43 hunters commented on the lack of gobbling, and although it was impossible to interpret all of these comments, many implied it was due to our "late" season. Combined, these numbers show that 39% of those surveyed complained of little or no gobbling and/or believe the season is too late. Comments conveyed were: "Worst season ever!" "Worst season since 1975!" "Worst season in 22 years!" "Worst season in 26 years!"

To counter these comments, we turn now to the "kill information" on the survey form. Of those surveyed, 104 (61.5%) harvested birds during the 2011 season. One satisfied hunter exclaimed, "Season was right on time this year!" and another said, "Don't start the season until May 1st!" In summary, 40% of those surveyed did not harvest a gobbler and listed complaints of either little or no gobbling and wanted an earlier season. Ironically, 60% of our participants harvested one or more birds and had no complaints!

Forty-one participants (24% of those surveyed) recorded comments regarding wet and windy conditions during the gobbler season. One surveyor related, "Was beginning to think I was hunting in an Amazon rain forest!" And, another's version, "Turkeys were beginning to grow webbed feet!" However, the weather was perfect for growing mushrooms (morels). Nine of the people surveyed mentioned the abundance of these edible delicacies last spring. One of these related, "I found 126 morels in one spot on opening day!"

Seven participants mourned their lack of time or inability to hunt during the spring gobbler season. The most understandable excuses were because of health reasons. However, one unexcused absence is marked against the nimrod that missed the first eight days of gobbler season to go on a cruise. We're sure he was forced into this and it was just another "job" on the "honey-do" list. Other comments worthy of notice were

made in regard to a desire for all day hunting (4 surveyors), a call for banning rifles (4 surveyors), the abundance of coyotes (9 surveyors), and the lack of hunting pressure (5 surveyors). Also, three comments were made concerning scouting forms. The Gobbler Survey Committee voted to eliminate the scouting surveys due to the lack of participation. Without an adequate sample size, it is impossible to acquire enough information of value for use in turkey management.

The avid turkey hunter, who spends most of the hunting season afield, will encounter many species of wildlife. Thirty-one participants recorded confrontations or observations of various animals and birds while in pursuit of gobblers. Eight surveyors saw bears, nine encountered coyotes, a fox was seen chasing a turkey, and several woodcock were sighted. One luckless hunter's day was disturbed when a bobcat ran a gobbler away, while another participant watched a bobcat chase a squirrel. Another cooperater expressed his pleasure at hearing whip-or-wills and songbirds, and other comments were made about the over abundance of red-tailed hawks and their detriment to grouse broods.

The West Virginia DNR biologists and managers, in charge of wild turkey management, strive to maintain populations by setting seasons dates that will protect the resource for the future and will also provide productive recreational days for the hunter. Your thoughts, arguments, and concerns are considered and analyzed each year. So, keep those surveys coming. Who knows? You may soon see the change you are looking for! For those who are satisfied with our methods, we appreciate your confidence in our work!

HIGHLIGHTS . . . AND . . . LOWLIGHTS

A person never knows when he starts out to do something just what will come of it. If we knew, things may never get accomplished! In order to harvest a gobbler, sometimes one must try a different approach, an unusual call, or a bigger shotgun! Attempts at bagging a gobbler can produce some amusing, educational, or pleasurable days afield. Many of our survey participants listed these "highs" and "lows" of their turkey hunting experience, and it is very apparent that each has different definitions of a successful season. While many nimrods expressed delight at having harvesting birds, one hunter called in a gobbler and filmed it instead of shooting, and another called in several gobblers and chose not to shoot. One participant's bird had the longest spurs and beard he had ever killed, another bragged of killing a bird on opening day the last five years, while another boasted of his success at shooting a flying bird. On the other hand, a few of the cooperaters who did not call a bird in or take a shot were just happy to have an opportunity to hunt.

As always, the "highlights" section was dominated by comments about hunting with family or friends. One surveyor was happy to have another chance to hunt with his dad, another called in a gobbler for a friend- his first, and another introduced an adult to turkey hunting. Of the 35 participants who noted hunting with friends and family as the most important part of their hunting experience, sixteen of these assisted an under aged

hunter. Also, several youngsters harvested their first gobbler. One participant is quoted: "Called in gobbler for son; ½ hour later called in one for myself at the same setup!"

Thirteen participants expressed happiness at being in the woods in the spring and watching the woods wake up during the morning hours. Of course, another "high" always mentioned is listening to gobblers break the early morning silence with their gobbling. At least two older hunters noted their thankfulness at being able to hunt one more year, and another exuberantly declared, "Hunting is great; killing is just the cherry on top!" Another summarized by writing, "Everyday of turkey hunting is a blessing!"

There is an old saying, "Almost only counts in horseshoes!" Disregarding complaints of no gobbling or fewer birds seen, sixteen participants recorded excuses of why they did not bag a gobbler. In most cases, the bird was almost killed but blame was placed on an object, animal, or another hunter. Bushes, trees, skunks, coons, and uncooperative birds were blamed for an unsuccessful season. However, a few of those surveyed were honest and admitted to missing shots. Imagine that!

HONORS AND AWARDS

Remember, the world is where the impossible and unusual happens everyday. And, so it is with gobbler hunting. There is always a story to tell. Stories of mistakes, blunders, encounters, and, yes, even stories of success. Regardless of controversial issues related to wild turkey hunting seasons or regulations, most gobbler hunters are usually willing to exchange stories about hunting experiences. We have gleaned the best yarns worthy of honor from this year's survey and hope you will enjoy them.

The first award goes to the father and son who arose early and entered their favorite turkey hunting woods. As light finally crept into the dark forest, the sound of a boss gobbler pierced the quiet morning. It was quickly decided that "father" would do the calling while "son" poised nearby to way-lay the unsuspecting bird. The gobbler responded readily to the soft clucks of the hen call and could be heard making his way toward them. The boom of the shotgun echoed loudly in the arroyo where the hunters were set up. The gobbler flopped and rolled down the hill for about ten yards and then regained his footing and began running down the hill! The shooter began a search for the bird while his father went back to the truck. He stood at his vehicle waiting to hear if his son had caught up with the old gobbler. Presently, he saw something making its way toward him. The gobbler was coming to the truck! Upon seeing the camo-clad object standing by the truck, the bird immediately attacked him! After much kicking and yelling (by the hunter) and scratching and flopping (by the turkey), the brave nimrod finally subdued the ole gobbler. With a quick throw, the bird was pitched through the camper top lid into the back of the truck. After securing the door, he sat down to wait on his son. He showed up later, dejected and worn out, and told his story of the gobbler race. What a surprise when his dad showed him the gobbler standing in the back of the

truck. One can now only imagine the calamity which ensued as they tackled the gobbler inside the truck, and finally subdued it. These brave, astute gobbler hunters are hereby bestowed **“The Most Unusual Hunt of the Year Award.”**

This next award is presented to “Wildlife Center Linger” and his 9-year-old nephew who perfected the “ways and means” of harvesting the unresponsive bird, the one that totally ignores every call you have in your arsenal. The story is told that several gobblers were seen “grazing” with black cows in an open field. No amount of coaxing- or calling- would cause them to gobble, strut, or, more importantly, come to the waiting hunters. And then, as seen in a comic book, the word “idea” could be seen in the “bubble” above one’s head. He pulled out a giant black umbrella which covered both of them. The black umbrella and a few black cows then moved unobtrusively toward the gobblers. At about 35 yards the youngster’s 20 gauge boomed and the gobbler dropped. **“The Best Blind Award”** is presented to these Upshur County participants.

“The Best Camo Award” goes to the survey participant whose grandson, upon seeing him in camouflage for the first time asked, “Pap, what you got your pajamas on for?”

“The Most Realistic- or Not- Decoy Award” is presented to the surveyor who, with the help of a decoy and expert calling, persuaded a gobbler to come to him. As the gobbler walked up to the decoy, large gusts of wind caused it to spin around like a helicopter propeller. The gobbler promptly ran away and will probably be more careful of the next “lady” he walks up to.

Hunting from a motor vehicle is frowned upon in our state. However, it is legal to harvest game that happens to be close to a vehicle- when the hunter is not! One of our participants walked two miles in pursuit of a bird only to hear a gobbler back at his truck! **“The Closest Gobbler to the Truck Award”** goes to this hunter who wrote, “He crossed the road 30 yards from my truck and when I shot him, I was only 50 yards from my truck!” Sometimes, it pays to listen from the truck for a while!

“The Best Calling Technique Award” goes to the hunter who observed a strutting gobbler for some time. After calling numerous times and not getting a response, he imitated a “fly down” by beating his hat against his leg. “The bird came straight to me!” he said. His story ends here, however, we can assume he had a successful hunt since his harvest information indicates two birds harvested in 2011.

A Jackson County hunter is noted for **“The Most Unusual Turkey Call.”** A bird he was calling was coming to him 80 yards away when his cell phone rang (on vibrate mode). It was apparent the gobbler heard it, however, not only does curiosity “kill the cat;” curiosity also killed the gobbler.

Thousands of decisions- or in-decisions are made in the woods while hunting. A participant from Pendleton County relates **“An Exciting Moment”** while gobbler

hunting. He had called a strutting gobbler within 75 yards when a raccoon walked up to him and rested a foot on his boot! He was afraid to spook the coon, who in turn, may have spooked the gobbler. After some time, the raccoon moved on and he shot the gobbler at 20 yards. He said, "It was exciting there for a little while!"

The "**Dumb Dumb Award**" goes to the hunter who answered a hen call (another hunter) and stalked that hunter (one of our participants) using a gobbler call! What was he thinking? He should not be allowed to hunt until he has completed a remedial course in hunter education, namely the gobbler hunting safety section.

Kudos to our "**Oldest 2011 Spring Gobbler Survey Participant!**" At 89 years old, he is still turkey hunting! The first day of the season he happened on a gobbler strutting on a stump. He lifted his gun, but could not fire. He had forgotten his shells! We hope to receive many more surveys from him as he grows older!

Wildlife management and biology are important and necessary in order to maintain wildlife populations and give outdoor enthusiasts optimal recreation afield. However, we should be reminded of the more important aspects of life, such as happiness, good health, and family. One of our participants tells of a meeting with another gobbler hunter who had been treated for cancer. The experience with this dreadful disease made him appreciate the outdoors, God, and family more than ever. "Sometimes the most important things in a man's life are the ones he talks about least . . . and if I have not written words upon paper as I should like to have done, I have written large upon the page of life that was left open for me. May your shadow never grow less"*

*Louis L'Amour

THANKS

We are thankful for the Elkins data entry staff (Karen Currence, Janet Mullenex, and Kim Nestor) for a job well done! The Gobbler Survey Committee appreciates the efforts of the West Virginia Chapter of the National Wild Turkey Federation for assisting in the distribution of survey forms and questionnaires. Finally, we thank the dedicated sportsmen that participated in this survey; without them, the survey would not be possible.

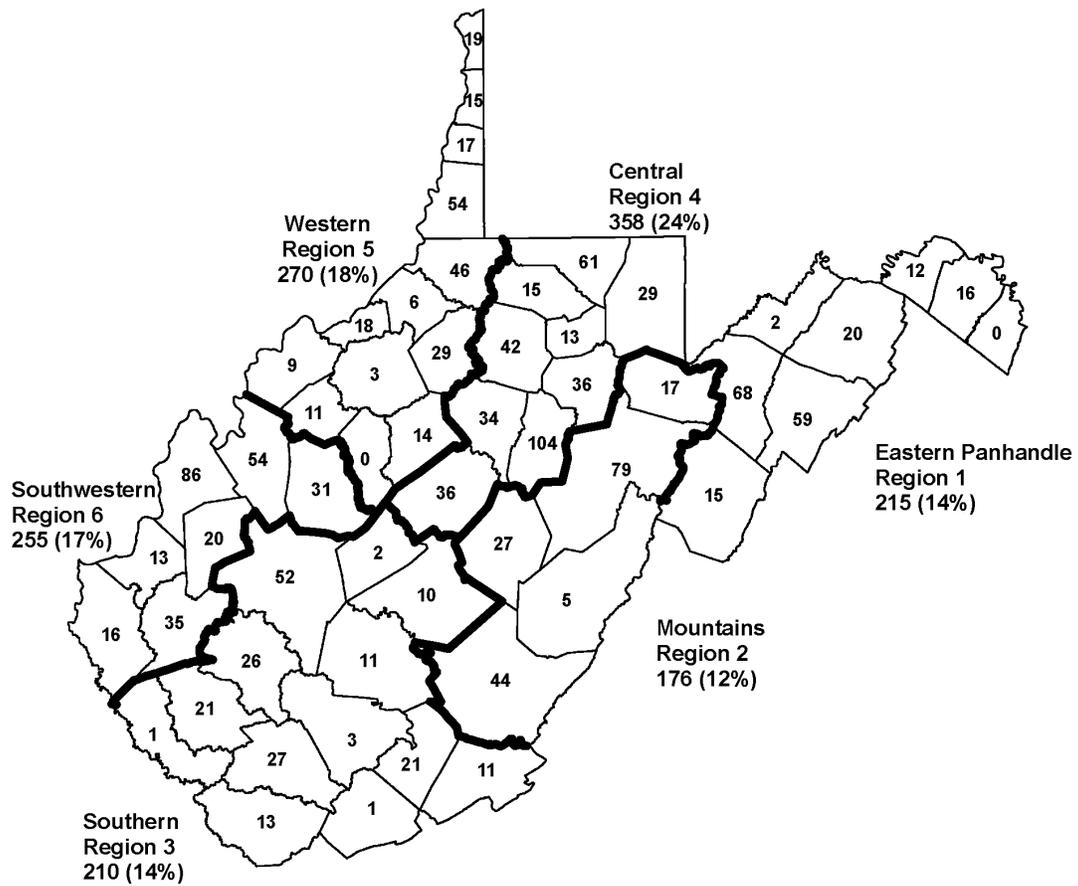


Figure 1. Ecological regions of West Virginia with the number and percentage of hunting trips by spring gobbler survey cooperators, 2011.

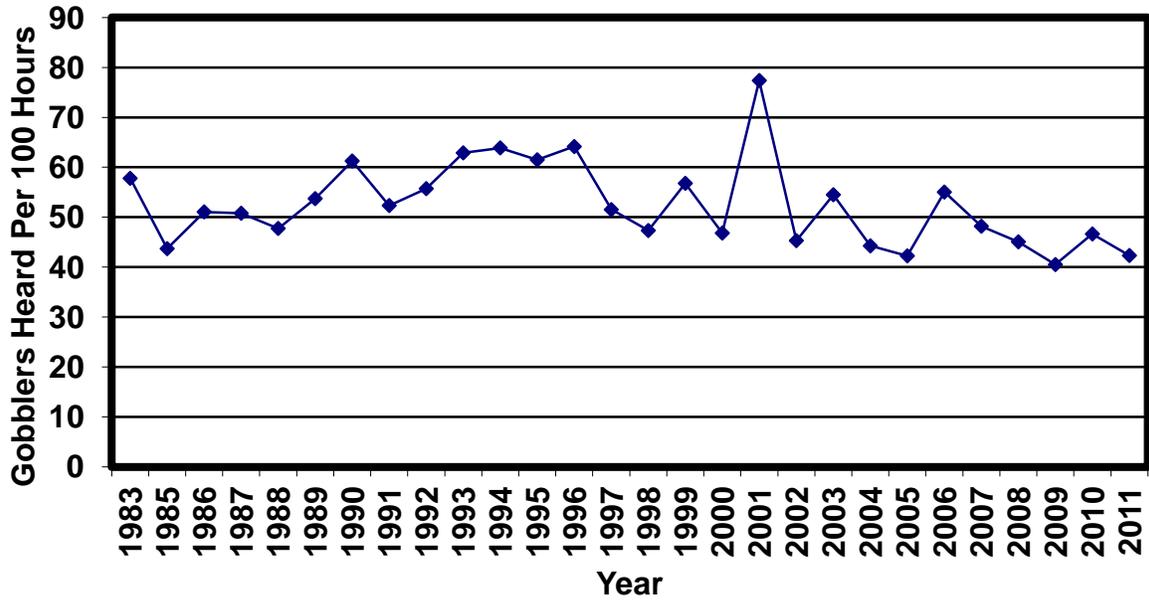


Figure 2. Average number of gobblers heard per 100 hours by West Virginia spring gobbler survey cooperators, 1983-2011.

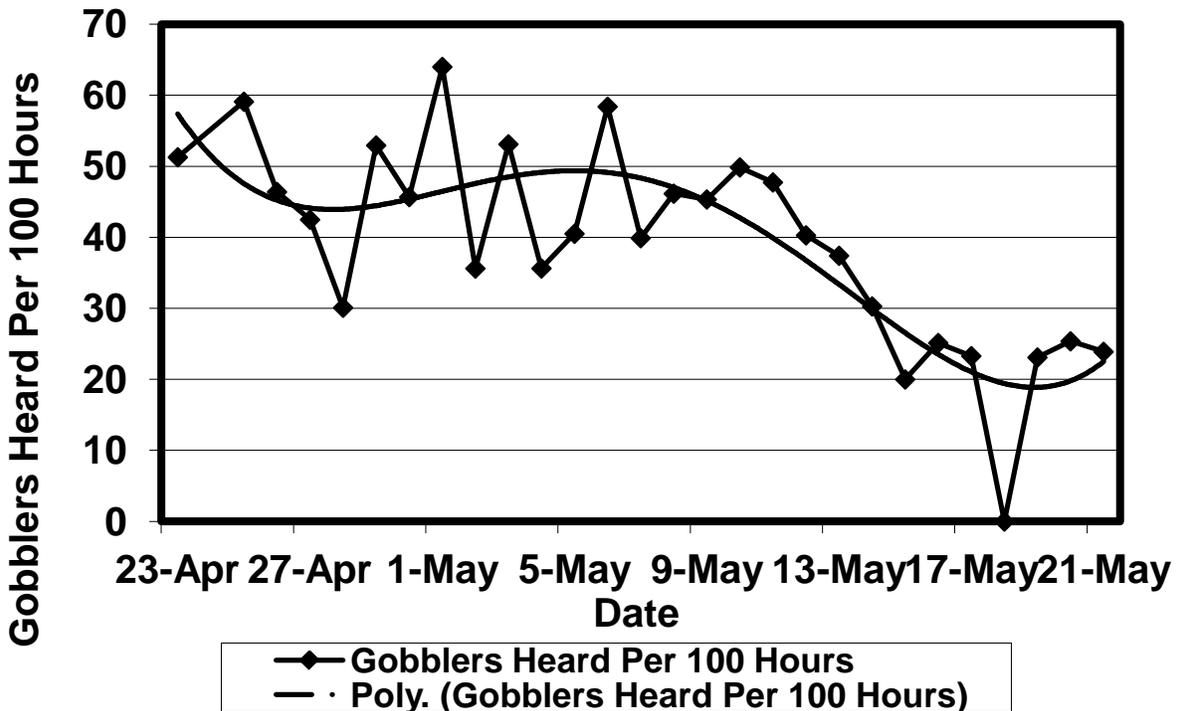


Figure 3. Gobblers heard per 100 hours by date by West Virginia spring gobbler cooperators, 2011.

Table 1. Statewide gobbler hunting seasonal statistics of 168 West Virginia spring gobbler survey cooperators based on 1,446 hunting trips, 2011.

Gobblers	Number	Average/Hunter
Heard	2,382	14.18
Called in	684	4.07
Seen	764	4.55
Crippled	6	0.04
Missed	49	0.29
Killed	149	0.89

Table 2. Average gobbler hunting statistics per trip by West Virginia spring gobbler survey cooperators, 2007-2011.

Gobblers	Year					Average
	2007	2008	2009	2010	2011	
Heard	1.9	1.8	1.6	1.8	1.6	1.8
Called In	0.5	0.4	0.5	0.4	0.5	0.5
Seen	0.5	0.5	0.5	0.5	0.5	0.5
Jakes Seen	0.4	0.3	0.5	0.2	0.3	0.4
Crippled	0.0	0.0	0.0	0.0	0.0	0.0
Missed	0.0	0.0	0.0	0.0	0.0	0.0
Killed	0.1	0.1	0.1	0.1	0.1	0.1

Table 3. Gobblers heard per hour per week of season by West Virginia spring gobbler survey cooperators, 2007-2011.

Week	Year					5-Year Average
	2007 ¹	2008 ²	2009 ³	2010 ⁴	2011 ⁵	
Youth Hunt	0.70	0.72	1	0.89	0.51	0.75
1	0.56	0.51	0.50	0.60	0.48	0.53
2	0.47	0.52	0.39	0.46	0.43	0.46
3	0.44	0.34	0.32	0.31	0.41	0.37
4	0.30	0.32	0.24	0.20	0.22	0.27
Season Average	0.48	0.45	0.41	0.47	0.42	0.45

¹Season opened, April 25

²Season opened, April 24

³Season opened, April 28

⁴Season opened, April 26

⁵Season opened, April 25

Table 4. Hours hunted and gobblers heard by West Virginia spring gobbler survey cooperators by region, 2011.

Ecological Region	Hours Hunted	Gobblers Heard	Number Trips	Gobblers	
				Heard Per 100 Hours	Heard Per Trip
Eastern Panhandle	593	201	192	33.9	1.0
Mountains	714	157	172	22.0	0.9
Southern	862	344	199	39.9	1.7
Central	1,348	511	370	37.9	1.4
Western	965	468	241	48.5	1.9
Southwestern	1,044	691	255	66.2	2.7
Unknown	100	10	17	10.0	0.6
Statewide	5,626	2,382	1,446	42.3	1.6

Table 5. Gobblers heard per hour and per trip by week of season by West Virginia spring gobbler survey cooperators by region, 2011.

Ecological Region	Gobblers Heard Per Hour				Gobblers Heard Per Trip			
	Week				Week			
	1	2	3	4	1	2	3	4
Eastern Panhandle	0.40	0.42	0.30	0.18	1.29	1.29	0.90	0.50
Mountains	0.18	0.26	0.24	0.15	0.79	1.03	1.08	0.50
Southern	0.47	0.34	0.36	0.27	2.07	1.65	1.36	1.14
Central	0.39	0.44	0.42	0.18	1.53	1.51	1.36	0.63
Southwestern	0.81	0.65	0.57	0.39	3.45	2.64	2.33	1.51
Western	0.61	0.45	0.46	0.17	2.39	2.08	1.79	0.60
Statewide	0.49	0.43	0.41	0.23	1.98	1.71	1.54	0.81

Table 6. Gobblers killed per 1,000 hours of hunting by West Virginia spring gobbler survey cooperators, 2011.

Week of Season	Kill	Hours	Kill Per 1,000 Hours
Youth Hunt	4	78	51
1	77	2,411	32
2	29	1,306	22
3	27	1,085	25
4	12	746	16
Total	149	5,626	26

Table 7. Percent gobbling intensity measured by West Virginia spring gobbler survey cooperators by region, 2009-2011.

Gobbling Intensity								
Ecological Region	Year	Gobbling on Roost and Few			Gobbling Fair	Gobbling Good	Gobbling Poor	No Gobbling
		Gobbling on Roost Only	Times on Ground					
Eastern Panhandle	2009	15.29%	18.82%		8.82%	10.00%	8.82%	38.24%
	2010	12.50%	12.50%		10.00%	12.50%	17.50%	35.00%
	2011	14.46%	21.69%		8.43%	9.64%	9.64%	36.14%
Eastern Panhandle Average		13.99%	17.35%		9.14%	10.82%	12.31%	36.38%
Mountains	2009	14.89%	14.89%		11.17%	9.04%	12.23%	37.77%
	2010	13.86%	12.65%		10.84%	11.45%	9.04%	42.17%
	2011	14.94%	13.64%		10.39%	6.49%	8.44%	46.10%
Mountains Average		14.57%	13.78%		10.83%	9.06%	10.04%	41.73%
Southern	2009	8.63%	21.94%		14.03%	11.15%	9.35%	34.89%
	2010	8.91%	16.34%		14.36%	10.40%	6.93%	43.07%
	2011	14.80%	19.90%		16.84%	13.78%	11.22%	23.47%
Southern Average		10.50%	19.67%		14.94%	11.69%	9.17%	34.02%
Central	2009	13.18%	16.92%		13.93%	11.69%	6.22%	38.06%
	2010	12.83%	26.24%		13.12%	9.04%	7.87%	30.90%
	2011	13.86%	18.21%		10.87%	10.60%	7.34%	39.13%
Central Average		13.30%	20.22%		12.67%	10.51%	7.10%	36.21%
Western	2009	15.45%	19.39%		12.12%	13.94%	11.52%	27.58%
	2010	10.49%	23.22%		13.48%	11.61%	7.87%	33.33%
	2011	8.77%	24.12%		19.30%	17.11%	10.09%	20.61%
Western Average		12.00%	21.94%		14.55%	14.06%	9.94%	27.52%
Southwestern	2009	13.49%	20.53%		9.38%	11.14%	9.38%	36.07%
	2010	15.35%	22.05%		20.87%	13.78%	8.66%	19.29%
	2011	13.78%	20.47%		20.87%	17.72%	9.84%	17.32%
Southwestern Average		14.13%	20.97%		16.25%	13.90%	9.31%	25.44%
Statewide Average		13.02%	19.53%		13.40%	11.85%	9.30%	32.90%

Table 8. Spring gobbler harvest per 100 square miles by region and county in West Virginia, 2011.

Ecological Region	County	Total	Area (Square Miles)	Kill Per 100 Square
				Miles
Eastern Panhandle	Berkeley	86	325	26
	Grant	102	478	21
	Hampshire	119	641	19
	Hardy	123	576	21
	Jefferson	42	212	20
	Mineral	78	330	24
	Morgan	70	231	30
	Pendleton	100	697	14
Eastern Panhandle Total		720	3,490	21
Mountains	Greenbrier	253	1,023	25
	Pocahontas	108	943	11
	Randolph	142	1,046	14
	Tucker	56	422	13
	Webster	99	559	18
Mountains Total		658	3,992	16
Southern	Boone	185	345	54
	Clay	85	520	16
	Fayette	234	418	56
	Kanawha	311	391	79
	Logan	169	314	54
	McDowell	228	369	62
	Mercer	186	654	28
	Mingo	138	177	78
	Monroe	158	355	45
	Nicholas	166	3,543	5
	Raleigh	215	506	42
	Summers	210	347	61
	Wyoming	242	667	36
Southern Total		2,527	8,604	29
Central	Barbour	160	456	35
	Braxton	172	538	32
	Harrison	242	424	57
	Lewis	201	424	47
	Marion	135	474	28
	Monongalia	218	657	33
	Preston	325	610	53
	Taylor	76	368	21
	Upshur	213	507	42
	Central Total		1,742	4,457
Western	Brooke	93	93	101
	Calhoun	96	280	34
	Doddridge	121	322	38
	Gilmer	137	342	40
	Hancock	107	89	121
	Marshall	253	315	80
	Ohio	92	109	84
	Pleasants	68	135	51
	Ritchie	212	455	47
	Tyler	135	260	52
	Wetzel	125	360	35
	Wirt	157	234	67
	Wood	277	378	73
Western Total		1,873	3,372	56
Southwestern	Cabell	134	286	47
	Jackson	290	472	61
	Lincoln	188	437	43
	Mason	445	446	100
	Putnam	236	351	67
	Roane	195	486	40
Wayne	182	518	35	
Southwestern Total		1,670	2,995	56
Statewide Total		9,190	21,850	42

Table 9. Ratio of gobblers heard per 100 hours by kill per square mile by region in West Virginia, 2011.

Region	Gobbling Per 100 Hours	Kill Per 100 Square Miles	Ratio of Gobbling/Kill
Eastern Panhandle	34	21	1.64
Mountains	22	16	1.33
Southern	40	29	1.36
Central	38	39	0.97
Western	48	56	0.87
Southwestern	66	56	1.19
Statewide	41	36	1.23

Table 10. Percent by age class of gobblers harvested by West Virginia spring gobbler survey cooperators, 2000-2011.

Year	Age Class				
	1	2	3	4	≥5
2000	39	18	27	4	12
2001	13	27	48	7	5
2002	25	16	36	12	12
2003	20	25	41	4	10
2004	16	24	36	9	16
2005	23	25	33	9	9
2006	14	29	42	8	7
2007	17	9	59	9	6
2008	11	10	68	6	6
2009	20	8	51	12	9
2010	8	13	59	12	8
2011	11	9	50	15	14
Average	18	18	46	9	10

Table 11. Crop contents of gobblers harvested by West Virginia spring gobbler survey cooperators, 2009-2011.

Crop Contents	2009		2010		2011		All Years	
	N	%	N	%	N	%	N	%
Green Vegetation	97	47%	85	56%	85	47%	267	49%
Insects	32	15%	21	14%	22	12%	75	14%
Acorns	9	4%	1	1%	20	11%	30	6%
Other	30	14%	16	10%	12	7%	58	11%
Corn	7	3%	2	1%	2	1%	11	2%
Empty	33	16%	28	18%	38	21%	99	18%
All Contents	208	100%	153	100%	179	100%	540	100%

Table 12. Wild turkey hens called in and seen per hunting trip by region by West Virginia spring gobbler survey cooperators, 2007-2011.

Ecological Region	Year											
	2007		2008		2009		2010		2011		5-year Average	
	Called	Seen	Called	Seen								
Eastern Panhandle	0.19	0.42	0.13	0.37	0.19	0.48	0.06	0.33	0.07	0.29	0.13	0.38
Mountains	0.18	0.62	0.12	0.37	0.14	0.42	0.13	0.29	0.11	0.25	0.14	0.40
Southern	0.18	0.76	0.13	0.59	0.34	0.87	0.12	0.73	0.23	0.51	0.20	0.71
Central	0.41	1.15	0.39	0.93	0.30	0.99	0.30	0.84	0.31	0.84	0.35	0.97
Western	0.37	0.98	0.38	0.98	0.51	1.18	0.27	0.65	0.29	0.91	0.38	0.96
Southwestern	0.32	0.73	0.25	0.57	0.41	1.09	0.22	0.62	0.27	0.85	0.30	0.78
Unknown	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.21
Statewide Total	0.29	0.83	0.26	0.69	0.34	0.91	0.20	0.61	0.23	0.66	0.27	0.75

Table 13. Wild turkey hens called in and seen by hunting trip and by week by West Virginia spring gobbler survey cooperators, 2011.

Week of Season	Hens Seen	Hens Called In	Number of Trips	Number Seen Per Trip	Number Called In Per Trip
Youth Hunt	26	11	23	1.13	0.48
1	460	149	594	0.77	0.25
2	187	61	331	0.56	0.18
3	184	72	289	0.64	0.25
4	95	40	209	0.45	0.19
Statewide Total	952	333	1,446	0.66	0.23

Table 14. Turkeys, deer, squirrels, bears, foxes, coyotes, and bobcats seen per 100 hours by West Virginia spring gobbler survey cooperators, 2011.

Ecological Region	County	Trips	Average		Squirrels					
			Hours Per Trip	Turkeys per 100 Hours	Deer Per 100 Hours	Per 100 Hours	Bears Per 100 Hours	Foxes Per 100 Hours	Coyotes Per 100 Hours	Bobcats Per 100 Hours
Eastern Panhandle	Berkeley	16	1.81	13.79	144.83	55.17	0.00	3.45	0.00	0.00
	Grant	68	3.24	28.57	74.83	42.63	0.45	0.00	1.36	0.00
	Hampshire	20	3.06	34.29	60.41	71.84	0.00	0.00	0.00	0.00
	Hardy	59	3.30	15.40	38.51	83.18	0.00	1.03	0.51	0.00
	Mineral	2	3.00	0.00	83.33	116.67	0.00	0.00	0.00	0.00
	Morgan	12	3.63	29.89	101.15	66.67	9.20	0.00	0.00	0.00
	Pendleton	15	2.53	50.00	28.95	60.53	0.00	0.00	0.00	0.00
Eastern Panhandle Total		192	3.09	25.30	63.91	63.24	0.84	0.51	0.67	0.00
Mountains	Greenbrier	44	3.72	19.57	4.89	28.13	1.83	0.00	0.00	0.61
	Pocahontas	5	5.50	25.45	10.91	25.45	0.00	0.00	0.00	0.00
	Randolph	79	3.91	8.43	48.62	22.69	1.62	0.65	0.00	0.97
	Tucker	17	4.21	47.55	61.54	51.75	5.59	0.00	0.00	0.00
	Webster	27	5.31	8.38	27.92	30.02	0.00	0.00	0.00	0.00
	Mountains Total		172	4.15	15.54	34.30	28.42	1.68	0.28	0.00
Southern	Boone	26	3.90	30.54	36.45	39.41	0.00	0.99	0.00	0.99
	Clay	2	6.50	0.00	30.77	92.31	0.00	0.00	0.00	0.00
	Fayette	11	4.73	15.38	42.31	25.00	0.00	0.00	1.92	0.00
	Kanawha	52	4.35	25.22	31.86	74.78	0.00	0.00	0.88	0.00
	Logan	21	4.11	9.28	17.39	12.75	0.00	0.00	1.16	0.00
	McDowell	13	3.92	86.27	27.45	49.02	0.00	0.00	0.00	0.00
	Mercer	1	5.00	20.00	20.00	40.00	0.00	0.00	0.00	0.00
	Mingo	1	2.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
	Monroe	11	4.32	27.37	14.74	21.05	0.00	2.11	0.00	0.00
	Nicholas	10	3.80	50.00	86.84	47.37	0.00	2.63	5.26	0.00
	Raleigh	3	4.33	69.23	15.38	0.00	0.00	0.00	0.00	0.00
	Summers	21	4.57	64.58	33.33	53.13	0.00	0.00	3.13	0.00
	Wyoming	27	4.85	16.03	14.50	32.06	0.76	0.00	1.53	0.00
	Southern Total		199	4.33	31.66	29.92	45.81	0.12	0.35	1.28
Central	Barbour	36	3.32	92.89	51.88	70.29	1.67	0.00	0.84	0.00
	Braxton	36	4.74	27.57	15.25	51.03	2.93	0.00	4.11	0.00
	Harrison	42	4.52	27.37	42.11	46.32	0.00	0.53	1.05	0.53
	Lewis	34	2.77	46.68	57.29	88.06	0.00	0.00	1.06	0.00
	Marion	15	4.10	60.16	81.30	63.41	0.00	0.00	0.00	0.00
	Monongalia	61	3.38	66.02	52.43	18.93	0.00	0.49	0.00	0.00
	Preston	29	2.83	46.34	71.95	23.17	0.00	2.44	1.22	0.00
	Taylor	13	4.04	41.90	64.76	57.14	0.00	0.00	0.00	0.00
	Upshur	104	3.57	40.67	72.73	50.64	2.96	0.00	0.27	0.00
Central Total		370	3.64	47.35	55.14	48.76	1.34	0.30	0.96	0.07
Southwestern	Cabell	13	5.27	102.19	35.04	64.23	0.00	0.00	0.00	0.00
	Jackson	54	4.62	48.50	38.08	68.14	0.00	0.00	1.20	0.40
	Lincoln	35	3.86	43.70	36.30	38.52	0.00	1.48	0.74	0.00
	Mason	86	4.20	49.81	40.68	61.43	0.00	0.00	0.55	0.00
	Putnam	20	3.80	30.26	47.37	93.42	0.00	2.63	0.00	0.00
	Roane	31	3.32	68.93	30.10	70.87	0.00	0.00	0.97	0.00
	Wayne	16	3.19	60.78	54.90	45.10	0.00	0.00	0.00	0.00
Southwestern Total		255	4.10	53.14	39.26	62.72	0.00	0.38	0.67	0.10
Western	Brooke	15	3.08	71.35	56.22	21.62	0.00	0.00	2.16	0.00
	Doddridge	29	4.04	25.59	42.64	89.55	0.00	0.00	0.00	0.00
	Gilmer	14	3.39	18.95	33.68	96.84	0.00	0.00	2.11	0.00
	Hancock	19	4.03	70.59	58.82	14.38	0.00	0.00	0.00	0.00
	Marshall	54	4.00	59.26	64.35	37.96	0.00	0.00	1.39	0.00
	Ohio	17	4.10	107.53	58.78	57.35	0.00	0.00	1.43	0.00
	Pleasants	18	4.08	44.90	34.01	51.70	0.00	0.00	0.00	0.00
	Ritchie	3	3.17	178.95	21.05	21.05	0.00	0.00	0.00	0.00
	Tyler	6	3.17	15.79	57.89	94.74	0.00	0.00	0.00	0.00
	Wetzel	46	4.55	23.87	42.00	38.19	0.00	1.43	1.43	0.00
	Wirt	11	4.43	18.46	28.72	88.21	0.00	0.00	0.00	0.00
	Wood	9	3.50	76.19	41.27	126.98	0.00	0.00	3.17	0.00
	Western Total		241	4.00	48.19	48.70	53.37	0.00	0.31	1.04
Statewide Total		1,429	3.87	39.66	45.33	50.67	0.65	0.34	0.81	0.13

Table 15. Deer, squirrels, bears, foxes, and bobcats seen per 100 hours by West Virginia spring gobbler survey cooperators, 2009-2011.

Ecological Region	Year	Deer Seen Per 100 Hours	Squirrels Seen Per 100 Hours	Bears Seen Per 100 Hours	Foxes Seen Per 100 Hours	Bobcats Seen Per 100 Hours
Eastern Panhandle	2009	118.43	72.47	0.31	0.15	0.00
	2010	67.90	41.91	1.19	0.13	0.00
	2011	63.91	63.24	0.84	0.51	0.00
Eastern Panhandle Average		83.14	58.18	0.80	0.25	0.00
Mountains	2009	45.79	47.80	1.54	0.35	0.00
	2010	40.40	11.58	1.24	0.28	0.14
	2011	35.22	28.26	1.67	0.28	0.56
Mountains Average		40.76	30.19	1.49	0.31	0.22
Southern	2009	43.64	61.36	0.09	0.26	0.09
	2010	33.35	16.26	0.24	0.36	0.12
	2011	29.70	45.70	0.12	0.35	0.12
Southern Average		36.35	43.34	0.14	0.32	0.11
Central	2009	66.00	46.82	0.85	0.26	0.07
	2010	63.83	19.77	0.61	0.69	0.08
	2011	55.34	48.64	1.33	0.37	0.07
Central Average		61.87	38.96	0.93	0.43	0.07
Southwestern	2009	54.02	114.26	0.00	0.34	0.14
	2010	48.31	32.62	0.00	0.10	0.19
	2011	39.16	61.48	0.00	0.36	0.09
Southwestern Average		47.79	74.60	0.00	0.28	0.14
Western	2009	60.28	70.68	0.00	0.15	0.00
	2010	56.26	21.96	0.00	0.19	0.00
	2011	48.79	53.42	0.00	0.31	0.00
Western Average		55.71	50.35	0.00	0.21	0.00
Statewide Averages	2009	61.14	70.42	0.42	0.26	0.06
	2010	52.68	23.85	0.49	0.31	0.09
	2011	45.38	50.49	0.64	0.36	0.12
3-Year Average		53.66	49.74	0.51	0.31	0.09

Table 16. Coyotes seen by region by West Virginia spring gobbler survey cooperators, 2002-2011.

Ecological Region	County	Year									
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Eastern Panhandle	Berkeley	0	0	1	0	0	1	0	0	0	0
	Grant	0	0	0	0	0	0	0	0	2	3
	Hampshire	2	2	9	0	0	0	0	0	1	0
	Hardy	0	0	0	1	0	1	0	0	0	1
	Jefferson	0	0	0	0	0	0	0	0	0	0
	Mineral	0	1	0	2	0	0	0	0	0	0
	Morgan	0	0	1	0	0	2	1	1	1	0
Pendleton	0	0	1	0	0	2	2	0	1	0	
Eastern Panhandle Total		2	3	12	3	0	6	3	1	5	4
Mountains	Greenbrier	3	2	3	3	1	5	1	1	3	0
	Pocahontas	0	0	2	0	1	1	0	1	0	0
	Randolph	2	2	2	2	2	1	4	3	3	0
	Tucker	0	1	0	1	0	1	0	1	2	0
	Webster	0	0	0	1	0	0	0	0	0	0
Mountains Total		5	5	7	7	4	8	5	6	8	0
Southern	Boone	5	4	1	6	2	0	0	1	2	0
	Clay	0	0	0	0	0	0	0	0	0	0
	Fayette	1	0	1	4	0	1	0	0	0	1
	Kanawha	0	1	3	4	1	2	1	7	0	2
	Logan	3	2	5	1	5	4	3	7	0	1
	McDowell	2	0	0	1	1	2	0	2	1	0
	Mercer	1	0	0	1	1	2	0	5	0	0
	Mingo	0	0	0	0	0	0	4	0	0	0
	Monroe	1	0	0	4	1	1	0	1	0	0
	Nicholas	0	0	2	0	1	0	0	0	0	2
	Raleigh	1	0	2	4	2	0	0	0	0	0
	Summers	0	1	12	0	0	6	0	0	0	3
Wyoming	2	4	5	4	1	7	1	0	0	2	
Southern Total		16	12	31	29	15	25	9	23	3	11
Central	Barbour	3	1	2	4	4	0	2	1	1	1
	Braxton	1	1	2	1	1	0	3	1	0	7
	Harrison	0	0	2	1	1	1	1	1	1	2
	Lewis	2	1	1	5	3	10	0	3	1	1
	Marion	0	0	1	0	5	0	3	0	0	0
	Monongalia	0	0	0	0	0	0	3	2	1	0
	Preston	0	1	6	6	2	3	0	2	0	1
	Taylor	0	0	1	0	1	0	0	1	0	0
Upshur	0	0	3	0	1	3	2	6	1	1	
Central Total		6	4	18	17	18	17	14	17	5	13
Western	Brooke	0	0	0	0	0	1	1	1	0	1
	Calhoun	0	0	0	0	0	1	0	0	0	0
	Doddridge	0	1	0	0	0	1	1	0	3	0
	Gilmer	1	1	1	1	0	0	0	0	0	1
	Hancock	5	0	0	3	0	0	0	0	1	0
	Marshall	0	1	0	1	1	1	1	1	2	3
	Ohio	1	0	3	3	0	1	0	0	1	1
	Pleasants	0	0	0	2	1	0	5	0	0	0
	Ritchie	0	3	0	0	1	0	0	0	0	0
	Tyler	0	0	0	1	0	0	2	0	0	0
	Wetzel	0	2	0	0	3	1	1	1	0	3
	Wirt	1	0	1	1	6	0	0	0	0	0
Wood	0	0	0	0	2	0	0	1	0	1	
Western Total		8	8	5	12	14	6	11	4	7	10
Southwestern	Cabell	1	0	0	1	0	0	1	2	0	0
	Jackson	8	0	10	2	3	3	0	3	0	3
	Lincoln	3	0	0	0	3	0	0	2	0	1
	Mason	0	1	5	1	5	4	2	1	0	2
	Putnam	3	3	1	0	1	1	0	0	0	0
	Roane	0	0	0	0	4	2	0	1	2	1
Wayne	1	2	1	1	1	0	0	8	2	0	
Southwestern Total		16	6	17	5	17	10	3	17	4	7
Statewide Total		53	38	90	73	68	72	45	68	32	45

Table 17. Number of winter-killed white-tailed deer found by West Virginia spring gobbler survey cooperators by region, 2002-2011.

Ecological Region	County	Year										Total	Ten-year Average
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		
Eastern Panhandle	Berkeley	0	0	3	0	0	0	0	1	4	0	8	0.89
	Grant	1	25	6	2	1	1	0	3	2	1	42	4.67
	Hampshire	2	18	4	3	0	0	0	0	2	0	29	3.22
	Hardy	3	3	1	1	0	1	0	2	6	3	20	2.22
	Jefferson	0	0	0	0	0	0	0	0	0	0	0	0.00
	Mineral	0	0	0	0	0	0	0	0	0	0	0	0.00
	Morgan	0	0	0	0	0	0	1	0	0	0	1	0.11
	Pendleton	8	10	8	1	1	40	4	0	6	0	78	8.67
Eastern Panhandle Total		14	56	22	7	2	42	5	6	20	4	178	19.78
Mountains	Greenbrier	3	18	6	2	0	0	0	2	0	0	31	3.44
	Pocahontas	1	23	0	2	0	0	0	0	0	0	26	2.89
	Randolph	0	39	6	4	1	4	3	3	5	3	68	7.56
	Tucker	0	3	0	0	0	1	0	1	0	0	5	0.56
	Webster	0	0	0	0	0	0	0	0	0	0	0	0.00
Mountains Total		4	83	12	8	1	5	3	6	5	3	130	14.44
Southern	Boone	1	4	0	0	4	0	0	0	0	1	10	1.11
	Clay	0	0	0	0	0	0	0	0	0	0	0	0.00
	Fayette	1	0	0	1	0	7	0	0	0	0	9	1.00
	Kanawha	0	3	0	0	2	0	0	0	5	2	12	1.33
	Logan	0	0	0	1	1	0	0	0	0	0	2	0.22
	McDowell	0	0	0	0	0	1	0	0	0	0	1	0.11
	Mercer	2	1	0	0	2	1	2	1	0	0	9	1.00
	Mingo	0	0	0	0	0	0	2	0	0	0	2	0.22
	Monroe	0	0	0	1	0	1	0	1	1	0	4	0.44
	Nicholas	0	0	1	2	0	0	0	0	0	1	4	0.44
	Raleigh	1	2	0	2	3	0	0	0	1	0	9	1.00
	Summers	2	3	0	2	3	8	8	4	7	2	39	4.33
Wyoming	0	5	0	0	0	3	0	0	1	0	9	1.00	
Southern Total		7	18	1	9	15	21	12	6	15	6	110	12.22
Central	Barbour	3	13	2	2	3	0	0	2	17	1	43	4.78
	Braxton	0	2	2	2	0	0	5	0	0	0	11	1.22
	Harrison	6	5	1	2	1	3	2	0	2	0	22	2.44
	Lewis	2	8	1	3	0	2	0	1	8	1	26	2.89
	Marion	0	4	0	0	1	1	1	3	1	0	11	1.22
	Monongalia	11	7	3	3	0	2	0	3	0	0	29	3.22
	Preston	4	15	5	5	2	3	0	1	0	1	36	4.00
	Taylor	0	5	0	0	0	0	0	2	0	0	7	0.78
	Upshur	0	5	0	2	3	0	0	1	1	2	14	1.56
	Central Total		26	64	14	19	10	11	8	13	29	5	199
Western	Brooke	1	0	1	0	0	3	1	0	0	0	6	0.67
	Calhoun	0	0	0	0	0	0	0	0	0	0	0	0.00
	Doddridge	2	5	0	4	2	0	3	0	11	1	28	3.11
	Gilmer	1	0	0	0	0	2	1	0	0	0	4	0.44
	Hancock	0	1	2	0	1	2	0	0	0	0	6	0.67
	Marshall	0	2	0	0	0	1	1	8	0	3	15	1.67
	Ohio	3	9	6	6	0	0	0	0	0	0	24	2.67
	Pleasants	0	0	0	3	2	2	0	0	1	0	8	0.89
	Ritchie	1	11	3	3	0	0	0	1	1	0	20	2.22
	Tyler	2	3	0	4	0	0	0	0	0	0	9	1.00
	Wetzel	12	11	1	7	3	3	0	0	2	0	39	4.33
	Wirt	4	3	1	1	3	7	5	1	0	1	26	2.89
	Wood	0	3	0	0	1	1	0	0	2	0	7	0.78
	Western Total		26	48	14	28	12	21	11	10	17	5	192
Southwestern	Cabell	0	0	0	0	0	0	0	4	0	1	5	0.56
	Jackson	3	3	1	4	2	2	0	1	4	0	20	2.22
	Lincoln	0	0	0	1	0	0	1	1	0	4	7	0.78
	Mason	0	0	2	3	0	0	0	3	3	0	11	1.22
	Putnam	0	1	0	0	0	0	1	0	2	2	6	0.67
	Roane	7	3	0	6	2	2	4	5	21	1	51	5.67
	Wayne	1	1	0	2	0	0	0	0	0	0	4	0.44
Southwestern Total		11	8	3	16	4	4	6	14	30	8	104	11.56
Statewide Total		88	277	66	87	44	104	45	55	116	31	913	101.44

Table 18. Sightings of winter-killed turkeys found by West Virginia spring gobbler survey cooperators by region, 2002-2011.

Ecological Region	County	Year										Total	Ten-year Average
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		
Eastern Panhandle	Berkeley	1	0	0	0	0	0	0	0	0	0	1	0.11
	Grant	0	2	0	0	0	1	0	0	1	0	4	0.44
	Hampshire	0	0	1	0	0	0	0	0	0	0	1	0.11
	Hardy	0	0	0	1	0	2	0	0	0	0	3	0.33
	Jefferson	0	0	0	0	0	0	0	0	0	0	0	0.00
	Mineral	0	0	0	0	0	0	0	0	0	0	0	0.00
	Morgan	0	1	0	0	0	0	0	0	1	0	2	0.22
	Pendleton	0	0	0	0	0	0	0	0	1	0	1	0.11
Eastern Panhandle Total		1	3	1	1	0	3	0	0	3	0	12	1.33
Mountains	Greenbrier	1	0	0	0	0	0	1	0	0	0	2	0.22
	Pocahontas	1	2	0	0	0	2	0	0	0	0	5	0.56
	Randolph	0	9	0	1	0	1	1	0	1	0	13	1.44
	Tucker	0	0	0	0	0	0	0	0	0	0	0	0.00
	Webster	0	0	0	0	0	0	0	0	0	0	0	0.00
Mountains Total		2	11	0	1	0	3	2	0	1	0	20	2.22
Southern	Boone	0	0	0	1	0	0	0	0	0	0	1	0.11
	Clay	0	0	0	0	0	0	0	0	0	0	0	0.00
	Fayette	0	0	0	0	0	1	0	0	0	0	1	0.11
	Kanawha	0	0	0	0	3	1	0	1	0	1	6	0.67
	Logan	0	0	0	0	0	1	0	0	0	0	1	0.11
	McDowell	0	0	0	0	1	0	0	0	0	0	1	0.11
	Mercer	1	0	1	0	0	0	0	0	0	0	2	0.22
	Mingo	0	0	0	0	0	0	0	0	0	0	0	0.00
	Monroe	0	0	0	0	0	0	0	0	0	0	0	0.00
	Nicholas	0	0	0	0	0	0	0	0	0	0	0	0.00
	Raleigh	0	0	0	1	1	0	0	0	0	0	2	0.22
	Summers	2	2	1	0	0	1	0	2	1	0	9	1.00
	Wyoming	1	1	2	0	2	1	1	1	0	1	10	1.11
Southern Total		4	3	4	2	7	5	1	4	1	2	33	3.67
Central	Barbour	5	1	0	0	0	1	0	0	0	0	7	0.78
	Braxton	0	0	0	2	0	0	0	0	0	2	4	0.44
	Harrison	0	0	0	0	0	0	0	0	0	0	0	0.00
	Lewis	1	1	1	1	0	2	0	1	0	0	7	0.78
	Marion	1	0	0	0	0	0	0	0	0	0	1	0.11
	Monongalia	0	0	0	1	0	0	1	1	0	1	4	0.44
	Preston	1	2	0	0	4	0	0	1	0	0	8	0.89
	Taylor	0	0	1	0	0	0	0	0	0	0	1	0.11
	Upshur	0	0	0	1	0	1	0	0	2	0	4	0.44
	Central Total		8	4	2	5	4	4	1	3	2	3	36
Western	Brooke	0	0	0	0	0	0	0	0	0	0	0	0.00
	Calhoun	0	0	1	0	0	0	0	0	0	0	1	0.11
	Doddridge	0	3	0	0	0	0	0	0	0	0	3	0.33
	Gilmer	0	1	0	0	0	1	0	0	0	0	2	0.22
	Hancock	0	0	0	0	0	1	0	0	1	0	2	0.22
	Marshall	0	0	0	0	1	0	0	0	0	0	1	0.11
	Ohio	0	1	7	2	0	0	0	0	1	1	12	1.33
	Pleasants	0	0	0	0	1	0	1	0	0	0	2	0.22
	Ritchie	1	1	0	0	0	0	0	0	0	0	2	0.22
	Tyler	0	0	0	0	0	0	0	0	0	0	0	0.00
	Wetzel	0	2	1	0	1	0	0	0	0	0	4	0.44
	Wirt	0	0	1	0	0	2	0	1	0	0	4	0.44
	Wood	1	1	0	0	0	0	1	0	0	0	3	0.33
	Western Total		2	9	10	2	3	4	2	1	2	1	36
Southwestern	Cabell	0	0	0	0	0	0	0	0	0	1	1	0.11
	Jackson	1	0	0	0	1	0	0	0	0	0	2	0.22
	Lincoln	1	0	0	0	0	0	0	0	0	1	2	0.22
	Mason	1	0	0	0	0	0	0	0	0	0	1	0.11
	Putnam	1	0	0	0	0	0	0	0	0	0	1	0.11
	Roane	0	0	1	0	1	0	0	0	0	0	2	0.22
	Wayne	0	0	0	1	0	1	0	0	0	0	2	0.22
Southwestern Total		4	0	1	1	2	1	0	0	0	2	11	1.22
Statewide Total		21	30	18	12	16	20	6	8	9	8	148	16.44

Table 19. Ruffed grouse heard drumming per 100 hours and flushed per 100 hours by West Virginia spring gobbler survey cooperators, 1996-2011.

Year	Drumming Per 100 Hours	Flushing Per 100 Hours
1996	11.4	5.1
1997	7.0	3.3
1998	7.0	2.4
1999	8.4	2.9
2000	10.1	3.2
2001	11.7	3.8
2002	9.3	3.2
2003	5.2	2.0
2004	4.3	1.7
2005	5.6	1.8
2006	6.0	2.1
2007	4.7	2.0
2008	3.6	1.1
2009	3.4	1.2
2010	2.4	1.3
2011	3.8	0.9
Average	7.0	2.6

Table 20. Ruffed grouse drumming per 100 hours and flushed per 100 hours by region by West Virginia spring gobbler survey cooperators, 2011.

Ecological Region	Hours	Trips	Grouse Drumming	Grouse Flushed	Drumming Per 100 Hours	Flushed Per 100 Hours
Eastern Panhandle	593	192	15	5	2.5	0.8
Mountains	714	172	96	27	13.4	3.8
Southern	862	199	28	8	3.2	0.9
Central	1,348	370	31	3	2.3	0.2
Southwestern	1,044	255	18	3	1.7	0.3
Western	965	241	20	2	2.1	0.2
Statewide Total	5,526	1,429	208	48	3.8	0.9

Table 21. Wild turkey hen flushing rate in West Virginia by spring gobbler survey cooperators, 1985-2011.

Year	Total Flushed	Total Hours Hunted	Flushed Per 1,000 Hours	Percent Hunters Flushing
1985-1988	57	28,166	2.02	8
1989-2002	478	162,640	2.94	12
2003	27	9,441	2.86	10
2004	34	9,844	3.45	11
2005	24	9,581	2.5	9
2006	25	9,054	2.76	10
2007	27	9,141	2.95	9
2008	17	6,872	2.47	8
2009	7	6,971	1	4
2010	9	5,731	1.57	8
2011	9	5,626	1.59	6

Table 22. Wild turkey hens flushed from nests in West Virginia by spring gobbler cooperators by week of the 2011 season.

Date	Week	Flushed by Cooperators	Flushed Per 1,000 Hours
April 23-youth day	0	1	13
April 24 – April 30	1	3	1.24
May 1 – May 7	2	2	1.53
May 8 – May 14	3	3	2.76
May 15 – May 21	4	0	0

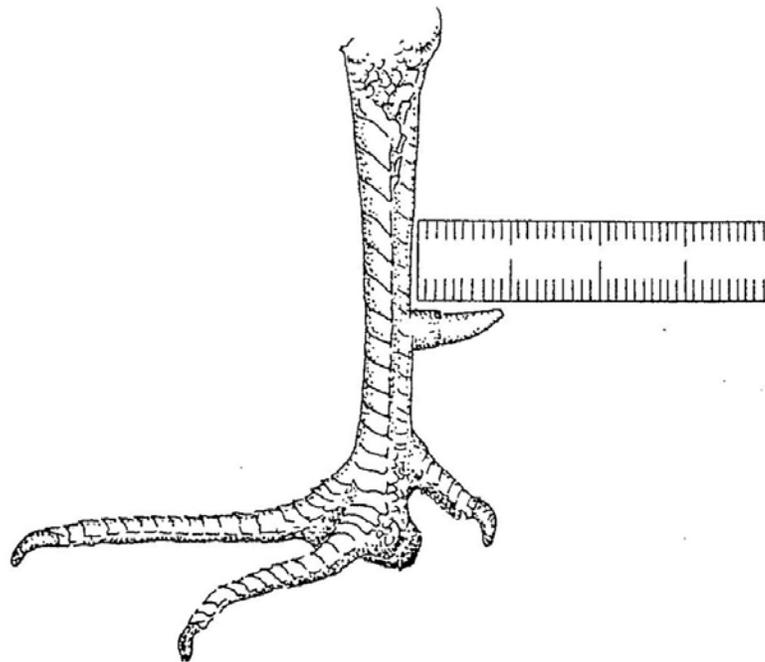
Table 23. Wild turkey hens flushed from nests in West Virginia for comparable periods by spring gobbler survey cooperators, 1985-2011.

Date	Flushed by Cooperators	Total Hours Hunted	Flushed Per 1,000 Hours
Last week April	258	113,337	2.28
1st week May	181	59,957	3.02
2nd week May	170	50,842	3.34
3rd week May	93	38,869	2.39

APPENDIX

AGE YOUR SPRING GOBBLER

How: Measure Spur Length



Then: Use the Table Below

AGE (YEARS)	LENGTH (INCHES)	LENGTH (MM)
1	0 – 9/16	0 – 15
2	10/16 – 14/16	16 – 22
3	15/16 – 1 1/16	23 – 27
4	1 2/16 – 1 4/16	28 – 32
5 or OLDER	OVER 1 4/16	33 or GREATER

NOTE: MILLIMETER SCALE MOST ACCURATE SCALE TO USE. MEASURE INSIDE EDGE OF SPUR WHERE IT JOINS LEG

REWARD

Reward for information leading to arrest and conviction

of person found guilty of:

- Illegally killing a wild turkey -- \$200
- Hunting wild turkey over bait -- \$100
- Willfully destroying a turkey nest or eggs -- \$100

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Spring Gobbler Survey

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