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CKWRI Quail eNews

News from the Richard M. Kleberg, Jr. Center for Quail Research at the Caesar Kleberg Wildlife Research Institute

Richard M. Kleberg, Jr. Center for Quail Research Caesar Kleberg Wildlife Research Institute CKWRI Quail eNews - January 2014

Happy New Year from Caesar Kleberg Wildlife Research Institute Quail Faculty and Students. In this edition, we'd like to provide you with an update on the students, and the research, that donors have helped support.

South Texas has the distinction of having the longest continuouslyoperating quail research program in the world. Although Herbert Stoddard started conducting quail research in the Southeastern Coastal Plain in the 1920s, many years passed between the time his landmark book appeared in 1931 and Tall Timbers Research Station was founded in 1958, and very little quail research occurred there during this time. In contrast, quail research in South Texas has now spanned eight decades of time and four generations of quail scientists. Val Lehmann (first generation) went to work as a biologist for King Ranch in the 1940s and conducted research on bobwhites until he retired in the 1970s and published his landmark book in 1984. Dr. Fred Guthery (second generation) arrived at CKWRI around this time and spent the next 2 decades conducting cutting-edge research on South Texas bobwhites until he left for Oklahoma in 1997. In 1999 Fidel Hernández and two years later, Lenny Brennan (both third generation) arrived at CKWRI. Since that time, several other CKWRI colleagues such as Alan Fedynich, Tim Fulbright, Randy DeYoung have become deeply involved in quail research.

Providing the science behind quail conservation and management.

January 2014

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Last year, we were proud to hire Dr. Eric Grahmann to help direct and run the game bird program at CKWRI. As a newly-minted Ph.D., Eric represents the fourth generation of quail researchers who have called South Texas home. Additionally, we have 15 graduate students who are currently involved with quail-related research, with the vast majority of projects focused on bobwhites and scaled quail in South Texas. Like Dr. Grahmann, these students represent the next generation of wildlife science professionals who are working to build a scientific basis for quail and grassland bird conservation in semi-arid rangelands. Each of these people has a story to tell. Their stories are presented in this newsletter.

~~~ Dr. Leonard Brennan



Dr. Eric Grahmann, a previous graduate student, has recently been hired as the Director of Game Bird Sciences at Caesar Kleberg Wildlife Research Institute.

Hometown: Victoria, Texas

Semester graduated: Spring 2013

Eric Grahmann is Director of Game Bird Sciences at the Caesar Kleberg Wildlife Research Institute (San Antonio). He was born and raised in Victoria Texas. While spending time with his father and grandfather on their family properties throughout south Texas, Eric developed his love for the outdoors, especially cattle ranching and the ranching culture, native rangeland, and wildlife (most importantly quail). Eric graduated from Sam Houston State University with a B.S. in Agriculture (2006) and a minor in science. He graduated from Texas A&M University-Kingsville with an M.S. degree in rangeland and wildlife management (2009) and a Ph.D. in wildlife science (2013) with minors in statistics.

Eric has continued working with the research team at the Caesar

Fidel Hernández Alfred C. Glassell, Jr. Professor for Quail Research

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#### **CKWRI Quail eNews:**

Winner of the Outstanding Electronic Media Publication Award from the Texas Chapter of The Wildlife Society, February 2011.



Kleberg Wildlife Research Institute beginning in 2013. His research interests involve habitat management for quail, plant community ecology, and rangeland management and restoration techniques. He has conducted research related to feeding deer and deer density impacts on vegetation communities, scaled quail ecology, and the management of non-native grasses and restoration of native plant communities for bobwhite and scaled quail in south Texas. Eric has presented research results at more than 40 local, state, national, and international meetings. He also serves as a board or committee member for 4 conservation organizations.

Through his position with the CKWRI, Eric provides oversight of quail research projects in the northern and western reaches of south Texas. These projects include 1) understanding the general ecology and habitat use of bobwhites in a Goliad prairie/post oak savannah/Tamaulipan thorn scrub transition zone (Berclair, TX), 2) documenting bobwhite use of bermudagrass pastures being converted back to native vegetation (Pawnee, TX), 3) understanding the general ecology and habitat use of chestnut-bellied scaled "blue" quail in south Texas (Cotulla, TX), documenting quail and other wildlife use to the large-scaled restoration of a native plant community in an area dominated by buffelgrass and old world bluestems (Cotulla, TX), and documenting bobwhite habitat use at multiple spatial scales in western south Texas (LaPryor, TX).

In addition to research, Eric provides quail, habitat management, and restoration outreach/consultation (through the CKWRI) for landowners and managers throughout coastal, south, and central Texas by conducting free ranch visits. Starting in the winter of 2013, Eric will also provide electronic outreach through a question/answer quail management forum. Look for this forum on our quail center page in the coming months.

\*\*\* Current CKWRI Quail Students \*\*\*



Katherine Miller, Ph.D. Student

Hometown: Phoenix, Arizona

Semester started: Fall 2010

Advisors: Dr. Leonard Brennan and Dr. Randy DeYoung

Dissertation Title: Landscape Molecular Genetics of Northern

Bobwhite in Texas and the Great Plains.

Research Insights: I am attempting to determine how landscape may affect the gene flow and genetic diversity for northern bobwhite in Texas to the Great Plains region. At this point I have extracted and amplified DNA from more than 600 birds representing 23 populations. I have found that northern bobwhite populations within my study show low genetic structure (FST = 0.025) and most genetic variation is partitioned within populations (AMOVA). The genetic distance among northern bobwhite populations in are positively related to geographic distance and to landscape resistance. I am in the process of running spatial principal component analysis with south Texas samples to determine if there is any local structure.

Career Goals: working with a team of biologists and other scientists to manage bird species, particularly those in grassland habitats, and to teach new students in the field.

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Andrea Bruno, M.S. student

Hometown: Winthrop, Massachusetts

Semester started: Summer 2011

Advisors: Dr. Alan Fedynich and Dr. Dale Rollins, Rolling Plains Quail

Research Ranch

Thesis Title: Survey for *Trichomonas gallinae* and Assessment of Helminth Parasites in Bobwhites from the Rolling Plains Ecoregion

Research Insights: My research is based out of the Rolling Plains Ecoregion. From this area we have discovered that there are many questions to be answered on parasitic infections in quail. We've found intensities of infection higher than previously reported in bobwhites as well as new parasite species occurrences from the Rolling Plains. Currently I am attempting to understand eye tissue pathological response to eyeworms, a key factor in understanding how parasites are, if at all, affecting quail vision.

Career Goals: I hope to continue to work in Texas with bobwhites and other game birds.

\*\*\*



Carter Crouch, Ph.D. student

Hometown: Wichita Falls, Texas

Semester Started: Fall 2011

Advisors: Dr. Alfonso Ortega (M.S.), Dr. Leonard Brennan (Ph.D.)

Thesis Title: Northern Bobwhite Habitat Management: Vegetation and Arthropod Responses to Brush Reduction by Grubbing and Stacking

Research Insights: I documented fluctuations in Arthropods in response to brush management. I also documented effects on bobwhite habitat components. However, treatments appeared to have mostly neutral effects on overall brooding, feeding and nesting habitat for bobwhite.

I will be focusing my Ph.D. on habitat use of bobwhite and other grassland birds in fields with monocultures of non-native grasses, Bermuda grass fields that have been restored, and fields of native vegetation. I will start field work in March 2014.

Career Goals: I hope to continue with a career as a researcher. My interests lie in avian ecology, management, and conservation.

\*\*\*



Erika Pitzer, Ph.D. Student

Hometown: Fort Worth, Texas

Semester started: August 2012

Advisor: Dr. Leonard Brennan

Dissertation title: Northern Bobwhite Response to Expansion of

Habitat and Hunting Regulations in South Texas

Research Insights: The 3 year drought has had an impact on the abundance of bobwhites in South Texas. Ryan Piltz and I are working on two spatially different areas on the ranch. Ryan's study site has not been managed for wildlife in over 50 years whereas my study site has been managed for bobwhites since 2005.

Career goals: To graduate! One thing at a time.



Ryan Piltz

Hometown: Monroe, Connecticut

Semester Started: Fall 2012

Advisor: Dr. Leonard Brennan

Thesis Title: Evaluating Bobwhite Population Response to Brush

Management

Research Insights: Bobwhite weights seem to be much lower on unmanaged (heavy brush cover) site than managed site (managed intensively for bobwhites since 2005). Trapping success is much higher on the managed site. Bobwhite populations seem to be of similar densities on either site from helicopter survey data but abundance is almost twice as much on unmanaged site from birds caught/trap day data.

Career Goals: Continue wildlife research around the country for a couple years after graduating from my master's program to gain more knowledge and experience with different habitats and wildlife. My long-term professional goal is to someday run my own hunting outfitting service using proper land and animal management to provide the best opportunity for wildlife and hunters.

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Holley Kline

Hometown: Bound Brook, New Jersey

Semester started at CKWRI: Spring 2013

Advisor: Dr. Tim E. Fulbright

Thesis Title: Habitat Use and Resource Selection of Scaled Quail in South Texas

Research Insights: Scaled quail were most commonly found in areas dominated by short-statured native Tamaulipan brush with abundant bare ground and little grass cover. Woody species commonly used for loafing cover included amargosa, knife-leaf condalia, coma, blackbrush acacia, lotebush, and mesquite. Scaled quail avoided communities dominated by exotic grasses and were never found in exotic grass dominated range > 200m wide. Scaled quail tended to

avoid ground surface temperatures > 42 degrees C.

Career goals: Wildlife biologist

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Richie Sinclair

Hometown: Needville, Texas

Semester Started: Spring 2012

Advisor: Dr. Fidel Hernández

Thesis Title: Occupancy, survival, and nesting ecology of scaled quail

in the South Texas Plains

Research Insights: Peak calling occurred during June (June 6 - June 27 to be exact). Uncorrected occupancy estimates showed that scaled quail occupied 19% of survey points (n = 60 survey points). Apparent seasonal survival of 51 birds averaged 67% (n = 164 days). Apparent nest success averaged 41% (n = 26 nests). Mean clutch size was 10 eggs (n = 26 nests). Prickly-pear cactus was the nesting substrate for 19 out of 26 nests.

Career Goals: Finding a place where I am able to study a variety of species and habitats and make meaningful contributions to the ecological and natural resource sciences.

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Andrew Olsen, M.S. Student

Hometown: Missoula, Montana

Advisor: Dr. Alan Fedynich

Semester started at CKWRI: Fall 2012

Thesis Title: Survey for Quail Parasites in South Texas (M.S. Thesis)

Research Insights: Results from the first year of collecting bobwhites and blue quail in South Texas indicated that both species were infected with a variety of parasites. The two most common parasites in bobwhites were the eyeworm *Oxyspirura petrowi* and the cecal worm *Aulonocephalus pennula*. When compared to a sample of bobwhites from the Rolling Plains, a smaller proportion of South Texas bobwhites were infected with eyeworms (8% vs. 44%) and those infections were less intense than those of Rolling Plains bobwhites (average infection 2 worms vs. 15 worms). Eyeworms were documented in blue quail from South Texas for the first time. Preliminary results indicate that the communities of parasites infecting bobwhites and blue quail in South Texas may be significantly different. During the second and final year of sample collection, a larger sample of blue quail will be collected and additional bobwhites.

Career goals: I would like to be a wildlife biologist for a state or federal agency in the Rocky Mountain West.

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Kelsey Bedford, M. S. Student

Hometown: Sturgis, South Dakota

Advisor: Dr. Alan Fedynich

Semester started: Summer 2013

Thesis Title: Parasitological Survey of Scaled Quail from the Rolling

**Plains** 

Research Insights: I do not have any preliminary data at this time. I have completed all trapping fieldwork, but I am still accepting hunter donations. Laboratory work, which will include quail necropsies and counting and identification of helminth parasites, will begin in January 2014.

Career goals: My long term professional goal is to become a wildlife biologist and conduct research for the Forest Service to further the protection and conservation of wildlife and fisheries. After receiving my master's degree in Range and Wildlife Sciences, I will join a management or research agency as a technician. I would like to travel and work temporary jobs until I find a permanent contract with a federal agency. After gathering work experience, I may return to school to attain a Ph.D. to expand my knowledge of wildlife management.

\*\*\*



Michelle Downey

Hometown: Canton, Connecticut

Advisors: Dr. Fidel Hernández and Dr. Dale Rollins, Rolling Plains

Quail Research Ranch

Semester started: Fall 2013

Thesis Title: Translocation of wild bobwhites into recently depopulated

areas in the eastern Rolling Plains of Texas.

Research Insights: Two hundred and two wild bobwhites were released on a study site in the Rolling Plains of Texas in March 2013. Ninety-five of these were radio-marked females, and as of 1 November 2013, 60% have died. Radio-marked hens have demonstrated strong site fidelity. Nest success was 42% (n = 72 nests) in 2013, and 28% of nesting hens attempted 2 or more clutches. Further translocations of approximately 300 bobwhites per year are planned for March 2014 and 2015.

#### Career goals:

I hope to further my knowledge of wildlife and habitats through research in the future. I also plan to aid in conservation by attempting to instill a sense of stewardship in our youth through outdoor education.

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John Edwards

Hometown: Chickasha, Oklahoma

Semester started: Fall 2013

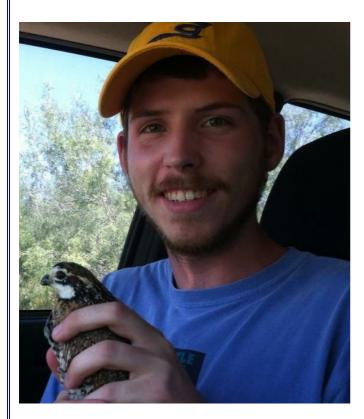
Advisor: Dr. Fidel Hernández

Dissertation Title: Habitat, climate, and raptor abundance as factors of

the northern bobwhite decline.

Research Insights: landscape scale analysis of the decline in northern bobwhite populations across its range within the United States. We will be using long-term data sets to quantify trends in northern bobwhite populations. Our main focus is to determine, on a large scale, the effect on northern bobwhite populations of multiple factors including: amount of habitat, habitat fragmentation, climate factors, and predatory bird populations. With this analysis we hope to determine a threshold value for each of these factors at which northern bobwhite populations are negatively affected.

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Anthony Henehan

Hometown: Harpursville, New York

Semester started: Fall 2013

Advisor: Dr. Fidel Hernández

Thesis Title: Bird, Small Mammal, and Pollinator Response to

**Grassland Restoration** 

Research Insights: Non-native grasses are proven to be detrimental to ecosystem health. However, large-scale restoration efforts are almost non-existent. My project will provide crucial information in understanding restoration of native grasslands for wildlife.

Career Goals: I plan to pursue a PhD in the future and work as a researcher in avian ecology and/ or ecosystem management.



Maia Lipschutz

Hometown: Santa Cruz, CA

Semester started: Fall 2013

Advisor: Dr. Leonard Brennan

Thesis Title: Effects of Drought and Grazing on Grassland Bird

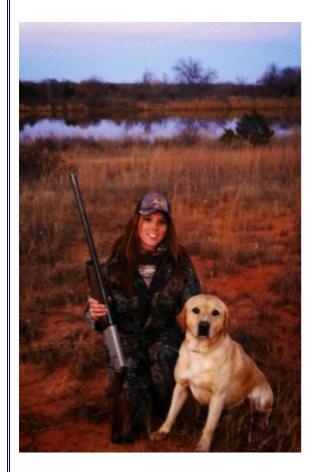
Abundance and Diversity in South Texas

Research insights: My project examines the effects of drought and grazing on grassland birds using Breeding Bird Survey and Wintering Bird Survey data collected over the past decade. South Texas contains some the largest contiguous undeveloped grasslands and mesquite savannahs and one of the most diverse assortments of bird

species in the U.S. It is my hope that this study will offer new multispecies conservation strategies for grazed lands in the unique and valuable ecosystem of South Texas.

Career goals: I hope to someday work for a government or private agency in the Southwestern U.S. as an avian biologist and conservation advocate.

\*\*\*



Monika Burchette

Hometown: Meeker, Oklahoma

Semester started: Fall 2013

Advisor: Dr. Tim E. Fulbright and Dr. Fidel Hernández

Thesis title: Temperature effects on habitat selection of Northern

**Bobwhites** 

Research Insights: In this study we are comparing surface temperatures at bobwhite locations versus random sites 20m in a random cardinal direction. Relative probability of a site being used by bobwhites declined with increasing surface temperature, as use was < 50% at surface temperatures >38 degrees C, which is similar to operative temperature avoidance. This study demonstrates that surface temperatures are an important variable in determining the influence of the thermal environment on habitat selection by bobwhites

and could be a simple tool for quail managers to assess the thermal qualities of bobwhite habitat.

Career goals: College professor or Environmental consultant

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Ross Couvillon, Ph.D. Student

Hometown: Houston, Texas

Semester Started: Spring 2014

Advisor: Dr. Leonard Brennan

Career Goals: I am looking forward to gaining new experiences and knowledge while working on a different study animal in a different part of the state. I hope to find a position in which I can conduct research and contribute to our understanding of wildlife.

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The mission of the Richard M. Kleberg, Jr. Center for Quail

Research is to develop a scientific basis for the sustainable management and harvest of wild quail populations throughout South Texas and elsewhere.



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