

Speaker Abstracts

1st Annual Texas Quail Study Group



Sustaining the “Quail Wave” in the Rolling Plains of Texas

October 6-8, 2004
Stonewall County Civic Center
Aspermont, TX

Sponsored by:

Bobwhite Brigade
Quail Unlimited
Stonewall Co. Chamber of Commerce
Stonewall SWCD
Texas Cooperative Extension
Texas Parks & Wildlife Department
Texas Wildlife Association
USDA Natural Resources Conservation Service

Co-sponsored by:

Bamert Seed Company
Texas Farm Bureau
West Texas Ranches

Special thanks to:

Snipes Ranch
Box P Ranch
Eddins Ranch

Wednesday, October 6
Stonewall County Civic Center

- 3:00 Registration opens
- 6:00 Welcome, *Bobby McGough*
- 6:15 Economic Impacts of Quail Hunting - Show me the Money!
Dr. Jason Johnson
Economic Expenditures of Quail Hunters at Matador WMA
Chip Ruthven
- 7:00 DINNER
- 7:30 Comments, *John Parker*

Thursday, October 7
Stonewall County Civic Center

- 8:00 Coffee & Sweets
- 8:30 Sustaining the Quail Wave in the Rolling Plains
Dr. Dale Rollins
- 8:45 Keynote Address:
Usable Space: The Foundation of Quail Management
Dr. Fred Guthery
- 9:30 The South Texas Quail Project
Dr. Fidel Hernandez
- 10:15 BREAK
- 10:30 Quail and Land Values
Butch Nelson
- 10:50 The Quail Craze: Fad or Fact?
Paul Melton
- 11:15 Ranching for Quail in the Rolling Plains Panel Discussion
Don Aiken
Rory Burroughs
Linda Campbell
Jerry Bob Daniel
Rod Hench
- 12:15 LUNCH
- 1:00 Depart for Snipes Ranch

- 1:30 **Stop 1. Creating Usable Space**
Welcome & Ranch Objectives, *Rick Snipes*
Evaluating Quail Habitat, *Kent Mills & Ricky Linex*
Using Cattle as a Tool to Manage Quail Habitat, *Dr. Dale Rollins*
- 2:30 **Stop 2. Habitability & Huntability/Brush Sculpting**
Shinnery oak, *Rick Snipes*
Mesquite, *Paul Melton*
Prescribed Burning, *Chip Ruthven*
Planning & Implementation, *Rory Burroughs*
Texas Quail Index, *Rebel Royall & Ben Taylor*
- 5:15 **Stop 3. Box P Headquarters**
(concurrent sessions to be repeated twice at 20 minute intervals)
The Texas Quail Restoration Plan, *Steve DeMaso*
The Fisher County Quail Project, *Jason Brooks*
Farm Bill Question/Answers, *Ricky Linex & Justin Corzine*
Key Plants for Quail, *Bobwhite Brigade Cadets*
- 6:00 DINNER – Pig in the Ground, *(coordinated by Johnnie Hudman)*
- 7:30 ADJOURN

Friday, October 8
Box P Ranch

- 7:45 Coffee & Cookies
- 8:30 **Stop 1. Welcome and Ranch Objectives**
Bill Prestage & Matt Lindsay

Why is Carolina Re-locating to Texas? *Jerry Eddins*
- 9:00 **Stop 2. Habitat Management**
Brush Sculpting, *Matt Lindsay*
IPT for Mesquite Control, *Rebel Royall*
Prickly Pear Options, *Rocky Vinson*
Huntability as a Management Concern, *Roy Wilson*
- 10:30 **Stop 3. Supplementing Food**
Feed, Feeders & Food Plots, *Matt Lindsay*
Guess Who's Coming for Dinner? *Dr. Dale Rollins*
- 11:00 **Stop 4. Water Management**
Waterers, *Matt Lindsay*
Water Harvesting, *Don Aiken*
Sprinklers, *Rick Snipes*
- 11:45 Closing & Evaluation
- 12:00 ADJOURN

Speakers

Don Aiken, Co-owner, Aiken Ranch, Roscoe

Jason Brooks, Grad. Research Asst., College Station

Rory Burroughs, Private Consultant, Comprehensive Land Mgmt., Rotan

Linda Campbell, Technical Guidance Program, TPWD, Austin

Justin Corzine, Soil Conservationist, NRCS, Aspermont

Jerry Bob Daniel, Owner, Circle Bar Ranch, Truscott

Steve DeMaso, Upland Game Coordinator, TPWD, Austin

Jerry Eddins, Owner, Eddins Ranch, Aspermont

Fred Guthery, Quail Research Scientist, OSU Dept. of Forestry, Stillwater, OK

Rod Hench, Owner, Wild Wings Ranch, Hermleigh

Fidel Hernandez, Assistant Professor, Ceasar Kleberg Wildlife Research Institute, Kingsville

Johnnie Hudman, Manager, Stasney's Cook Ranch, Albany

Jason Johnson, Economist, TCE, San Angelo

Matt Lindsay, Manager, Box P Ranch, Jayton

Ricky Linex, Biologist, NRCS, Weatherford

Bobby McGough, Judge, Stonewall County, Aspermont

Paul Melton, Owner, Melton Ranch, Roby

Kent Mills, Nutritionist/Tech Service, Hi-Pro Feeds, Hermleigh

Butch Nelson, Land Appraiser, Nelson Farm & Ranch, Abilene

John Parker, Commissioner, TPWD, Lufkin

Bill Prestage, Owner, Box P Ranch, Jayton

Dale Rollins, Wildlife Specialist, TCE, San Angelo

Rebel Royall, County Extension Agent, TCE, Aspermont

Chip Ruthven, Biologist/Manager, TPWD/Matador WMA, Paducah

Rick Snipes, Owner, Snipes Ranch, Aspermont

Ben Taylor, Research Associate, TAES, San Angelo

Rocky Vinson, County Extension Agent, TCE, Albany

Roy Wilson, Manager, Texas Best Outfitters, Haskell

WEDNESDAY, OCTOBER 6

ECONOMIC IMPACTS OF QUAIL HUNTING - SHOW ME THE MONEY!

JASON JOHNSON, Extension Economist, Texas Cooperative Extension Service, 7887 U.S. Highway 87 North, San Angelo; e-mail jljohnson@tamu.edu

Abstract: Hunting expenditures in Texas annually exceed \$1.5 billion. In 2001, more than 8% of Texas hunters identified quail as preferred species, but quail hunting accounted for less than 4% of Texas hunting days. While the typical Texas hunter spends less than \$215 per year to pursue small game (17% of their annual hunting expenditure), there exists a portion of small game hunters willing to spend more than \$10,000 per year pursuing quail. Attracting this caliber of high-spending hunters is one economic development strategy available to those rural counties and regions with huntable quail populations. A description of the demographic and economic characteristics of the “passionate” quail hunting population will be detailed. Suggestions for landowners and rural entrepreneurs hoping to attractively position themselves to these hunters will be provided. This presentation further highlights the far-reaching importance of hunting to the regional and Texas economy.

ECONOMIC EXPENDITURES OF QUAIL HUNTERS AT MATADOR WMA

CHIP RUTHVEN, Matador Wildlife Management Area, Texas Parks and Wildlife Department, Paducah; e-mail donald.ruthven@tpwd.state.tx.us

BILL ADAMS, Matador Wildlife Management Area, Texas Parks and Wildlife Department, Paducah; e-mail robert.adams@tpwd.state.tx.us

Abstract: Impact of hunting expenditures in Texas as a whole is well known; however, there are few data on the impact of hunter’s expenditures at the local level. A sample (N = 750 hunters) of hunters who hunted quail on the Matador WMA, a public hunting area, during the 2002-03 season were surveyed to assess their impact on the local communities of Paducah and Childress. Hunters spent an average of 3-4 days on the Matador WMA and harvested 1.8 quail per day. Average age of hunters was 47; 82% hunted over dogs. They traveled an average of 305 miles from their place of residence to the Matador WMA. Hunters spent an average of \$307.32 in local communities while in pursuit of quail on the Matador WMA. Considering that the recreational dollar turns-over 1-3 times within the community, quail hunters on the Matador WMA brought in \$230,490 to \$691,470 to local communities.

QUAIL MANAGEMENT EFFORTS AT TEXAS PARKS & WILDLIFE DEPARTMENT

JOHN D. PARKER, Commissioner, Texas Parks & Wildlife Department, 4200 Smith School Road, Austin; e-mail tthc@consolidated.net

Abstract: Hunting, fishing, and camping in Texas have become big business. This is a fact that cannot be denied by anyone. What is happening with our salt-water fishing people? I'll tell you what is happening. For the past two years Texans have been flocking to our bays. Texans have been buying salt-water fishing licenses at the rate of more than 6,000 per month for more than the past 2 years! Why? Because of the out of the box thinking by 2 of my heroes! Perry Bass and Jack Cowan were the integral reason for this phenomenon. One day these men decided that if redfish and speckled trout were ever coming back to Texas somebody was going to have to do something about their habitat. And they did it!

Today, the quail hunting community is in the formative years of a plan of action that will deal with the 3 most vital and essential things that quail must have to live on any given piece of land. Those three things are Habitat, Habitat, and Habitat! You know those little birds are not extremely demanding, but they do demand what they need to exist. It is very simple, a dining room, a living room, a bedroom, and once and sometimes twice a year they need a delivery room! But, if they are denied any single one of those rooms in "their house" or their habitat, they will leave!

Over the past several years the call has come from the quail community, "What's happening to the quail"?, "Where have the quail gone"?, "I've got fire-ants on my land or lease"!, and all the other complaints that our wildlife people, and the feed-store people have heard! Well, it has finally sunk in. What our TPWD biologists and our Texas Cooperative Extension people have been saying for years has finally sunk in! Habitat, Habitat, and Habitat. Let's provide our quail with a dining room, a living room, and a bedroom, and once or twice a year, let's not let that old mama cow eat that bunch of bluestem down to where it's just a half-inch high dome so we can provide that delivery room!

Now, I have maybe oversimplified a lot of this home-spun wildlife biology, but what you are going to see tomorrow and the next day will, as my Mother always said, "The proof of the puddin' is right square in the eatin'"! Over the past 2 years TPWD has realized the time for quail is NOW! Since then, TPWD has begun to develop a proactive strategy to deal with what is happening with quail in Texas, what is happening with the land whereon we find quail living, or NOT living, what is happening with the people who own the land where quail live, and what is the thinking of the people who spend huge amounts of money in pursuit of this little bird. TPWD's approach to its proactive strategy has been one of partnership. Several state, federal and private conservation organizations (including private landowners) have come together to form the Texas Quail Conservation Initiative (TQCI). And once the "quail people" of Texas saw that we were serious, then EVERYONE got excited!

**THURSDAY, OCTOBER 7
STONEWALL COUNTY CIVIC CENTER**

SUSTAINING THE 'QUAIL WAVE' IN THE ROLLING PLAINS OF TEXAS

DALE ROLLINS, Professor & Extension Wildlife Specialist, Texas Cooperative Extension, San Angelo; e-mail d-rollins@tamu.edu

Abstract: The Rolling Plains have historically provided some of the best, and most stable, northern bobwhite (*Colinus virginianus*) populations anywhere. Historically scaled quail (*Callipepla squamata*) were common to abundant over much of the Rolling Plains, but populations of scaled quail decreased dramatically in the late 1980s, and have been slow to reclaim their historic range. The combination of abundant quail (the Rolling Plains have a long-term mean of 22.3 birds/20 miles compared to 21.7 for South Texas), hospitable terrain which allows easy walking among scattered brush, and cooler weather for most of the quail hunting season than South Texas, combine to make the Rolling Plains a favorite destination for quail hunters. Hunting leases in the Rolling Plains---which averaged about \$2.20 per acre in 1999 dollars---and land prices for quail ranches---which averaged about \$300 per acre in 2002 dollars---cost less than half of what similar properties do on the productive quail areas in South Texas. Rainfall and rangeland management for livestock are the primary factors that affect quail habitat in the Rolling Plains. Range management practices (e.g., brush management, grazing management) can be prescribed to benefit quail habitat, but a large part of potential quail range in the Rolling Plains suffers from overgrazing and excessive brush control. Farm Bill policies have had a major impact on dryland agriculture in this region. The impacts of these policies on bobwhites are mostly undocumented at this time. Income generated from quail hunting in this region currently rivals or exceeds income generated from grazing leases. Accordingly, more landowners are beginning to temper traditional land management goals and incorporate more quail-friendly practices such as brush sculpting and reduced stocking rates. The current demand for quail hunting provides an excellent opportunity to promote---and subsequently adopt---management practices that will hopefully sustain the heritage of quail hunting in this region for the future. For an expanded version of this presentation see http://texnat.tamu.edu/symposia/Sustaining_Quail_Wave.pdf.

RECENT RESEARCH FINDINGS ON BOBWHITE BIOLOGY AND MANAGEMENT

FRED S. GUTHERY, Department of Forestry, Oklahoma State University, Stillwater, OK; e-mail forfsg@okstate.edu

Abstract: This abstract covers selected research findings on bobwhites that will appear in technical articles published during 2004 and 2005. The work involved collaboration with biologists from Oklahoma, Texas, Kansas, Missouri, and Arizona. (1). Based on data from the Packsaddle Wildlife Management Area in western Oklahoma, the first incubation attempt contributes 66% of total annual chick production, the second about 32%, and the third about 2%. (2). Radio transmitters apparently handicap bobwhites; therefore, transmitter-equipped birds

provide unreliable (too high) estimates of death rates in a population. (3). Under fixed (same from year to year), liberal (long seasons and high daily bag limits) harvest regulations, the quail harvest in a state tends to be self-accelerating; i.e., the harvest rate goes up as the population goes down. The average hunter in the field during population lows is about 3 times as skilled as the average hunter during population highs. (4). After mid-June, incubating bobwhites are in thermal stress for about 1.5 hours each day. More than 90% of incubating bobwhites go into thermal stress at air temperatures at or above 95 °F. (5). Evidence indicates that when air temperature reaches bobwhite body temperature (108 °F), entire pastures become thermally intolerable for bobwhites, including pastures with excellent cover.

THE SOUTH TEXAS QUAIL RESEARCH PROJECT: WHAT HAVE WE LEARNED?

FIDEL HERNÁNDEZ, Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville, Kingsville; e-mail fidel.hernandez@tamuk.edu

Abstract: The South Texas Quail Research Project was initiated in August 1998 as a long-term radiotelemetry study with a primary focus of documenting bobwhite survival and nesting ecology. In 1999, the project was expanded to include additional demographic variables (e.g., movements, home range, and bobwhite density) as well as ecological factors (e.g., predator abundance, habitat, and weather) influencing bobwhite populations. The South Texas Quail Research Project is located on the Encino Division of King Ranch in Brooks County. Bobwhites are trapped, radiocollared, and monitored throughout the year in order to maintain at least 60 radiocollared bobwhites on the ground at all times. This fall will denote the 5-year anniversary of the project. Since its inception, we have radiocollared over 1,000 bobwhites and have located more than 250 nests. The long-term nature of the project has allowed us to monitor bobwhites both during the usual dry conditions of South Texas, as well as during one of its wettest periods in the past 20 years. Herein, I present notable findings and interesting field observations emerging from this 5-year data set.

THE QUAIL CRAZE: FAD OR FACT?

PAUL MELTON, Melton Ranch, Box 5141 Abilene; e-mail melton.paul@att.net

Abstract: The amount of attention, interest, and investment both of time and money in all aspects of quail, and anything pertaining to them, has never been greater. This study group is a perfect example. Although always studied in a limited and localized manner historically, (Stoddard, Lehman, Jackson, et al.) never before in history has so much attention, research and interest in quail been generated on such a large scale as now seen. What drives this new quest? The changing ownership and land use goals now seen in South Texas and across the Rolling Plains and Eastern Panhandle are strong evidence that the influence bobwhites have exerted will last much longer than a fad or “phase”. The commitment in financial resources, and management goals of sportsman, owners or leaseholders will sustain this heightened quest for even more knowledge and information about the successful management of the species for years to come.

RANCHING FOR QUAIL IN THE ROLLING PLAINS (PANEL DISCUSSION)

QUAIL MANAGEMENT AT AIKEN RANCH

DON AIKEN, Aiken Ranch, Roscoe, Texas; e-mail kaiken@morganre.com

Abstract: The Aiken Ranch consists of 3,700 acres in southwestern Fisher County. Our experience reflects that quail, with proper food, do not range much more than about 200 acres. We have quail feeders located throughout the total property spaced so that approximately 75 acres is served by each feeder. With the feeders, spreader dams, roadblocks and food plots we effectively cut their range to about 20 acres. Feeders and food plots concentrate quail and we feel that concentration is very important during severe weather because of their ability to covey and maintain proper body heat. The 320 acres where the headquarters are located are used for conditioning cattle and is divided into 4 pastures that are all connected to the working pens and water lot. These 320 acres are off limits to all hunting and can be used for restocking if needed. The remaining land is basically divided into 4 pastures and are grazed about 45 days each and then rested for some 135 days. We are very specific about livestock grazing numbers and try to vacate the ranch of livestock during spring and summer growing months. If drought conditions exist, we further restrict stocking numbers. Our brush control or sculpting consists of removing mesquite and cedar in strips that range from 60 to 300 feet in width and leaving an equal number of feet with cover for game. We also sculpt brush by clearing sides of hills and attempt to leave brush undisturbed along creeks, headers and low-lying areas. Again, mesquite and cedars are the only trees removed. All other trees, brush and forbs are left for cover. Food plots are another important tool in wildlife management as well as the feeders, brush sculpting, spreader dams, roadblocks and grazing management. Food plots increase not only cover for wildlife but also increase the nutritional value of rangeland. Properly fenced they also create a safe haven for the wildlife.

RANCHING FOR QUAIL IN THE ROLLING PLAINS—HAWKS DOUBLE MOUNTAIN RANCH

RORY BURROUGHS, Comprehensive Land Management, P.O. Box 492, Rotan;
roryb@complandmgmt.com

Abstract: Hawks Double Mountain Ranch (HDMR) is located in Fisher and Kent Counties. The main objective for the ranch is to create and maintain the best possible habitat for quail. This will be accomplished by addressing all 4 components for habitat: food, cover, water, and usable space. Preparing for “droughty” times and extreme weather are important for insulating the ranch’s quail population through the boom and bust times. To provide food for quail HDMR will implement 4 practices: disk strips, food plots, supplemental feed, and bugging areas. Disk strips installed throughout the ranch on a 2-year rotation should create weedy areas. Food plots will be planted across the ranch with methods to water them during dry times to ensure success. Supplemental feeding will be done when necessary; if there is a bad winter storm and or during

extended drought. Bugging areas are created from water harvesting techniques and overflows or seeps along water lines. The moisture in these areas will produce bugs and weeds, especially during dry times. Good herbaceous cover for quail can be maintained through flexible livestock grazing and prescribed burning. Water availability is being increased across the ranch for both livestock and wildlife. Wells have been added and waterlines installed to get water to areas of the ranch without water. In level to rolling sites on the ranch, water lines and troughs with overflows are set at ½ mile intervals so livestock and wildlife are never more than ¼ mile from a reliable water source. Usable space for quail is being designed through sound brush management. Areas will be sculpted and brush species preferred by quail will be protected and enhanced; i.e.: wild plum and lotebush. The ranch is also exploring options to plant additional species beneficial to quail. The largest obstacle to many of the practices the ranch has started is accessibility. The ranch is very diverse in its habitat types divided by deep canyons. The canyons have prevented the installation of some wells because a drilling rig cannot get access. In addition to topographic features, past brush management practices have affected flat to rolling sites across the ranch. Most, if not all, of the flat areas on the ranch were root plowed in the late 1960's and early 1970's. Nothing was done following root plowing and as a result there are stands of dense prickly pear or extremely rough areas littered with debris. Before much sculpting can be done, prickly pear will need to be brought to a manageable level and sites should be leveled and cleaned up to improve range quality.

QUAIL ON WILD WINGS RANCH

ROD HENCH, Wild Wings Ranch, Snyder; e-mail rodmaryh@aol.com

Abstract: Our ranch is located east of Snyder in Scurry County and is about 6,000 acres. We graze some cattle during the non-growing season but manage the ranch mainly for wildlife with an emphasis on quail. We are new at this compared to others on the panel. Our first concern after purchasing was “not to screw it up.” We’ve asked many questions and found there are knowledgeable people who are willing to help. Once you gather the needed information you must then pick and choose what is best for you. The first thing we did was address the water issue. We have 3 springs that have never gone dry. There were some good tanks and to that we added several small, deep tanks with seeded diversions. There are 5 windmills or solar-powered pumps that flow into cattle troughs and then into dirt tanks for the wildlife. We have added hundreds of spreader dams to hold the water that are also seeded. There are 2 large dams at the start of our main canyon that hold a lot of water. Finally, we have added many road berms to help control erosion and hold water. These elements have allowed us to help hold water on the ranch while creating hundreds of small food plots.

Choosing the right equipment is very important. We use an excavator for our main grubbing tool. We have added a third middle tooth that helps fracture the ground when it is hard. Our dozer is used for grubbing cedar, raking, ripping up bare ground, and building dams. We run a skid steer with tracks for grubbing small cedar and raking. Other equipment includes a tractor, offset plow, shedder, and broadcaster on an ATV for seeding. We grub 60-yard strips and then leave 40 yards. Within the 60 yards we always leave cover plants and trees. The cover is left to protect the quail from predators. These areas are grubbed, raked, and seeded.

Our food plots are about 10 acres in size and consist of a quail and turkey mix on the outside, milo, native sunflowers, and wheat in the middle. The ranch also has 6 feeders fenced with 100-foot square barbed wire. We have finally made them hog proof.

QUAIL MANAGEMENT ON SMALLER ACREAGES

LINDA CAMPBELL, Landowner, Stonewall County, 6204 Salcon Cliff Drive, Austin;
linda.campbell@tpwd.state.tx.us

Abstract: My husband and I are among a growing number of people who are buying rural land for hunting and other wildlife-associated recreation. Our goal is to restore and enhance our land to benefit a diversity of native wildlife, particularly bobwhite quail. Like many new owners of 500-1000 acre tracks, we are seeking information on ways to develop our habitat to provide maximum hunting opportunity. One of the challenges we face is how to develop brush management techniques that work well on a smaller scale and result in the type of habitat diversity we are seeking. We are interested in learning from and cooperating with our neighbors. We would offer the idea that forming a Quail Management Association, similar to the landowner-driven associations that have worked well in other parts of the state, should be considered as a way to benefit quail populations and landowners with similar management goals.

THURSDAY, OCTOBER 7 SNIPES RANCH/BOX P HEADQUARTERS

QUAIL HABITAT EVALUATION EXERCISE

RICKY LINEX, Zone Wildlife Biologist, Natural Resource Conservation Service, Weatherford;
e-mail ricky.linex@tx.usda.gov

KENT MILLS, Nutritionist, Hi-Pro Feeds, Hermleigh; e-mail kmills@bigcountry.net

Abstract: Evaluating habitat for quail involves assessment of the components of the habitat: cover, space, food, and water. In this exercise we will use a Habitat Evaluation Method that was developed to teach cadets of the Rolling Plains Bobwhite Brigade to assess the value of different types of cover, including nesting cover (large bunchgrasses and/or clumps of prickly pear) and woody cover (brush and shrubs that provide quail protection from both raptor and mammalian predators); abundance of food from both plants and/or insects; availability of water; and interspersed (the mix of the different habitat components to provide for the needs of quail). As a part of the Habitat Evaluation Exercise, we will also suggest management practices to improve the habitat to enhance it for quail survival and productivity, such as prescribed burning, prickly pear control, brush control or sculpting, livestock grazing, food plots, water development, and other measures. The purpose of the exercise is to help you to evaluate your own quail habitat and determine what management measures will be needed to improve your range resource and increase your quail populations.

GRAZING AS A TOOL IN MANAGING QUAIL HABITAT

DALE ROLLINS, Professor & Extension Wildlife Specialist, Texas Cooperative Extension,
San Angelo; d-rollins@tamu.edu

Abstract: Grazing is a double-edged sword as a tool for managing rangelands for quail. Grazing can be used to retard plant succession, thus promoting the lower successional species like doveweed and western ragweed. But overgrazing degrades quail habitat when too much grass is removed. Overgrazing changes the composition, species diversity, and structure---most importantly fewer tall bunchgrasses---of the vegetation. The novice quail manager sees such sites as awash with good food-producing plants such as western ragweed and doveweed, but food is rarely the limiting factor for bobwhites in Texas. Over the next 10 years, I predict there will be growing interest in the idea of prescribed grazing---grazing for the purpose of attaining specific quail habitat management goals---as opposed to traditional use of cattle for generating income. This trend heralds a shift from the historical livestock-grazing paradigm of land use. Having cows and quail simultaneously, and using cattle as a tool to manage quail habitat, are not the same thing. There will always be trade-offs, and the aspiring quail manager should anticipate and understand the pressure points. Higher stocking rates and lower successional stages are recommended for quail in mesic climates (areas receiving more than 35 inches of annual precipitation) whereas lower stocking rates and higher range condition are preferred in more arid

regions, or less productive sites. A lack of bare ground is often cited as a management concern in some areas, but such is rarely the case on rangelands west of the 100th meridian (about a 25 inch precipitation line). A desirable grazing regime for quail must be, above all else, flexible. Weather has a tremendous impact on the amount of forage available for livestock grazing, and the resulting condition of quail habitat. There are no optimal grazing systems, or schemes, for quail habitat, other than the incorporation of flexible stocking rates. To optimize quail habitat, I recommend a light-stocking rate, perhaps 30-50% of the NRCS-recommended stocking rate, either in a continuous or slow rotational grazing scheme, such as a Merrill four-pasture, three-herd system. A limited amount of spot or patch grazing is beneficial, and helps promote spatial and floral heterogeneity across the landscape.

MESQUITE MANAGEMENT

PAUL MELTON, Melton Ranch, Box 5141 Abilene; melton.paul@att.net

Abstract: The management of mesquite has evolved through many phases over the course of the past 50 years. The area of management we will deal with specifically in this presentation is both unique to this site, as well as generally applicable across the Quail Belts of Texas. This site will show the method used to bring underutilized, yet potentially excellent habitat into maximum quail production and huntability. Methods of treatment and consideration to cost of treatment are key issues for the owner/manager to consider. The use of certain mechanical treatments (in this case roller chopping in a planned sculpting pattern) will provide one of the biggest "Bang for the Buck\$" and one of the quickest treatments to show desired results (more useable area to both quail and sportsman) will be seen at the Snipes Ranch. The goals of mesquite management and treatment are indeed shifting as primary land use also changes.

RESPONSE OF WOODY AND HERBACEOUS PLANTS TO PRESCRIBED BURNING

CHIP RUTHVEN, Matador Wildlife Management Area, Texas Parks and Wildlife Department, Paducah; e-mail donald.ruthven@tpwd.state.tx.us

Abstract: Prescribed burning is becoming a more popular tool to manage rangelands throughout the Rolling Plains. The Rolling Plains is a fire dependent ecosystem and the flora and fauna of the region have evolved with fire. With adequate fuel loads prescribed fire can be an effective tool in managing woody vegetation. Most woody plants of the Rolling Plains are seldom killed by fire and will resprout following fire. Low intensity fires can be used to "trim" the lower branches off mesquite and other tall woody plants to open up canopies and promote herbaceous vegetation in the understory. In some cases prescribed fire can effectively kill some species of cacti such as pricklypear and tasajillo. Winter or cool season fires can be equally effective in controlling woody vegetation as summer or warm season fires. Grasses can quickly recover and may increase following winter burns, whereas grasses are slower to recover following summer fires. Forbs can respond similarly to both winter and summer fires, with warm season annuals such as doveweed and perennial forbs including dayflower and ground cherry increasing following fires. The positive effect of prescribed fire on annual forbs only persists through the

first growing season post burn while the benefit to perennial forbs can persist for several growing seasons.

PLANNING AND IMPLEMENTATION

RORY BURROUGHS, Comprehensive Land Management, Rotan; e-mail rory@complandmgmt.com

Abstract: The two keys to planning and implementing a brush sculpting project are: establish goals for the property and effectively communicate those goals. Communication between everyone involved in the planning and implementation of that plan is vital for success. Planning is essential to ensure that the goals are attainable. Inventory available resources such as brush, capital, ranch infrastructure, soil types, available equipment, water resources, wildlife populations on the property, livestock, time and labor to implement the plan(s). Identify options for treatments. Plans can use any one or combinations of options, such as prescribed burning, mechanical, biological, and chemical controls in broadcast or individual plant treatments. Do not be shortsighted when making plans; be sure to evaluate long-term effects of the various treatments. Follow-up treatments are necessary to extend and maintain the effective life of any treatment. Understand that brush control is a process, not a project. With available resources and treatment options identified, plans can be detailed and customized to improve the ranch. Before physically starting any projects, take time to review your goals. This review ensures that implemented practices will help to achieve your goals. During the review process, check field sites and identify important and valuable plants. Your plans should be reviewed by individuals experienced in these fields for feedback. If it is possible, locate and tour examples of the treatments you have selected. Contractors and neighbors are valuable resources for finding examples. Touring similar examples puts the potential treatments, sizes, and responses into better perspective because simply discussing acreages and distances can sometimes be difficult to visualize. Patience and communication are critical during this stage. “Don’t get into a rush to kill brush.” It is much easier to remove more brush at a later time than it is to replace brush. Explaining this aspect to ranch personnel and potential contractors keeps all parties on the same page.

The physical work of implementing one’s plan should begin only after plans have been made, reviewed, and discussed with everyone involved. Continued communication on a daily basis is necessary once construction has begun. Updates on progress and potential problems with the projects must be addressed in order to minimize down-time during the implementation phase. Always remember: “If you fail to plan, plan to fail”; AND “plan your work, and work your plan”.

TEXAS QUAIL INDEX

REBEL L. ROYALL, County Extension Agent-Agriculture/Natural Resources, Stonewall County, Aspermont; r-royall@tamu.edu

BEN D. TAYLOR, Extension Associate, Texas Cooperative Extension, San Angelo. E-mail bdtaylor@tamu.edu

Abstract: The Texas Quail Index (TQI) is a long-term (5-year), large scale (involving over 45 counties) demonstration to evaluate various measures of quail abundance as predictors of quail reproduction and hunting success. The goal of the program is to develop practical management strategies to sustain or increase quail populations. Cooperators learn how to count quail-related habitat variables (e.g., nest site availability) by using various indices. In that sense, the TQI is similar in function to the Standardized Performance Analysis (SPA) that has been useful in helping beef producers analyze their individual operations. This is the third year of the 5-year program, so data herein should be considered preliminary. To date there have been 46 counties and 7 Wildlife Management Areas involved in the project. Over the next 2 years, we will examine the database for patterns among those sites, and across years, that have consistently good, or poor, quail abundance. These guidelines should help identify Best Management Practices (BMPs) that can be implemented at other sites. Funding for this effort was provided by the State of Texas (Quail Decline Initiative funded in FY02; renewed in FY 04) and Texas Council of Quail Unlimited. Additional details on the TQI are available at <http://teamquail.tamu.edu>.

TEXAS QUAIL CONSERVATION INITIATIVE

STEVE DEMASO, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin; e-mail steve.demaso@tpwd.state.tx.us

Abstract: The Texas Quail Conservation Initiative (TQCI) includes northern bobwhite, scaled quail, Gambel's quail and Montezuma quail. However, due to a lack of basic population and ecological information regarding Gambel's and Montezuma quail in Texas, population goals and habitat objectives are not included for these 2 species in this version of the TQCI. From the early 1980s to the late 1990s, the fall bobwhite population in Texas declined from 20 million to 5 million birds (75.0%). Scaled quail fall populations have declined from 6.6 million to 2.2 million birds (66%). The Breeding Bird Survey (BBS) shows a decline in Texas bobwhite breeding numbers at a rate of 5.6% per year from 1980 to 2002. Over the same time period scaled quail breeding numbers declined 2.9% per year in the Shortgrass Prairie and 12.9% per year in the Central Mixed Grass Prairie. For some individual Bird Conservation Regions (BCRs) in Texas, the quail decline is even greater. The BBS and harvest statistics suggest that conservation action is needed to stabilize quail populations in Texas.

The Initiative is a step-down version of the Northern Bobwhite Conservation Initiative (NBCI), which was prepared by the Southeast Quail Study Group Technical Committee at the request of the Directors of the Southeastern Association of Fish and Wildlife Agencies. The charge issued

to the committee was to develop a quantitative, habitat-oriented plan to restore bobwhites to a density during the baseline year 1980. The TQCI follows that same charge, and is organized to delineate population and habitat objectives for northern bobwhite and scaled quail in the eight BCRs that comprise Texas. This approach was selected to facilitate coordination and cooperation with other bird management plans, e.g., Partners in Flight (PIF), North American Waterfowl Plan, etc.

The scope of the TQCI is enormous. For example, it will require incorporation and changes of land management on between 40 and 100 million acres in Texas to meet the targeted northern bobwhite and scaled quail population goals. An accurate and efficient monitoring system to track whether quail populations will respond to the implementation of landscape-scale habitat improvements needs to be designed, and tested. The TQCI includes 3 chapters that detail specific quail habitat management practices to be used on agricultural land, grasslands, and forests, and one chapter outlining the approaches to be taken to implement the Initiative. Also, sections covering implementation strategies for the Initiative, outreach and training needs, management needs, research needs, funding needs and sources, and the development of a Texas Quail Council (TQC) and a Texas Quail Technical Support Committee (TQTSC).

The recently formed TQC serves as a coordinating and oversight Council for quail activities in Texas. The TQC is supported by the TQTSC that reviews and proposes research projects, habitat improvement projects, and provides the TQC with scientific-based recommendations. Harvest records maintained by Texas Parks and Wildlife Department (TPWD) were used to assess the change in bobwhite harvests from the early 1980s to the late 1990s. These data were also used to estimate densities of bobwhites and scaled quail in the pre-hunt population and breeding densities at the initiation of the breeding season. The BBS data from 1978-1999 were used to observe and forecast trends in the breeding population by BCRs, and the entire state. The National Resources Inventory (NRI) generated by the Natural Resources Conservation Service (NRCS) provides detailed land use data at 5-year intervals. Data from 1982 and 1997 were used as sources for land use information used in the Initiative.

Restoring northern bobwhites in Texas to target levels recommended by the NBCI will require the addition of 1.1 million coveys to the current population. Achieving this population will require impacting the habitat on about 100 million acres of crop, hay and rangeland. However, the recommended land management practices would change the primary land use on about 22.0% of this acreage. Rangeland management practices, including prescribed grazing and prescribed fire can improve bobwhite habitat and enhance range productivity. About 75% of the needed coveys could be produced by altering range management practices in Texas. Replacing exotic vegetation with native grasses and forbs, can also improve bobwhite habitat. However, such practices are costly and would likely not occur on a landscape scale without an incentive based program similar to TPWD's Pastures for Upland Birds (PUB). Farm lands (crops, pasture/hay, Conservation Reserve Program) could produce almost 25% of the total number of needed coveys. Notably, the conversion of pasture, hay and croplands to properly managed, diverse stands of native warm-season grasses (NWSG) and forbs. Altering forest management practices to encourage habitat favorable to bobwhites should yield 2-3% of the needed coveys. Important management practices include site preparation to encourage native grass and forb

communities, prescribed fire, thinning to encourage light penetration, and where ecologically sound, increase acreage of longleaf pine.

Scaled quail recovery will require the addition of 196,000 coveys to the current population. Achieving this population will necessitate impacting the habitat on about 47 million acres of farm and rangeland. However, most of the recommended land management practices would be on rangelands and involve planned grazing management. Rangeland management practices, including brush sculpting, prescribed grazing and seasonal grazing deferrals can improve scaled quail habitat, enhance range productivity and produce 90% of all the needed scaled quail coveys. Replacing exotic vegetation with native grasses and forbs, can also improve scaled quail habitat but for the same reasons mentioned above, would not likely occur without an incentive-based program. The remaining 10% of the needed coveys could be produced on farm lands.

Implementation of the TQCI will require the long-term cooperation among federal, state, and private wildlife organizations, as well as individual landowners and managers. For this initiative to be successful, it will require huge cultural and policy changes among resource management agencies, stakeholders, and the general public. Existing Joint Ventures provide a delivery system to develop partnerships, leverage funds, and conduct landscape scale, habitat based projects that improve wildlife habitat. Much of the needed funding can be derived from existing federal and state programs, though increased appropriations will be required, and some new funding initiatives may be needed. It is also suggested that the TPWD Commission consider requesting 2005 legislative approval for reorganization of existing game bird stamps to provide a stable, secure source of funding for the upland game bird program. It is anticipated that if immediate action is taken the quail decline may be stabilized in 5-7 years, and if the TQCI is followed to its conclusion, the restoration may be effected in 20-25 years.

AGE-SPECIFIC SURVIVAL AND REPRODUCTION OF BOBWHITES

JASON BROOKS, Graduate Assistant, Department of Wildlife and Fisheries, Texas A&M University, College Station; e-mail jl-brooks@tamu.edu

DALE ROLLINS, Texas Agricultural Experiment Station, San Angelo; e-mail d-rollins@tamu.edu

Abstract: Northern bobwhite populations are irruptive (e.g., “boom and bust”) along their western range. Previous research has been unable to identify the mechanism(s) which drives such irruptions, although they appear to be precipitation-mediated. We hypothesize that the mechanism involves demographic variables, i.e., that birds entering their second breeding season are more productive than subadult breeders. A better understanding of demography and age-specific productivity in quail populations may provide clues to fine-tuning harvest recommendations (“stockpiling” quail to a limited degree by managing for a population with an “older” age-structure may be adaptive). These findings may also assist future strategies in translocating wild bobwhites to restore local populations (i.e., should restocking efforts focus on adult or subadult birds in order to maximize survival and subsequent reproduction?). We radio-marked 130 bobwhites (31 adult males, 30 adult females, 36 subadult males, 33 subadult

females) and followed them throughout the 2003 breeding season (April – August) and radio-marked 100 bobwhites (25 per age/sex class) in 2004. Nesting attempts, hatch rate, number of eggs laid, and survival were monitored and differentiated based on age. Although juveniles experienced higher success rates than adults in 2003 [4 of 21 for adults, 6 of 14 for Juveniles (29% overall)] success was identical in year 2 (50%). Adult birds initiated more nests (21 vs. 14, Yr.1 and 26 vs. 14, Yr. 2), and also comprised all renesting attempts in year 1 (n = 4). Renesting in 2004 was attempted 8 times by adults and twice by juveniles. Age- and gender-specific survival data will also be presented.

USDA FARM BILL PROGRAMS THAT BENEFIT WILDLIFE

RICKY LINEX, Zone Wildlife Biologist, Natural Resource Conservation Service, Weatherford;
e-mail ricky.linex@tx.usda.gov

JUSTIN CORZINE, Soil Conservationist, Natural Resource Conservation Service, Aspermont;
e-mail justin.corzine@tx.usda.gov

Abstract: Recent Farm Bill provisions have addressed wildlife habitat and management with cost share and annual rental payments for producers who implement practices that promote habitat management. The Wildlife Habitat Incentive Program (WHIP) offers 50% cost share for restoring high quality wildlife habitat. The Environmental Quality Incentive Program (EQIP) has a special program that benefits Northern Bobwhites in the Rolling Plains of Texas. The Quail-EQIP offers cost share and incentive payments for carrying out grazing and wildlife management practices. The Conservation Reserve Program (CRP) enrolls highly erodible cropland into permanent native grasses and forbs beneficial to wildlife. Three Continuous Conservation Reserve Programs (CCRP) are available that offer annual payments for retiring marginal pastureland/rangeland along riparian areas (CP-22), for retiring marginal pastureland/rangeland and creating a Wildlife Habitat Buffer (CP-29) and creating Habitat Buffers for Upland Birds in cropland fields (CP-33). Technical assistance to improve wildlife habitat is available from the Natural Resources Conservation Service in every county regardless of your participation in USDA programs.

FRIDAY, OCTOBER 8 BOX P RANCH

INDIVIDUAL PLANT TREATMENT FOR CONTROL OF MESQUITE

REBEL L. ROYALL, County Extension Agent-Agriculture/Natural Resources, Stonewall County, Aspermont; r-royall@tamu.edu

Abstract: Brush has long been considered one of the major management problems confronting owners and managers of rangeland. A dense stand of brush usually minimizes grass cover. Reduced grass cover results in loss of livestock production, increased soil erosion and inefficient use of rainfall. It can also result in loss of nesting sites for quail. Brush also has some desirable attributes. It provides food and cover for many wildlife species including quail. However it needs to be managed and sculpted to enhance wildlife management. In the Texas Rolling Plains mesquite tends to be the largest nuisance in terms of brush cover. Individual plant treatment using Brush Buster methodology allows an excellent means of taking out unwanted mesquites while leaving those that benefit your wildlife (quail) needs. Brush Busters recommends 2 ways of controlling mesquite by individual plant treatment methods. The first is the Leaf Spray method. This method is to be used on mesquites that are bushy and have many stems at ground level and are less than eight feet tall. The Leaf Spray method is to be used in spring through summer. Begin when leaves change color from a light pea green to a uniform dark green. The other method is known as the Stem Spray method. It is used to control relatively young mesquite trees that have smooth bark and few basal stems. The Stem Spray method can be used anytime during the year, although best results occur during spring-summer growing season. In depth information can be found in Texas Cooperative Extension bulletin L-5144 (Brush Busters- How to Beat Mesquite).

PRICKLYPEAR CONTROL OPTIONS

ROCKY VINSON, County Extension Agent – Agriculture, Shackelford County, P.O. Box 535, Albany; e-mail r-vinson@tamu.edu

Abstract: Although some quail will use pricklypear as nesting cover, it is a plant that most people do not want. Pricklypear control options include aerial spraying, cool season burning followed by aerial spray, warm season burning, broadcast spraying with a ground rig and individual plant treatment. The herbicide picloram is used when spraying pricklypear. You need to remember that picloram will also control many of the forbs that quail will use for food or cover. Hackberry can also be affected. The length of forb control is not well documented. We do know that control will vary from 2 to as long as 5 years depending on soil and rainfall. Therefore careful planning is needed to ensure some forbs are left on your ranch for quail. In many cases it is advised to spray parts of a pasture or ranch over a 3-5 year period. By staggering treatments forbs are allowed to replenish in the older sprayed areas. Another option is to spray strips. Some people choose to spray their most productive soils while leaving shallow hillsides. No matter

which control option you choose, planning is the key to achieving control of pricklypear while maintaining quail habitat.

SPECIES VISITATION AT FREE-CHOICE QUAIL FEEDERS IN WEST TEXAS: GUESS WHO'S COMING FOR DINNER?

KELLY HENSON, Graduate Assistant, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station; e-mail bassthumper@cox.net

DALE ROLLINS, Texas Agricultural Experiment Station, San Angelo; e-mail drollins@tamu.edu

Abstract: Providing supplemental feed is a popular management practice for quail in Texas. The biological efficacy, and economic efficiency, of one's feeding program depends on several variables; perhaps the most important of which is how much of the feed is consumed by quail versus various nontarget species. We monitored species visitation seasonally at free-choice quail feeders at 7 sites in West Texas (Coke [2 sites], Collingsworth, Fisher, Glasscock, Stonewall and Tom Green Counties). Quail feeders were monitored using active-infrared sensing camera systems (TrailMaster Model 1500, Goodson and Associates, Lenexa, KS) and Trophyview video systems (Wildlife Surveillance Systems Inc., Kerens, TX) in order to compare data obtained via these 2 surveillance techniques. Data collection took place during 4 time periods during 2002 – 2003: winter (Dec. 15, 2002 - Jan. 15, 2003; all other dates during 2003), spring (Mar. 20 – Apr. 20), summer (June 15 – July 15), and fall (Aug. 15 - Sep. 15). Visitations by quail varied across seasons and sites. Across the first 3 seasons highest visitation rates by quail occurred in summer ($x = 9.4\%$ (SE = 2.5), followed by winter ($x = 5.2\%$, SE = 1.9) and spring ($x = 2.8\%$, SE = 1.4). Feeder visitation by quail (as a percent of total visitations) was lowest during the spring because of the influx of neotropical migrant birds, which accounted for 15.4 – 49.4% of visitations across all sites. At those sites where raccoons were common (e.g., Coke and Tom Green counties) they likely are the biggest consumer of milo intended for quail. Wild turkeys also spend considerable time (e.g., > 20 minutes) feeding whereas feeding bouts for quail are typically much shorter (e.g., < 2 minutes). Our surveillance at these sites underscores the inefficiency of a supplemental feeding program, hence the expense of feeding. While some of the nontarget consumption might be curbed by active management, i.e., trapping of raccoons, that portion of the feed lost to other major nontarget species, e.g., wild turkey and neotropical migrants, should be considered an overhead expense of feeding.

WATER HARVESTING TO CREATE “QUAIL OASES”

DON AIKEN, Aiken Ranch, Roscoe; e-mail kaiken@morganre.com

Abstract: Spreader dams and “road blocks” are an extremely important method of harvesting and retaining rainfall. Almost without exception all creeks on the Aiken Ranch originate on the ranch and we have attempted to make certain that all the water they carry is retained. Any place that carries water from rainfall is normally a good place for a spreader dam and, then after construction, if it should fill and run around the spillway, then another could be constructed further down the creek. Basically creeks, headers and sloping flats are sites for spreader dams. Road blocks are built to prevent erosion on ranch roads and each block has a retaining pond as the result of the damming process. The ponds in wet weather retain water for wildlife and are properly seeded to provide a food haven for wildlife. Spreader dams, by comparison, are some 50 to 100 feet in length and 4 to 6 feet in height that hold 1 to 3 feet of water. Construction of these should take 1 to 2 hours. Road blocks with water holding areas should take about 30 minutes. Again, all disturbed land from the construction of roadblocks and spreader dams should be seeded with grass and or wildlife seed mix. These areas create a virtual oasis for all wildlife