



# Tracking the wild turkey

## A STUDY OF GOBBLER SURVIVAL

by Delbert J. Vandevander

A loud boom blasted the early morning stillness. A flurry of feathers, snow and smoke filled the small clearing where, only a moment before, all was silent. My feet and legs, numb and cramped from sitting, would not work properly. I promptly fell over my chair and other gear and fell headlong into the brush behind the small blind I was trying to exit. After finally extricating myself from multiflora rose and electrical cord, I ran out to encounter a wriggling mass of turkeys entangled beneath a net.

Early that morning, I had left my warm bed, grabbed a pack prepared the evening before, and traveled several miles to a turkey trap site. Snow crunched beneath my boots as I trudged the last 50 yards to a blind set up in the brush at the end of a clearing. The temperature that morning at 4 a.m. read 22 degrees. I unzipped the entrance to my small canvas tent and entered. By the light of a small lantern, I arranged items taken from my pack. First of all, I set up a small propane heater and got it going. A coffee thermos, food, radio and reading material were laid out within easy reach. I then dug around and found my ohmmeter, an instrument used to test electrical wiring continuity, and backed out of the blind to check my equipment.

The year was 2008. The West Virginia Division of Natural Resources Wildlife Resources Section was in the fourth and final year of field work for the Mid-Atlantic Gobbler Survival Study. In cooperation with the state of Virginia, and funded in part by The West Virginia Chapter of the National Wild Turkey Federation, the main purpose of the project was to study gobbler mortality and determine causes. As Wildlife Manager at Stonewall Jackson Wildlife Management Area, I was required to trap and track as many gobblers as possible. As the late, great western

writer Louis L'Amour would say, one must have “savvy” and “sand” in order to successfully trap the wild turkey. In other words, one must possess knowledge about their habits and abilities, and have patience and will-power to wait them out. Regardless, the wild turkey has a very good sense of sight and sound, which is why it is important to camouflage or cover all trapping equipment with brush, grass or leaves and maintain complete silence.

Up to that date, I had shot my cannon net 14 times and netted 80 birds. Of these, 28 gobblers had been outfitted with radio transmitters.

These small devices were equipped to lie on the back of the bird and were held in place by two small cords around the base of each wing. I assigned each transmitter its own frequency which was then programmed into a receiver. With the aid of a directional antenna, I could determine the bird's location.

In addition, if the transmitter emitted a faster signal, the bird was presumed dead. After locating a dead gobbler, one's investigative skills then came into play to determine the cause of death. “CSI Stonewall Jackson!”

I checked my trapping equipment and electrical connections. All seemed OK. I then looked for the small bait pile in front of the net. As usual, deer had eaten most of it during the night. I hustled back to the blind and found a small bucket of cracked corn I had stashed there earlier. After one more careful study of the area, I reentered the blind and prepared for a long wait. I had been a bit disappointed with this site. Although the birds had “hit” the bait two days in a row, on the third day they had not shown up. With the aid of a game camera and upon inspection of the turkey droppings — “J”-shaped are males, “curled” are females — I had already determined that 10 to 12 gobblers

had been on site. So, why had they not visited the bait site on the third day? Again, Louis L'Amour would say, “‘Mebbie’ they're just notional.” More than likely, however, they had another food source and, hopefully, would visit my site again as they made their rounds. Wishful thinking, right?

As I sat waiting for daybreak, I sipped my coffee and dozed. This getting out of bed before the turkeys was for the birds! As light finally filtered through the small peephole in the blind, I made sure I could see from all angles and, more importantly, see the spot

where the bait lay. I then dug into my pack and found my detonator. This is a device used to send an electrical spark to three rockets that are attached to the net. Each rocket contains a small packet of rocket fuel and black powder. When ignited, the rockets shoot the net over the bait site and turkeys. The rockets are set at proper angles to insure that the net travels over the birds quickly without injuring

them. Even though the net measures 40 by 60 feet, turkeys are very capable of escaping capture. With the detonator hooked up and easily accessible, I was ready.

A slow two hours went by. In between frequent inspections of the trap site, I read four chapters of “Under the Sweetwater Rim.” It was then I heard a soft “putt.” The western novel was quickly forgotten as I scanned the clearing, looking for movement. Out of nowhere appeared a young gobbler being chased by a longbeard. They ran by the bait pile, made a circle, and raced back again. I sat there thinking, “Well, that was different!” During the next five minutes, all was silent, as before. Then I saw birds approaching again. Ten gobblers were cautiously moving toward the bait while two “boss” longbeards stood aloof at the edge of the clearing. The 10 birds began fighting for the



*A gobbler outfitted with a radio transmitter.*

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▲ A DNR biologist heads out quickly to get turkeys captured under the cannon net.  
◀ The author measures a turkey's flight feathers to determine the bird's age.

best positions at the small pile of corn. I waited only a few moments for the two watchful gobblers to join the others. They were acting suspicious and staring at my blind. I knew one sound of warning from them would cause the entire flock to spook. I already had the detonator in my hand. As I held the charge button, I waited until most of the birds were huddled closely over the bait with heads down, and then pushed the fire button.

Not all of the birds were captured. Two gobblers escaped, proof that turkeys can react and move quickly. Only eight lay kicking and squirming, entangled in the net. After making sure all were secure for the moment, I found my radio and called for assistance. Other Wildlife Resources Section personnel were waiting nearby for my call. They soon arrived to assist with outfitting each gobbler with a radio. They recorded measurements of spurs and beards in order to estimate age, weighed each bird, and placed a reward leg band on each turkey. Within three hours, DNR personnel released all gobblers at the very spot where they were

captured. The location and status of each gobbler was then checked weekly, until either the bird died or the radio battery failed. The life of the batteries varies but is guaranteed for two years. One of my gobblers carried a radio for over four years, only to die at the hands of a poacher. Over a long period of time, one can become somewhat attached to certain birds. I felt a real pang of regret when I finally located him, minus the breast meat and with the radio cords cut cleanly in two.

Wildlife managers and biologists radioed and tracked 272 gobblers statewide during a four-year period. Firearms contributed to the demise of 79 (30 percent) radioed gobblers. Of this number, 23 (8.5 percent) were taken illegally. I remember one particular gobbler that lived only a few days after being released. When the signal indicated he was probably dead, a long search ensued and led into a very brushy area. After much casting about and false leads due to signal bounce, I found the radio. It was hanging in the brush where the poacher had tossed it. No doubt his intent was to make it as hard as possible to find. You have to

give those guys a little credit; they're smart enough to know they shouldn't take a working radio transmitter to their homes!

Preliminary analysis shows between five to 10 percent of radioed birds were taken by mammalian and avian predators. The bobcat and great-horned owl were the predominant killer in their respective groups. The coyote is a minor predator of wild turkeys. One of the radioed birds at Stonewall fell prey to these clever canines. For several weeks, a two year old gobbler at Stonewall had not been difficult to track. I could usually pick up a signal from the highway and then pinpoint his location with a compass and map. On one particular day, however, a fast "beep" from the receiver let me know there had been no movement of the transmitter during the last eight hours. Since the lake lay between me and the bird, I had to drive several miles to access the area where I believed him to be.

I walked about two miles into a hollow only to discover that the signal seemed to be bouncing from several different angles. This required extra trips in and around the area to determine the exact direction of the bird. I knew I was getting closer when I found a few feathers at the top of an abandoned coal strip "high wall." The signal was coming from the very bottom of a sheer drop-off. After much searching, I finally found a safe route to the bottom. Here I located more feathers and eventually found the bird's remains. The radio transmitter was still attached to the skeleton, which was clean of flesh. Bones and feathers had been chewed and broken by strong teeth, proof that the culprit was a large mammal. As I scouted further from the kill site, I came upon coyote scat. This concluded my investigation. The unlucky gobbler had been caught by coyotes near the base of the high wall.

*A reward leg band is placed on a turkey's leg. ►*

Hunters legally harvested 45 (16.5 percent) radioed birds during four spring gobbler seasons. Interestingly, 20 percent of radioed birds killed were adults, while 7.5 percent of radioed birds harvested were jakes (yearlings). Past surveys of spring turkey hunters revealed that many hunters pass up jake birds, waiting for adult longbeards. Also, hunters think the two-year-old gobbler is most vulnerable to harvest since their lack of breeding experience causes them to gobble more frequently. This, they believe, makes them easier to locate, and due to less wariness, can be called in easily. However, results from radioed two-year olds reveal they are no more or less susceptible to kill than older radioed toms. It appears it is the quantity of two-year olds that is the factor in their kill rates. It has been proven that higher harvests occur during spring hunts two years after good brood production, while a lower number of birds are harvested two years after poor brood production. Only a small number of radioed gobblers (1.6 percent) were killed during the fall season.

Upon downing a bird, most nimrods were very surprised to find radio transmitters and leg bands attached to them. One day during the gobbler hunting season, I failed to locate one of my birds at Stonewall. As I was driving back to headquarters, I was surprised to hear a signal many miles from where the bird normally ranged. After narrowing the search, I believed



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*Captured birds are held in boxes for a short time until they can be weighed, banded, fitted with a transmitter and released.*

the signal was coming from a residence a few hundred yards off the road. I drove to the house and stepped out with the receiver, which pointed the way to the center of the yard where the radio lay in the grass. I retrieved it and rang the doorbell. The homeowner was very surprised to see me at his door holding the radio. Very hesitantly, the story was revealed. Even though both radio and leg band was marked “reward,” he was unsure if the bird was a legal kill. After examining his check tag and hunting license, I assured him he was not in trouble. He then produced both beard and spurs which were measured for comparison with trapping data. His story soon surfaced among the locals who chided him, “You can’t hide those things from those guys!”

Although the gobbler survival study data collection was completed by the end of 2008, analysis of the data is not yet complete. Data from this study has proven valuable for other studies as well. Recently, a master’s degree thesis was published in regard to home ranges of gobblers. Statewide, the study shows the average home range for gobblers is approximately 2,000 acres. During the spring, adult home ranges are larger than those of yearlings, probably because of breeding behavior. Not surprisingly, home ranges of gobblers are smaller during

good mast years and larger during years with poor mast.

The cooperative effort between West Virginia and Virginia is unique in that comparison of survival rates can be made between hunting regimes and seasons. Criteria used in deciding season dates, bag limits, and hours of hunting allowed per day are items of interest of the gobbler hunting community. Information gleaned from this project will be invaluable to biologists when considering

changes in the rules and regulations of turkey hunting. As always, the seasons are set with the wild turkey resource considered first and foremost in importance. Desires of hunters are then taken into account.

All turkey hunting enthusiasts are encouraged to participate in the annual Spring Gobbler Survey. These survey forms can be acquired at any DNR district office or at the Elkins Operation Center (304-637-0245). Cooperators record daily observations during the spring gobbler season. The Gobbler Survey Technical Committee then compiles and analyzes all the information. In exchange for your participation, you will receive a copy of The Spring Gobbler Survey Summary, published by the West Virginia DNR Wildlife Resources Section in cooperation with the West Virginia Chapter of the National Wild Turkey Federation.

The DNR research team is always looking for ways to learn more about wildlife. Look your harvested game over closely. You never know when you might find a radio transmitter attached to a deer, bear, grouse or wild turkey!

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