

Passing the torch By Bill Palmer

After 16 years running the Game Bird Program, most of that along with biologist Shane Wellendorf, the time has come to pass the torch. I wanted to take a minute to recap where we have been and to thank our many supporters that made our work possible. The dedication of the owners, managers and conservationists to this region is outstanding and this group provided the resources to conduct our research, as well as many of the ideas to test. Collaboration with Clay Sisson and the Albany Quail Project was hugely beneficial and productive, and resulted in collaborative research that broaden our collective knowledge on quail management and changed quail management policies across the South. Key to our success was the many talented graduate students and coveys of hard-working technicians and interns collecting data, and more data! Our colleagues at the University of Georgia, Auburn University, and Mississippi State were critically important partners in our work. The wildlife agencies in Florida and Georgia conscientiously adapted their policies as management information improved through research. The owners, managers, and dog handlers of the Red Hills and Albany Area deserve the greatest thanks, as through their dedicated efforts the end result is the greatest quail hunting in the world. It has been inspiring to observe increased success in quail management spread across the region, and to hope we played a small part.

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Game Bird Program Update By Theron Terhune



Theron Terhune and his bird dog, Gerti. Photo by Dale Spartas.

There is no doubt I have gigantic shoes to fill following in Bill's footsteps. I would like to thank the many landowners and managers that have already reached out to me with the invitation to see some spectacular quail woods and learn from them how bobwhite management is done in the Red Hills. My goal as the program director is to develop and carry out meaningful research designed to advance our knowledge and science of game birds, with a primary focus on practical habitat management issues and hunting success. Of course this would not be possible without your continued support and a dedicated staff doing great work throughout the region.

Since I took over as the Game Bird Program Director in October 2013, we have been running on all cylinders. We have successfully hosted a fall field day in Georgia on Nonami Plantation, where more than 300 were in attendance, and a fall field day in South Carolina on Black River Plantation, where just over 100 attended. Many thanks to the landowners, managers and staff for helping us to

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Seth Wood

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pull off successful field days! In addition, we hosted our fourth annual Quail Summit and farm tour on the eastern shore of Maryland, in cooperation with Washington College and Chester River Field Station. We also recently added three new graduate students to the Game Bird Lab: Diana McGrath; Seth Wood; and Aaron Griffith. You will read about some of their new projects in this edition of the *Quail Call*.

For years we have relied on information gathered from radio-tagged individuals to inform management decisions, and we continue to deploy radio-tags on properties to better understand bobwhite demographic response to applied management techniques. Therefore, we are very excited about the opportunity to have a new research site at Dixie Plantation, where Clay Sisson is overseeing the transition to Tall Timbers' management philosophy. John Michael McCormick joined our game bird research team and will help to track birds at Dixie. Including Dixie, we are now monitoring bobwhites on five properties using radio-telemetry.

We started two new research projects this fall and one this winter. In South Carolina, we began studying *Factors Influencing Detection of Bobwhite Coveys* and *Factors Influencing Scenting Ability of Bird Dogs*. We are grateful for the support of the owners and management staff at Mount Pleasant Plantation for partnering with us on this project. We also started a new project at Tall Timbers investigating *Edge and Cover Effects on Survival and Hunting Success* as it relates to grid-blocking. Finally, this winter we began a cooperative project with the University of Tennessee and the Florida Fish and Wildlife Commission evaluating the *Effects of Supplemental Feeding on the Movement and Harvest Rates of Wild Turkey*.

These are exciting times in the Game Bird Lab at Tall Timbers. We are not only embarking on new research and tracking birds on new sites within the Red Hills, but

we are also expanding our footprint to properties much beyond the Red Hills region. Of course, we remain dedicated to understanding what makes populations tick in the Red Hills, and our hope of incorporating sites outside the traditional quail belt into the fold is that we will have a larger, range-wide impact on bobwhite population recovery. In doing so, we also believe the information learned will help to refine what we know about bobwhites and management in the Red Hills. Already, we are working on over 12,000 acres on the Eastern Shore of Maryland and Delaware, as well as more than 60,000 acres in South Carolina, North Carolina and Virginia.

In this issue of the *Quail Call*, we have tried to incorporate some of these on-going projects to give you a sense of the vast bobwhite management efforts taking place beyond the Red Hills. For me, seeing firsthand the challenges and obstacles many properties face outside the quail belt, when managing for bobwhites, only deepens my appreciation of the Red Hills' regional dedication to bobwhite management. In the next issue of the *Quail Call* this fall, we will highlight some new research on bobwhite chick ecology and on-going parent-reared releases. We hope you enjoy this issue and as always the Game Bird Lab and Albany Quail Project greatly appreciate your steadfast commitment to bobwhite management, and we thank you for your generous donations that make this research possible! 🐦



Fall Field Day at Nonami Plantation.
Photo by Rose Rodriguez

Game Bird Research at Dixie Plantation

Dixie Plantation was gifted to Tall Timbers Research Station & Land Conservancy by the Geraldine C. M. Livingston Foundation in December 2013. This 9,000-acre property provides the Game Bird program with a unique opportunity for research and management projects on bobwhite quail on a working hunting plantation. Our objectives at Dixie include: quail management and hunting, abiding by an existing conservation easement, historic preservation, education and training, hosting field trials, and research that contributes to the mission of Tall Timbers.

The property has been historically managed for bobwhites, so the cover condition and bird numbers are in very good shape. In March, we radio-tagged 50 bobwhites on Dixie to begin collecting baseline demographic data in the core bobwhite research area. We will continue to have a year-round sample of radio-tagged birds, which will be used for evaluation, such as use of cotton fields by quail, the efficiency of all age field trial dogs in locating wild quail coveys, along with the effects of field trials on subsequent hunting quality, and a study to determine the driving forces behind the “new ground effect” of an intensive upland hardwood removal. This hardwood removal has already begun on Dixie; we will measure quail demographics before, during, and after this work is done on the core study area. We are excited about this work on Dixie and look forward to providing regular updates. 🐦

Bill Palmer continued from front page —

In 1996 there were a handful of donors to the program at Tall Timbers; now with 40 times that many, their support has allowed us to radio-tag and study the behavior of over 20,000 quail! Our goal was to understand how the demographics of quail populations impacted population trends and what management actions reduced negative impacts of predators and weather. However, we took a slightly different approach when we adopted a predation management focus, which is geared toward reducing effects of predation and weather through proper habitat, feeding and predator management, rather than just habitat. To do so, we studied more than quail, but also their predators and other prey species, such as cotton rats. All of our important findings



An important feature of Dixie is its historic main house. The 14,000+ square foot house was designed in 1936, and built between 1938 and 1940 by John Russell Pope, the foremost classical architect of the twentieth century. Photo by Rose Rodriguez.



Longleaf pine forest on Dixie. Photo by Rose Rodriguez

and management implications are being published in an updated management handbook that will be out sometime later this year.

Over this time, a lot has changed in management of quail in the region, as a result of this collaboration. Just a few changes followed a series of surveys we have conducted over the years 1994 and 2009. Burning has shifted later with more acreage being burned in April and May, and less in February, which reduces impacts from migratory hawks and improves habitat suitability for quail in some circumstances. Today, more managers burn “blocks” versus cutting small ring-a-rounds across the property. By 2009, 85% of managers had conducted hardwood control, a practice first promoted by the Albany Quail Project, now proudly an integral

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TALL TIMBERS AND ALBANY QUAIL

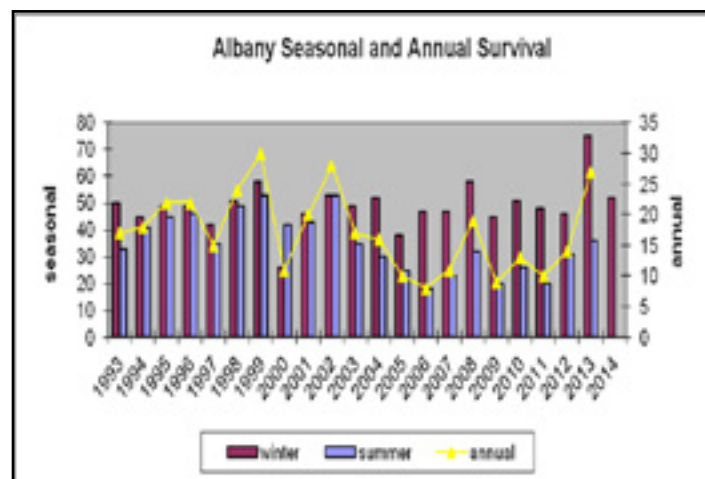
Sometimes the Bobwhite Demographic Stars Align

By Clay Sisson and Theron M. Terhune

The last couple of years have been an exciting time in the Plantation Belt of Southwest Georgia and Northwest Florida. This past season (2013/2014) was one of the best we have seen in many years, pretty much across the board. To fully understand the success seen this season, we must first reflect back to the late summer of 2011. The 2011 growing season had one of the worst droughts to hit the region in many years. This, of course, affected the quail hatch in several ways, the most important of which was low adult survival and low productivity, along with poor brood survival.

Hunting success during the 2011/2012 season was less than what folks in this area had become accustomed to. Thankfully, the 2012 growing season was nearly ideal for quail reproduction, with frequent and well distributed rain showers throughout the growing season and no heavy rainfall events. This contributed to one of the best hatches we had seen in quite some time, and the beginning of a two-year population recovery. Some density dependent compensation may have also come into play here, as we have documented some of our best hatches in years following weather induced declines. Put in other terms, while the mechanisms are poorly understood, it seems that quail populations can “turn it on” when they sense a need to do so. In the summer of 2012, they did just that.

The 2012/2013 hunting season was good, but not nearly as good as many had expected. The reason was hot and dry weather throughout most of the winter. It was frustrating to many knowing that there were more birds out there than what was being seen due to the tough hunting weather and poor scenting conditions. In February, toward the end of the season, wet and cold weather improved hunting conditions. This left most properties feeling a little better about the birds they believed were out there all along. The good news from all of this was that the same conditions making it tough for hunters were ideal for over-winter bobwhite survival. A continent with a warm and dry winter meant fewer hawks than normal migrating south. This combined



with abundant cotton rat populations and good cover produced during the 2012 growing season yielded above normal over-winter survival. In fact, as the graph above shows, 2012-2013 overwinter survival was the highest (72%) ever recorded on our Albany study area during 21 years of year-round radio-telemetry.

This is obviously a positive factor for a quail population, because it means more birds are surviving to the nesting season. In fact, a “sensitivity analysis” conducted on our demographic data revealed that overwinter survival was THE most important factor in quail population performance, even more important than adult breeding season survival and brood survival. This high survival put us in good shape for the start of the 2013 nesting season, and hopes were high for another good growing season.

What we got was rain and a bunch of it all through the summer. While a few isolated heavy rain events may have hindered chick survival a little, the end result was another good hatch in 2013. The per capita production was not as good as it had been in 2012 but since we started the season with more capita (breeders), the end result was another good population increase. Two consecutive good hatches with a mild winter in between produced some of the highest fall densities seen in the last decade. Cold and wet weather all winter made for good hunting conditions but also meant our honeymoon from the migrating hawks was over; overwinter survival was back to normal. (See graph above.)

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Moving Bobwhites in the Right Direction

Translocation involves the capture and movement of wild bobwhite quail from one site to another. This technique has become a valuable tool for restocking bobwhites in numerous states over the past decade.

We began studying wild quail translocations in the late 1980s, with more intensive studies occurring during 1997-2004. These efforts contributed to the development of an official translocation policy implemented by the Wildlife Resources Division of the Georgia Department of Natural Resources in 2006 and similar programs in other southeastern states. A series of projects since that time has resulted in wild birds being moved to 13 different properties in 4 states and even more in the pipeline for the next couple of years. Each of these projects began under unique circumstances but all have an underlying theme. They all result in new acreage through intentional management and serve as population hubs for wild quail through the creation of quality habitat from scratch, renovation of existing habitat, or conversion from pen-raised bird operations to strictly wild birds.

In each case, private landowners were reassured in their efforts and allocation of resources that wild quail

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About half of last year's birds made it to this breeding season, which still puts us in pretty good shape due to the high density back in the fall. This spring's breeding population is very similar to what it was this time last year. This puts the population in a very good situation — if we can have good spring survival and another good hatch. The moral of this story is that the success of the 2013/2014 hunting season did not come from one event, but from a series of fortunate events that we may not have fully understood, without this long term demographic information from radio-tagged birds. 🐾



could be successfully re-stocked through translocation following suitable creation or renovation of habitat. The old adage says, “create it [habitat] and they will come.” But unfortunately in today's landscape, this isn't always true, at least not right away. With translocation as a tool in the management toolbox we can say, “if you build it and they don't come, we can help provide them for you.” Population response in almost every case has been dramatic and at worst has turned what would have been a 10-year proposition into one that took only 3 or 4 years. To date, translocation has been responsible for the stocking of 2,375 wild quail onto 13 properties (in 4 different states) totaling ~45,500 acres of newly established and currently existing wild quail lands.

Projects beginning in upcoming years will add a couple more states to these totals for approximately 31,000 new acres and 650 birds moved, during 2015-2017. Of course none of this would have been possible without the landowners who have generously donated wild quail to these projects. You know who you are and we thank you for it! Not only do these projects generate new members and support for Tall Timbers, but they also contribute significantly to the range-wide population recovery of bobwhite quail. 🐾

Evaluating the Effect of Edge and Cover on Northern Bobwhite Survival in Relation to Hunt Success

By Seth Wood, Theron M. Terhune, and James Martin



A hunter approaches a covey point during a late January quail hunt on Tall Timbers Research Station.



An aerial view showing grid-blocking on a intensively managed plantation.

Overview

Grid-blocking via mowing or chopping (drum chopper) is a common management technique used on intensively managed plantations to accomplish multiple objectives such as reduction of heavy brush or overgrown thickets, manage vegetation succession, increase hunter accessibility, and provide travel lanes for pointing dogs, to name a few.

On average, properties grid block at 30'x30' widths which translates into approximately 35% of cover flat-mowed or chopped during early Fall. This loss of cover is exponential following frosts where cover is known to decline toward the end of the hunting season, and this timing also coincides with the typical raptor migration commonly resulting in mortality blips during late winter. In addition to the amount of cover reduction the amount of edge is increased dramatically. This is important to quail survival because theory suggests that mortality increases with amount of edge.

The purpose of this study is to evaluate the potential impacts of cover reduction using grid-blocking on bobwhite survival and hunting success. We developed two treatments (30'x30' and 90'x90' grid-blocks) and a control (no grid-blocking) on Tall Timbers to examine how these different densities of edge impact covey behavior and survival.

Year One Results

We found that survival did not differ very much between the traditional grid-blocking width (Dense treatment at 30'x30') and the control; however, survival on the control was higher (see Figure 1) than the moderate density grid-blocking (90'x90', moderate treatment).

This is only one year of a three-year study and many factors affecting survival such as treatment location may be at play. In terms of hunting success, the moderate and dense treatments were similar but the control (no grid-blocking) was much poorer. The total coveys moved per hour was similar between the control and the treatments,

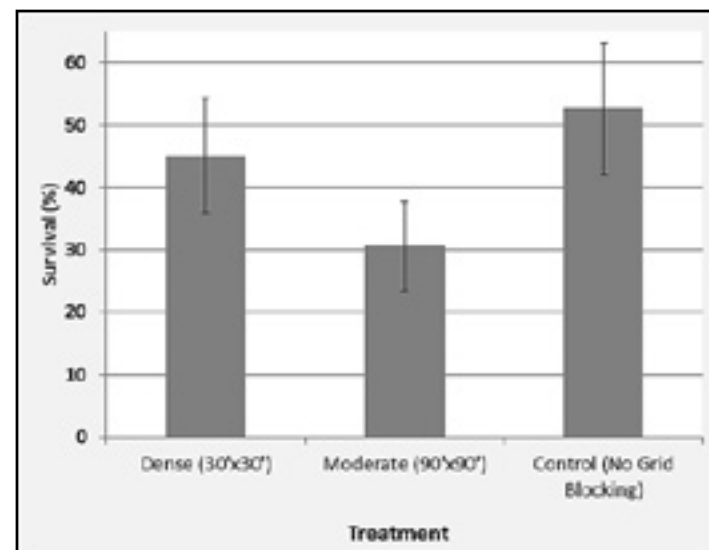


Figure 1. Northern Bobwhite survival delineated by treatment type on Tall Timbers (2013/2014).

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Edge and Cover continued from previous page —

but the number of coveys pointed and birds harvested was substantially lower on the control (Figure 2). This observation is likely a result of many more wild flushes than the two treatments.

The grid-blocking treatment also influenced dog movement and coursing pattern during a hunt. On average, dogs covered 8.9 miles per hunt (~4.2 miles per hour) on the control (no grid-blocking), 9.9 miles per hunt (~4.7 miles per hour) on the dense treatment, and 10.4 miles per hunt (~5 miles per hour) on the moderate treatment. This suggests that hunt paths increase the amount of distance covered in a shorter amount of time. We also observed that wider spacing of hunt paths resulted in bird dogs working larger sections of area but this does not always directly result in more birds found and may actually result in more coveys missed.

The jury is still out, but there seems to be some patterns evolving among the treatments and control in terms of survival and hunting success. We look forward to next hunting season to learn more.

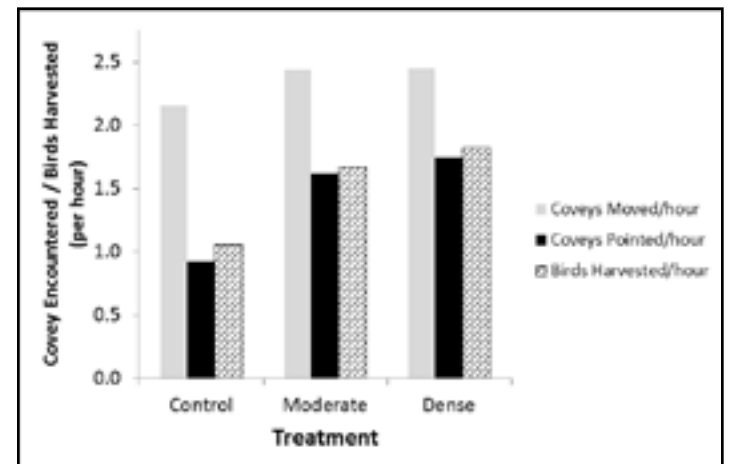


Figure 2. Hunting success delineated by treatment type on Tall Timbers (2013/2014).

OTHER PROJECTS

Evaluating Wild Turkey Gobbling Activity in Relation to Breeding Chronology

By Aaron Griffith, Theron M. Terhune, Danny Caudill, Roger Shields and Dave Buehler

Overview

This is a multi-site, cooperative project with the Florida Fish and Wildlife Conservation Commission, University of Tennessee, and Tall Timbers evaluating wild turkey gobbling activity as it relates to reproduction (e.g., mating, nesting, and etc.). In particular, we are interested in determining factors (such as latitudinal variation) influencing gobbling activity. In addition, this project is part of a larger research study evaluating how supplemental feeding practices implemented for bobwhite management purposes influences movement, habitat use and home range of wild turkeys.



Turkey hen captured in a rocket net. Photo by Seth Wood

This winter we deployed the first ever GPS collar on a



wild turkey at Tall Timbers and a total of seven turkeys were equipped with GPS collars. We are using song meters placed at various locations to record gobbling activity throughout the breeding season.

BOBWHITES BEYOND THE RED HILLS

New Project Overview and Update

Factors Influencing Detection of Bobwhite Coveys

By Diana McGrath, Theron M. Terhune, and James Martin



Tracking of radio-tagged coveys occurs during the hunt both from horse back and a horse or mule-drawn wagon.



Using radio telemetry, graduate student Diana McGrath looks for radio-tagged coveys, while on horseback.

Overview

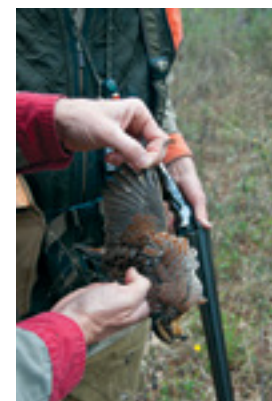
On average, about 50% of coveys are not detected, or are simply missed, during the course of a hunt. The escape behavior of bobwhite coveys may vary depending on habitat type. While studies have documented escape behavior of bobwhite coveys, and the daily and seasonal probability of finding coveys, no studies have focused on the influence of vegetation characteristics and the dynamics of scenting ability of bird dogs. This project is designed to better understand bobwhite evasive strategies in the context of vegetation structure and composition.

Selection for hiding in thick cover, versus running or flushing, may further reduce the probability of finding a covey when hunting. And, selection for escape behavior can be “fixed” in a population in only a few generations. Understanding evasive strategies exhibited by bobwhites

will hopefully help guide on-the-ground management and improve overall hunting success. In addition, knowing why coveys are more difficult to find in certain cover types is important, because sites with similar covey densities may provide significantly different rates of finding coveys, which influences the quality of the hunting experience. We will investigate factors influencing covey detection and a dog's ability to detect bobwhite coveys in varying habitat cover types.

Year One Results

We had a total of 113 encounters of radio-tagged coveys and found that hunters saw (detected) 52% of those coveys, suggesting that 48% of the time coveys were not seen during a given hunt. Tracking coveys during the hunts suggested that, when hunting, we tend to overestimate the number of wild flushes and underestimate



the number of actual coveys pointed. Frequently, (>85%), an unproductive point (or “false point”) was a result of the covey exhibiting an evasive strategy, going undetected by the hunt party, rather than birds not being there. In other words, more often than not, when a dog points, birds are there, but they evade the hunt party. While numerous evasive strategies were observed during this first field season, the more common evasive behaviors included: hold; run; run and hold; and flush.

Not surprisingly, the majority of radio-tagged coveys that were shot into held tight (73%), compared to 23% that ran to avoid hunters (see Figure 1). Of those coveys not shot, most ran, while some held tight going undetected (see Figure 2). So far, we have observed that the density of cover vegetation (thickness), does not greatly influence detection of coveys (Figure 3). However, more often than not, individual coveys seemed to use the same evasive technique multiple times; this may be linked to the thickness of cover when/where encountered. The factors influencing these unique evasion strategies will be of particular interest in upcoming seasons as we gather more encounter information. Nonetheless, a good way to increase the number of shots into coveys is to increase the speed at which you approach a covey. The longer the covey has before hunters get to the point, the greater the chance it will escape detection.

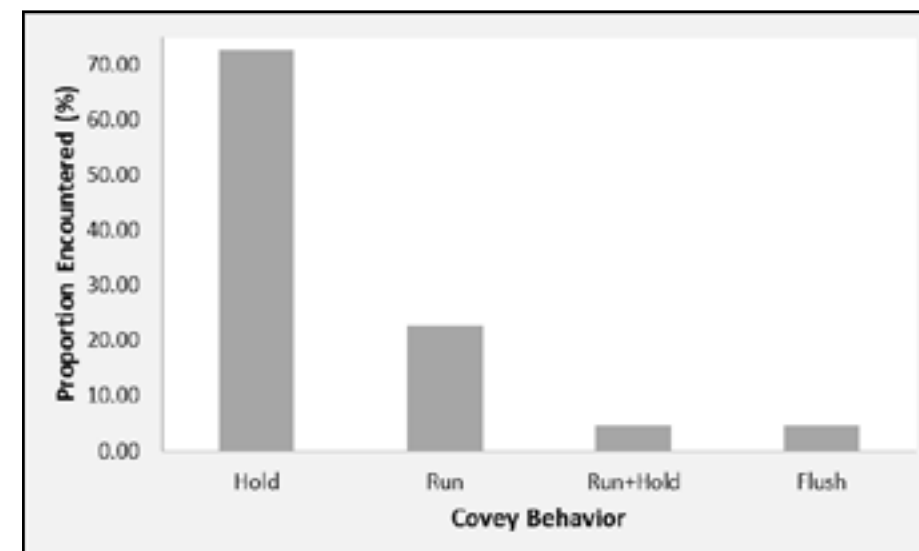


Figure 1. Radio-tagged covey encounters that were pointed, seen and/or shot.

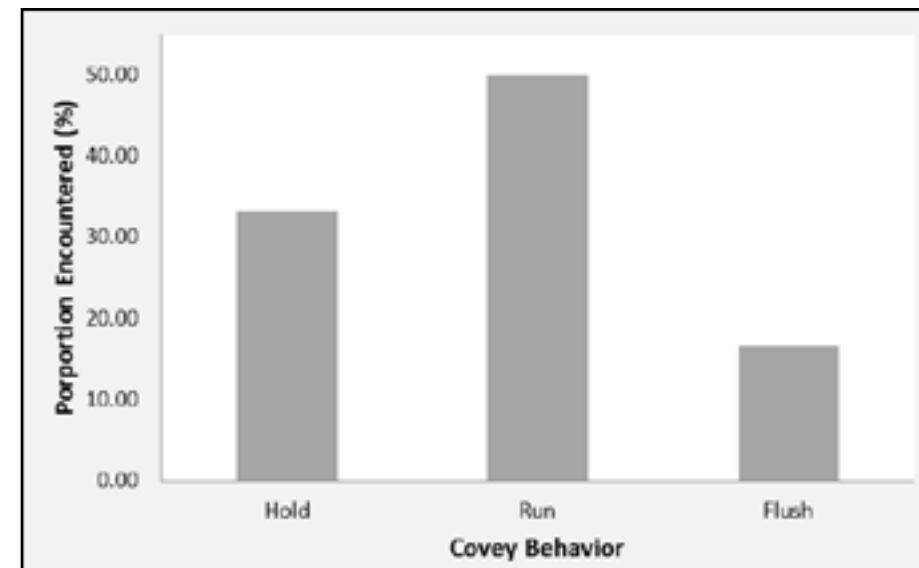


Figure 2. Radio-tagged covey encounters that were pointed (seen or not seen) but not shot.

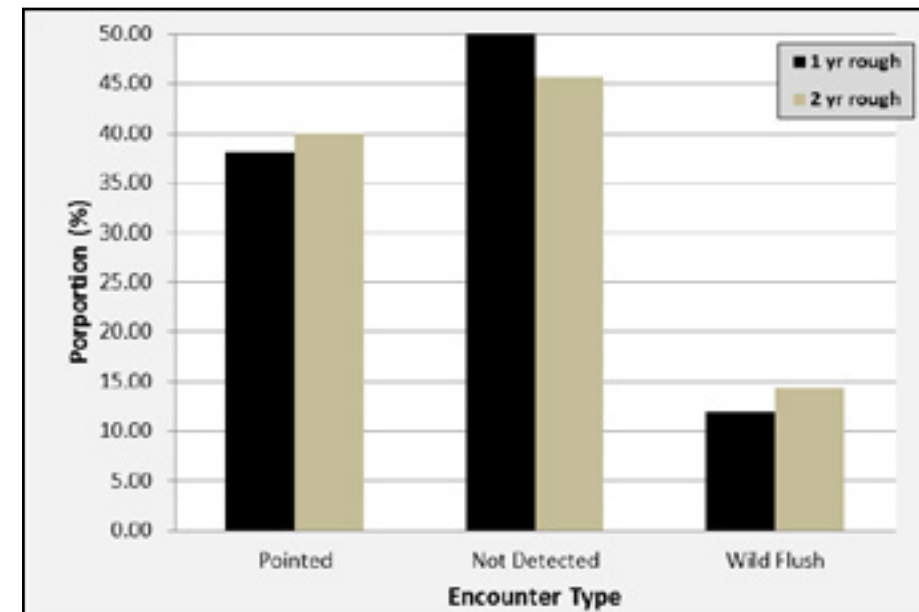


Figure 3. Radio-tagged covey encounters delineated by time since burn (age of rough).

Bobwhites Down South...Fire Scale Study on Babcock-Webb WMA

Project Collaborators: James A. Martin, Jesse T. Kamps, Seth D. Sofferin, Bill Palmer, Theron M. Terhune, Greg Hagan, Robert J. Cooper

It should be of no surprise that Tall Timbers is still leading the way on research related to fire management and bobwhite populations. In 2012, collaboration with the Florida Fish and Wildlife Conservation Commission, Mississippi State University, the University of Georgia, and Tall Timbers began a new project to investigate the effects of fire scale on bobwhites at the Babcock-Webb Wildlife Management Area (BWWMA) near Punta Gorda, Florida. To date, more than 250 bobwhites have been radio-tagged, >80 nests monitored, >100 chicks banded, several thousand telemetry locations logged, and numerous near misses with diamondback rattlesnakes!



Figure 1. Burning on the Babcock-Webb Wildlife Management Area can be challenging when dealing with a fluctuating water table and dense, volatile fuel loads. Photo by Seth D. Sofferin

BWWMA provides some unique opportunities to evaluate scale of fire. It has a rich tradition of bobwhite management and research dating back to the 1950s when Earl Frye conducted some of the seminal work on bobwhites following Stoddard's model in the Red Hills. However, linked to multiple factors such as harvest management, a fluctuating water table, and the degradation of the surrounding landscape, bobwhites currently exist at much lower densities than the days of Frye.

The BWWMA still supports a vibrant bobwhite hunting season enjoyed by an avid cadre of hunters, but large-scale burning was thought to be dampening populations. Why fire size? As you know, fire is essential

to maintaining the proper plant community for bobwhites. But, we are constantly learning that the manner in which it is applied is equally important. Bobwhites are poor long-distance fliers and have limited mobility when walking, unlike a wood duck or wild turkey. Thus, they need their resources (e.g., escape cover, food, brood-rearing cover, etc.) in close proximity to optimize survival and reproduction. As burn patch size increases, the average distance of those critical resources also increases. This increased distance may exhaust more energy by hens, which may reduce productivity and/or increase their susceptibility to predation.

Based on preliminary data, we are seeing negative effects of large fires (>500 acres) on bobwhite survival (Figure 2). Bobwhites in the area undergoing large fires have >2 times the risk of mortality than the small-scale burn treatment. We caution that this is only preliminary data and analysis, but this developing pattern is not surprising. Bobwhites without question evolved under constraints of a fire-disturbed environment in the piney woods and prairies across the US. Traditional knowledge suggests these historical fires were large and expansive, however, as better records and techniques become available, we are beginning to discover historical fires were most likely much less vast, but rather more patchy.

If bobwhites are the primary management objective, understanding the ideal fire size is central to maximizing their abundance. Burning at smaller scales has additional challenges compared to large-scale fires, but again the tradeoff is likely worth it in terms of producing higher bird numbers and improved hunting opportunities.

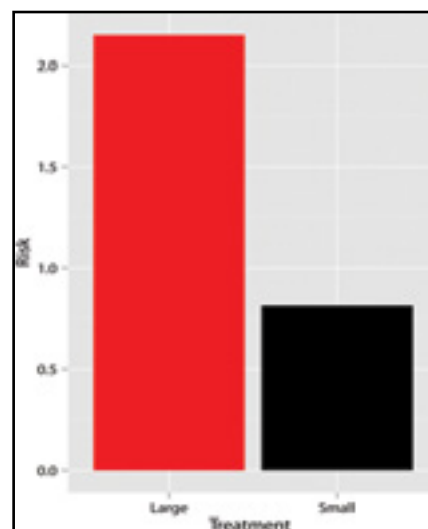


Figure 2. Risk of bobwhite mortality associated with large and small scale burning treatments on the Babcock-Webb WMA

TOOLS AND TECHNOLOGY

CoveyIQ — Data to the Point!

An ongoing challenge of wild quail managers is ensuring that healthy, fall bird numbers translates into consistent covey finds throughout the hunting season. Many southern plantations have collected quail hunting information such as covey finds for dozens of years. When hunting data is effectively organized and analyzed, managers are able to track hunting success through time and use these data as an index to trending bobwhite populations on a given property. In addition, when hunt data is combined with other information such as weather and time of day, one's ability to identify patterns linked to higher hunting success is greatly improved. The advent of smart phones and mobile devices has made it easier than ever to collect this type of data in the field.



CoveyIQ (CIQ), www.coveyiq.com, is an online software application for managers and landowners of wild quail plantations to record, evaluate and share hunting information. CIQ is designed to allow managers to easily identify and evaluate their most productive

dogs, courses, hunting windows (afternoon hunts, etc.) and hunting success. It is also a comprehensive information management system providing numerous functions with the quail manager in mind such as:

- An app available for smartphones and mobile devices (such as Android phones, iPhone and iPad) to enter data in the field during a hunt.
- An online hunting module to record and evaluate data and success;
- A dog module to evaluate brace and dog performance;
- A GIS-based trapping module to record and analyze predation management;
- A supplemental feeding plan module; and
- A hunt planning module.

CoveyIQ is a secure and tested software product that will increase efficiency in collecting quail hunting data in the field, while providing a means to evaluate hunting success with respect to various factors. The Game Bird Program at Tall Timbers is pleased to support CIQ to help advance quail research through quality data collection and analysis. To sign up or get more information about CIQ please email: info@coveyiq.com.



Florida/Georgia Quail Coalition Conservation Organizations Team Up for Quail

Tall Timbers has partnered with the Florida Fish and Wildlife Conservation Commission (FWC), the Georgia Department of Natural Resources – Wildlife Resources Division (GADNR), and Quail Forever to help the northern bobwhite (quail) and youth shooting programs in Florida and Georgia.

All four organizations have signed a memorandum of agreement pledging that they will each provide mutually beneficial support to a project called the Florida/Georgia Quail Coalition, whose goal is to enhance, promote and conserve quality habitat for northern bobwhite and to promote and support youth shooting sports programs and education. The term of the agreement is for three years, and the four organizations each will appoint one authorized representative to serve on the Coalition's steering committee.

Quail Forever will provide one shared full-time position employee and one part-time position staff member. The organization also is charged with providing funding to establish, manage and monitor quail populations and habitat on public and private lands in Florida and Georgia, and to work with the Coalition to increase youth hunting opportunities on some of these lands once adequate bird populations and habitat have been restored. Also, Quail Forever is to provide funding from its local chapters to help pay the cost of youth shooting sports programs and scholastic shooting teams.

"Being a Georgia native and having been raised in a family which respects our upland hunting tradition, I am eager to see the positive effects which will be generated by this landmark partnership," said Talbott Parten, Quail Forever's regional representative for Georgia and Florida. "Knowing the commitment of the partners involved, it is my, and Quail Forever's, firm belief that in the years to come, future generations of Georgia and Florida outdoorspeople will be able to look back at this partnership as a pivotal moment for the conservation of the bobwhite quail in the Southeast."

Tall Timbers will serve as the fiscal agent to receive and disburse money provided by local Quail Forever



Representatives from the Florida/Georgia Quail Coalition, L-R: Howard Vincent, Pheasants/Quail Forever; Dan Forster, GADNR; Nick Wiley, FWC and Bill Palmer, Tall Timbers celebrated the partnership agreement, Wednesday, April 16 at Tall Timbers.

chapters to pay for approved Coalition quail habitat projects. The Coalition enhances efforts of the Upland Ecosystem Restoration Project (UERP), which is housed at Tall Timbers. For more information on UERP, visit talltimbers.org/gb-UERP. Tall Timbers has also agreed to house both Coalition employees by providing them office space and administrative support. "Coalition activities will energize restoration efforts by our agency partners in Florida and Georgia, and hold great promise to recover quail populations and other grassland birds on public lands," said Tall Timbers President/CEO Bill Palmer.

Both states' wildlife and conservation agencies have similar duties and responsibilities as outlined in the agreement. The FWC and GADNR are charged with providing leadership for youth shooting sports and quail habitat projects, and for the planning, implementation, monitoring and auditing of such projects and events.

"Only through collaborative efforts like the Florida/Georgia Quail Coalition will we be able to reach our conservation goals of more substantial habitat restoration for bobwhite quail and all species that depend on early successional habitat," said GADNR's Wildlife Resources Division Director Dan Forster. "Conservation and hunting go hand in hand so through supporting youth shooting sports programs and education we will complete the cycle that leads to success."

"I feel really good about the partnership we have created here and the level of leadership," said FWC Executive Director Nick Wiley. "I am confident that we have the ability and commitment to make some positive changes to help quail restoration in both our states."

Quail Coalition continued on next page —

2014 GA/FL Turkey Invitational: March 27-28 Turkey hunters raise funds for Tall Timbers Game Bird Program

On March 27, the annual GA/FL Turkey Invitational Kick-off Dinner was held for the ninth year in a row at scenic Osceola Plantation, near Thomasville, Georgia. Dr. James Earl Kennamer, a leading wild turkey scientist and long-time Coordinator of Conservation Programs for the National Wild Turkey Federation (NWTf) talked some turkey to the crowd, stating that even if you don't kill a turkey "it's an honor to be in their presence."

The next morning, the promise of rain didn't deter over 50 teams from taking to the woods in search of a winning gobbler. Judge Ricky Lackey, NWTf Biologist, conducted the weigh-in at Seminole Plantation. As usual, there were memorable moments ranging from missed chances to one contestant bagging a season limit with one shot! Team Chace Wheeler and Bubba White won the overall invitational with a "boss" gobbler from Foshalee Plantation. Team Stephen Demott and Randy Floyd took second place, while third place went to perennial winners and three-time champions Walter Hatchett and Travis Sherman.



First place winners, Bubba White and Chace Wheeler with their Foshalee gobbler.



L-R, first place winners, Bubba White and Chace Wheeler; standing, 3rd place winner, Travis Sherman; 2nd place winner, Randy Floyd; far right, 3rd place winner Walter Hatchett.

We had 12 youth teams this year. Christopher Watt won the Youth Division for a third time. This year the winning youth team took home a Mossberg SA20 Bantam shotgun donated by South Georgia Outdoors! Hillman Smith was a close second with a tremendous turkey that won the Calcutta, a whopping 24 pounds, 7 ounces!

Thanks to Osceola and Seminole Plantations for their hospitality and to steering committee members John Daniels, Bryan Knox and Robbie Green for helping pull together a great year! The committee is considering a Friday dinner/Saturday event next year to attract even greater youth participation.



Above, L-R, 3rd Place Youth Division winner Grant Gatson with his father Greg Gatson behind him; center Jason Loper with Youth Division winner, Christopher Watt at far right.

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To increase and enhance quality quail habitat, money for projects will be spent on frequent small-scale prescribed burning, removing oak trees, roller-chopping dense palmettos and hardwood thickets and thinning rows of planted pine trees. The result of such management practices will create a forest and canopy that is more open, allowing sunlight to reach the forest floor, so that native grasses and weeds can grow, which provide quail food and cover from predators.

For more information, contact Talbott Parten with Quail Forever at tparten@quailforever.org.

Life on the Edge ... Building Habitat Cooperatives for Improved Bobwhite Population Stability

In the Mid-Atlantic (Maryland, Virginia, Delaware, and New Jersey), the northern range of bobwhites, birds were once ubiquitous, but now there are few to no bobwhites on the landscape. As a result, application of typical habitat management does not always result in increased bird numbers. And, where remnant populations do exist, they are much more susceptible to fluctuations in weather and other potential factors impacting bobwhites.



Entire coveys comprised of radio-tagged and unmarked birds were found frozen in the snow.


For example, during the first year of a research project on a Maryland site in 2009-2010, a series of severe winter storms dramatically altered our ability to study bobwhites in the Northeast. Following these winter storms, prolonged snow

cover blanketed the region for more than three weeks in some places. As a result, bobwhites were nearly extirpated from the region in less than a month where bobwhite mortality on the study site was greater than 97%! At the same time, a radio-telemetry study being conducted by Ohio State University documented poor survival, although not as dramatic (75-80% mortality), which resulted from the same snow events. This catastrophic event opened our eyes to the gravity of inclement winter weather and the vulnerability of bobwhite populations in the northernmost portions of their range.

Recently, we combined our data from the Maryland study site with Ohio's data and learned that habitat such as woody structure is critically important to over-winter survival during harsh snow events. We found the length of time snow cover was on the ground was the most important factor linked to bobwhite survival compared to temperature or snow depth. Increased exposure of birds resulted in increased mortality but starvation/thermoregulation was also a major issue – we found entire coveys frozen in the snow. Bobwhites were not able to access food as a result of extended snow cover. However, as a result of careful habitat management, elimination of hunting on these sites, and relatively mild winters since 2010, bobwhites have been able to slowly come back.

Supplemental feeding may also reduce the impacts of winter weather and extended snow cover.

One of the major obstacles to successful management and long-term bobwhite population stability in Mid-Atlantic States is the lack of large-scale habitat management. In attempt to improve population stability and reduce the overall impacts of winter weather on bobwhites, Tall Timbers is working with the Center for Environment and Society at Washington College in Chestertown, Maryland and its Chester River Field Research Station; New Jersey Audubon; Maryland Department of Natural Resources; Virginia Department of Inland Game and Fisheries; multiple academic institutions; and private land owners to establish habitat cooperatives.


Habitat cooperatives may be comprised of either or both public and private lands sharing similar land management objectives and goals. Landowners in cooperatives can work together through intentional management to increase habitat that is currently limiting, such as woody cover. The intent of our involvement is to encourage enhanced bobwhite management, while building contiguous land holdings among working landscapes and, therefore, increase the efficiency of management through large scale impacts on bobwhite populations. 



Over-winter cover is a major limiting factor in the Eastern Shore of Maryland and other Mid-Atlantic states. Therefore, the establishment of winter cover through field borders and hedgerows, to break up large farm fields, as seen in this picture, is critical to bringing back bobwhites in this region.

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part of Tall Timbers. Today 100% of properties spread supplemental feed year-round, which increases quail survival and production, versus none in 1994 (although most used feeders – remember them!). In 1994, food plots for quail were planted by 97% of managers, versus 29% in 2009. Nest predator control increased from 14% to 85% in 2009. In 1994, few properties saw more than 5 coveys per hour; the standard was 3-4. Today the range is typically 4 to 12. The list goes on, but the point is – management has adapted and the results are impressive.

We also spent a significant amount of effort on understanding brood ecology, which is still a relatively unknown portion of quail ecology. While we understand general habitat management for broods, there is much to be done in this area for refined management for chicks, whose survival is critical for sustaining bobwhite populations. New research on chick survival begun by Theron Terhune, my successor as Director of the Game Bird Program, will shed new light on this issue, and is a major focus of our research in the coming years. We are fortunate to have hired Theron. He has been a scout on plantations, a research technician, Outreach Coordinator, and now head of a keystone program at Tall Timbers. He is a dedicated game bird scientist and hunter. I know the program is in good hands – Tall Timbers will continue to be a leader in game bird research. Thank you all for your support, and I look forward to helping Tall Timbers continue to serve the fabulous plantations of the Red Hills, and Albany and beyond. 

2013/2014 Game Bird Research Team

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Bud Bostick, MS, Biologist
William E. Palmer, PhD, Director of Research, President/CEO
Eric Staller, MS, Natural Resources Coordinator

Research Associates

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James A. Martin, PhD, Mississippi State University
Chris Williams, PhD, University of Delaware

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Dan Small, MS, Chester River Field Station, Center for Environment and Society
Marc Puckett, MS, Virginia Department of Game and Inland Fisheries
John L. Seidel, PhD, Washington College, Center for Environment and Society
Roger Shields, MS, Florida Fish and Wildlife Commission

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Aaron Griffith, MS Candidate, University of Tennessee
Ryan Haley, MS Candidate, Delaware State University
Mark McConnell, PhD Candidate, Mississippi State University
Diana McGrath, MS Candidate
Will Macaluso, MS Candidate, University of Delaware
Kellie Phillips, MS Candidate, University of Georgia
Seth Sofferin, MS Candidate, University of Georgia
Seth Wood, MS Candidate

Research Interns

Nathan Applegate	Skylar Keller
Alyson Bleich	Kyle Lunsford
Caty Briggs	Brent Mills
Joanna Ennis	Margaret Rhode
Beth Foley	Landon Robinson
Alex Jackson	Curtis Walker
Madison Jones	

Albany Quail Program (AQP)

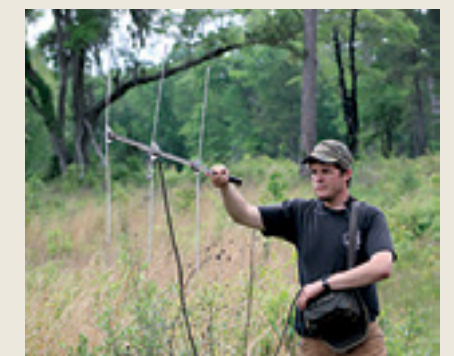
Clay Sisson, Director
Sherwin Smith, Biologist

Dixie Plantation

Randy Floyd, Land Manager
John Michael McCormick, Wildlife Technician

Upland Ecosystem Restoration Project (UERP)

Greg Hagan, FWC Northern Bobwhite and UERP Coordinator
Sarah Brown, Public Lands Research and Monitory Biologist
Bethany Wight, Monitoring Crew Leader
Shelby Thompson, Monitoring Technician
James Tucker, Monitoring Technician



Graduate student Seth Wood.

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Quail Management Research Needs Your Support

Tall Timbers has a long and rich tradition of leadership in quail research. Beginning with Herbert Stoddard's, study of quail life history nearly 80 years ago, Tall Timbers has led the charge to gain new knowledge that can be used to improve quail management. Today novel research is greatly needed to better understand how to deal with the many new challenges and obstacles faced when managing for bobwhites. The Game Bird Program continues to be an innovative leader in research and management of bobwhites, and serves as an important resource for those who value the future of sustainable populations of wild birds. The Game Bird Program now encompasses both the Tall Timbers Quail Management Research (QMR), which conducts research on Tall Timbers, Dixie Plantation and surrounding quail properties; the Albany Quail Project (AQP), which conducts research on quail lands around the Albany, Georgia area; and the South Carolina Quail Project (SCQP).

We hope you will consider making a contribution to the Game Bird Program. Our fundraising goal is \$650,000 in 2014 to support the QMR, AQP, and SCQP projects. If you have supported these programs in the past, please continue to do so as these programs depend greatly on your annual donations. Please earmark your contributions for the appropriate program.



Biologist Bud Bostick and intern Brent Mills aging a bobwhite.

If you love these birds as much as we do, please take a moment to fill out the enclosed envelope and mail it today, or visit our website <http://talltimbers.org/member-psg.html> and make your gift online. 🐦

*Thank you for your continued support of
Tall Timbers and quail research!*