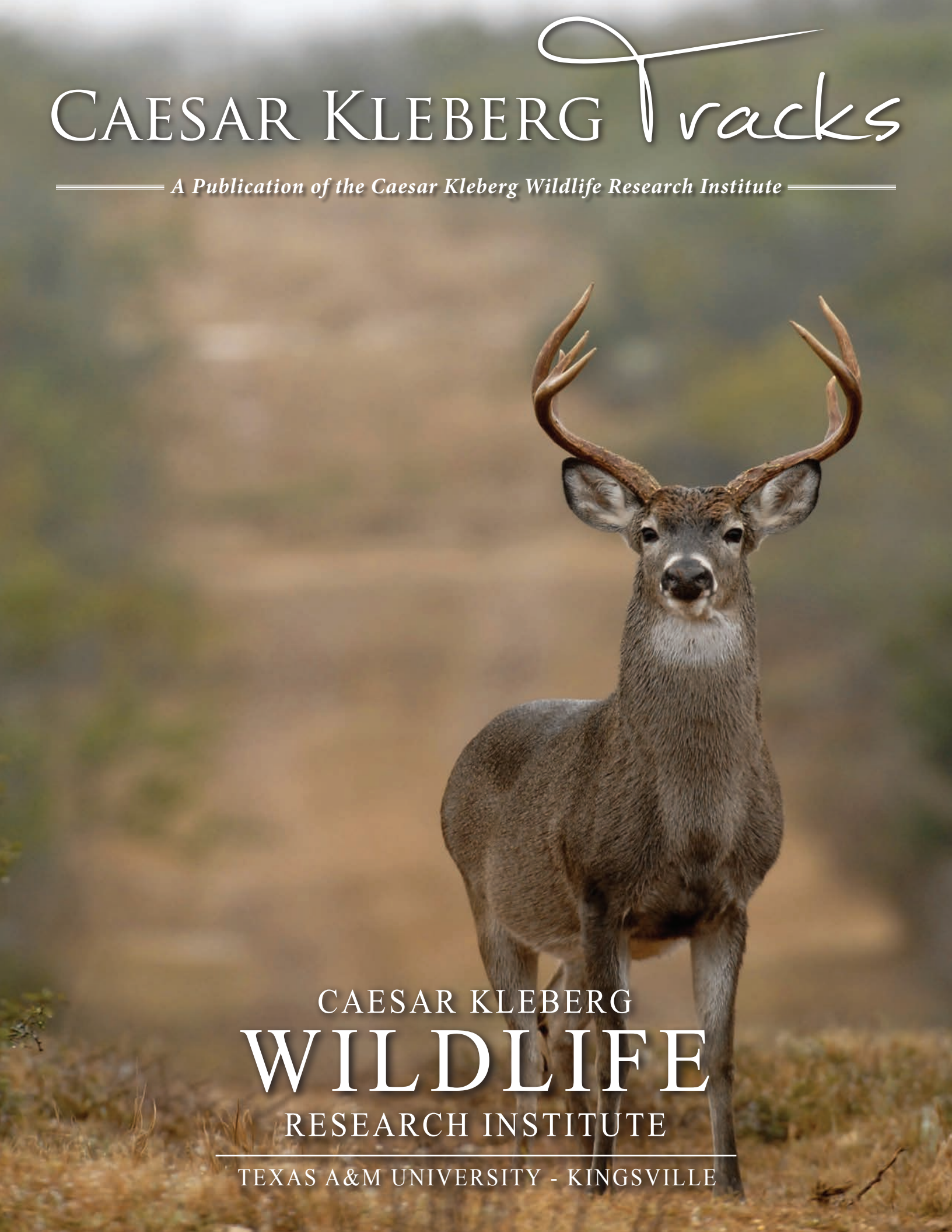
Caesar Kleberg Tracks

A Publication of the Caesar Kleberg Wildlife Research Institute



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TEXAS A&M UNIVERSITY - KINGSVILLE

Caesar Kleberg Tracks

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In This Issue

Learn More About CKWRI

The Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville is a Master's and Ph.D. Program and is the leading wildlife research organization in Texas and one of the finest in the nation. Established in 1981 by a grant from the Caesar Kleberg Foundation for Wildlife Conservation, its mission is to provide science-based information for enhancing the conservation and management of Texas wildlife.

Visit our Website

www.ckwri.tamuk.edu

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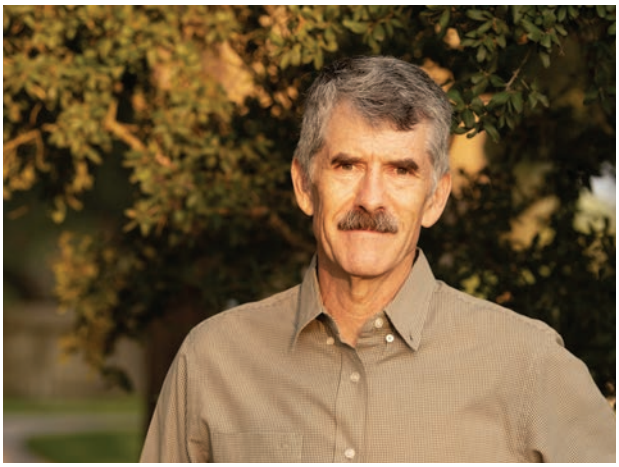
From the Director

In Your Element



A couple summers ago, I was in the Colorado mountains with my brother and one of his friends. We were going to climb a peak near Aspen which had a pleasant trail walk to reach the more challenging upper part of the mountain. My brother's friend held his own on the trail but when we reached the rock on the upper part of the mountain, he seemed to transform. He glided across the rock fields and was like a spider on the steep rock faces. He was in his element on the upper part of the mountain, as if he was born to climb.

I've seen the same phenomena in South Texas. A person steps off the quail truck and you can tell by their concentration on the dog, the poised gun, and the anticipation in their step, there is nowhere else they would rather be. I've seen a person grab their fishing rod out of the truck as soon as the wheels quit turning, tie on lure, and wade into the surf, casting and reeling, not to come ashore until the sun sets. Or a birder, moving quietly through an oak forest, every sense heightened, head turning at the flash of wings, and ears taking in every fragment of bird song. These people are engrossed. They are in their element.

One the best aspects of working at the Caesar Kleberg Wildlife Research Institute is that our students, staff, and faculty have found their passion. Their passion takes them places and causes them to do things that other people avoid. Some of our people are enthralled by the plants growing in a restored pipeline. Others by following a deer through the brush as it forages during the August heat. Some choose a cold, wet blind over a warm, soft bed so they can set off a rocket net to catch a flock of waterfowl. Other personnel are drawn to technology, using computers and mathematics to find the pattern in massive data sets, or work day after day in a laboratory to learn the secrets of animal behavior using DNA. Others are enthralled by flying a drone to get a different view of the world. They do it because they are driven to; it is their calling.

Those of us who work with students know when they are in their element. These students' eyes light up when discussing research and especially their project. They pepper you with questions and ideas. These students cannot wait to sit down at the end of a long day in the field to plot their data so that they can see the fruits of their labor. We see students get up early, no alarm needed, to hunt, go birding, or take pictures. The pages of this edition of Tracks magazine tell the story of people who are in their element. Enjoy!

All the best,

Dr. David Hewitt
Leroy G. Denman, Jr. Endowed Director of Wildlife Research

ONLINE

Learn more about the Institute by visiting www.ckwri.tamuk.edu

Native Grass Restoration in the Texas Hill Country

by Alexandria Dimaggio, Henry Hamman, Eric Grahmann, and Alfonso Ortega

The Texas Hill Country is known for its rolling hills, deeply carved limestone canyons, and spring-fed creeks and rivers. The diverse landscapes of the region support a wide variety of native plants and wildlife. However, invasive grasses have exponentially spread over large parts of the area and have increasingly been recognized as a problem to natural biodiversity. Yellow bluestem (*Bothriochloa ischaemum*; also known as King Ranch bluestem) and Texas wintergrass (*Nassella leucotricha*) dominate many acres in the Edwards Plateau, and there has been little remedy for their replacement with more desirable vegetation. Yellow bluestem is a non-native, warm-season perennial bunchgrass that is known to establish easily, possesses a rapid growth rate, and exhibits prolific seed production. Because of its aggressive nature, yellow bluestem was historically a top candidate for seeding of disturbed areas like roadsides and pipeline rights-of-way in Texas and northern Mexico. The grass was successful in preventing erosion and in providing a durable (albeit stemmy and relatively poor) forage to cattle during times of drought. Texas wintergrass, a cool-season perennial bunchgrass native to Texas, possess invasive qualities similar to that of yellow bluestem in some areas (bottomlands) such as reducing plant diversity as it grows in a monotypic stand and dominating fields during the winter and spring. Collectively, invasion by these plants creates communities with reduced plant and animal diversity and altered ecological processes. These invasions, and their ecological impacts, have become increasingly evident to observant landowners, but unfortunately, many restoration efforts of these invaded areas have generally been unsuccessful and discouraging for practitioners.

Nestled in the historic and ecologically important Frio River Valley adjoining Garner State Park, Henry Hamman's riverfront ranch contains pecan orchards and open pastures with scattered oaks and mesquites. Along the river, cypress trees tower along the clear rippling river, providing a picturesque view and riparian ribbon of immense ecological importance in an otherwise arid landscape. Despite the beauty and ecological value of the property, Henry realized that some areas held room for improvement; specifically, a relatively stagnant portion of the ranch where yellow bluestem and Texas wintergrass existed as a near monoculture. This 40-acre area was once an orchard but was overcome with yellow bluestem from the surrounding highway roadsides. The idea was conceived by Henry for a total restoration of the native plant community to get it back to its most natural/historic state possible, a floodplain grassland. In his words before starting

the project "I love the ranch. I just want a chance to give back and do the right thing", a statement reflecting Henry's broader love of, and dedication to, conservation.

Around the same time as Henry's vision, techniques of total plant community restoration/change were being developed by researchers Dr. Eric Grahmann, Mike Hehman, Dr. Tim Fulbright, and Dr. Fidel Hernandez for treating buffelgrass (*Pennisetum ciliare*) and Kleberg Bluestem (*Dichanthium annulatum*) on the Hixon Ranch in LaSalle County. Briefly, treatments that incorporated ways to remove established plants in monocultures, rid the soil seed bank of the non-natives through repeat cultivation or herbicide, then replanting with a diverse mix of ecotypic native plants, showed promise. It is this treatment regimen that Hamman proposed for use on yellow bluestem and Texas wintergrass on his property in the Hill Country, treatments not yet evaluated in the region on these grasses.

During 2016, Dr. Eric Grahmann, former Director of Gamebird Science at the CKWRI, was consulted by Henry to plan and conduct the native grass restoration; part of the goal from Eric's perspective was to develop a treatment for landowners interested in restoration of quail and grassland bird habitat in the Edward's Plateau. During the initial stages of goal setting and planning, Eric conducted an inventory of soil types and plant species, then established photo points to later assess the outcome. Yellow bluestem (the primary target) and Texas wintergrass dominated the field at about 70–80% coverage in a heavy matted carpet of grass and litter. Virtually no bare ground was visible in these areas. The other 20–30% of the site had relatively shallow soils with sparse vegetation dominated by bermudagrass (*Cynodon dactylon*), buffalograss (*Bouteloua dactyloides*), Hall's panicum (*Panicum hallii*), prairie vervain (*Glandularia bipinnatifida*), lazy daisy (*Aphanostephus skirrhobasis*), Mexican hat (*Ratibida columnifera*) and silverleaf nightshade (*Solanum elaeagnifolium*).

Site preparation was the first obstacle for this restoration project; a tedious, time-consuming, and expensive part of the process. The first step was to stimulate the yellow bluestem to produce new/healthy foliage from a dormant/matted layer by stocking the pasture with 31 cows from an adjoining pasture during August 2015. A benefit to this approach was to utilize this forage resource before it was destroyed. At the same time cattle were grazing the site, a buffer was disked around the periphery of the field (40–100 ft wide) to deter yellow bluestem reinvasion from outside of the pasture. This buffer remained disked to bare soil or planted with a cover crop (oats or sorghum-sudan) in perpetuity. Cattle were left on the pasture for about 3-weeks, then they were removed. The pasture was given a month of rest for regrowth of healthy plant tissue, at which point the pasture was sprayed in early October 2015 using a boom-applied herbicide treatment of the maximum application rate of glyphosate (a broad-spectrum contact herbicide) plus a surfactant to kill the mature grass plants. Yellow bluestem is generally susceptible to this treatment when it has healthy-green foliage during the warm-season. After the initial herbicide application, glyphosate and surfactant were again applied in April, July, and September 2016, whenever yellow bluestem seedlings were identified (usually about 2–3-weeks after rainfall), but before they could produce seed themselves. In July and September 2016, applications of 1% 2, 4-D were made with the glyphosate application to kill silverleaf nightshade and Mexican hat (these plants are not easily killed with glyphosate), as they became so abundant (after re-

Variety	Unit	Full Planting Rate/AC	Percent of Planting	Total Pounds
Atascosa Texas Grama	PLS	5	3%	5.7
South Texas Little Bluestem	PLS	3	10%	11.4
Catarina Bristlegrass	PLS	2	5%	3.8
Chaparral Hairy Grama	PLS	2	5%	3.8
Lavaca Canada Wildrye	PLS	10	10%	38
Mariah Hooded Windmillgrass	PLS	1	6%	2.28
Cheyenne Indiangrass	PLS	3	3%	3.42
Oso Halls Panicum	PLS	1	5%	1.9
South Texas Sideoats Grama	PLS	5	15%	28.5
Eastern Gamagrass	PLS	5	3%	5.7
Van Horn Green Sprangletop	PLS	2	10%	7.6
Buffalograss	PLS	3	3%	3.42
Texas Panicum	PLS	2	2%	1.52
Venado Awnless Bush Sunflower	PLS	2	5%	3.8
Sand Dropseed	PLS	1	3%	1.14
Alamo Switchgrass	PLS	2	12%	9.12
*And trace additions of Goliad Orange Zexmenia, Aztec Maximillian Sunflower, and Sabine Illinois Bundleflower			**100%**	**131.1**
Planting Rate Per Acre			3.45	
Price Per Pound			$22.88	
Price Per Acre			$78.94	

Table 1 - Custom seed mix from Douglas King Seed Company for a 40-acre restoration project in the Edwards Plateau. Pure live seed (PLS), full planting rate/ac is the number of PLS pounds per acre needed to achieve an adequate stand per acre, percent of planting is percent composition of each species in the mix, total pounds is the weight (lbs.) of seed for each species.

lease from the grass cover) it would have been difficult to find yellow bluestem seedlings. In addition, their presence would have made drill-seeding difficult and seedling establishment unsuccessful across large areas of the pasture. A final application of glyphosate and surfactant was made during March 2017 to keep the field completely clean for planting. An important note is that all herbicide applications were dictated according to the phenology/emergence of the targeted plants (e.g. yellow bluestem), which varied with precipitation, temperature, season, soil type, and previous management.

In April 2017, the site was planted to 2 seed mixes by Wallace Nichols of Native Habitat Restoration. Ninety-percent of the site was drill-seeded via a Truax seed drill to a diverse assemblage of ecotypic native plants (Table 1). All these species and ecotypes were expected to perform in this transition zone between the South Texas Plains and Edwards Plateau. Most of these plant ecotypes were developed by the South Texas Natives Program. The same general mix was seeded via walk-behind fertilizer spreader of the fields' low areas (too wet for a tractor), the exception being the addition of a 2 lb. mix of leftover seeds of Alamo switchgrass, 4-flower trichloris, and Oso Hall's panicum in the mix.

Results from the planting were not immediate despite the ample rainfall that occurred before planting. A dominance of brown-top signalgrass (*Urochloa fusca*) (warm-season annual) and various volunteer forbs inhibited the planted seeds for the first few months. These early successional species established first because rain was received between the last herbicide treatment and planting, and thus, they were germinating in a "head-start" as the site was being planted. However, by late summer 2017 through the spring of 2018, the planted natives germinated and grew, and by fall 2018 the site was a diverse assemblage of planted and volunteer native plants. The greatest victory was in the wildlife response, as flocks of mourning dove (early in the recovery), hundreds of grassland sparrows on any given visit, small mammals, white-tailed deer, and a few quail (a big deal for this area) were spotted within the plot.

Along with restoration treatments themselves, maintenance of restoration projects is unique to each project and must be adaptable to manage unforeseen outcomes or events. Since this site is located on the corner of two intersecting highways that were thought to be the initial cause of invasion, the cover crop buffer was especially important to prevent the re-invasion of yellow bluestem. The clever ranch manager utilized these areas by grazing or baling them on occasion. Cattle were not allowed onto the site until the spring 2020 after the native grasses were established. Occasional flash grazing of cattle was recommended to break up the dormant vegetation, stimulate growth, and expose bare ground for forbs and wildflowers. Ranch personnel removed yellow bluestem plants by hand or applied herbicide when found on the site.

The success of this restoration planting can be measured by species diversity and abundance over time. In June 2020, vegetation sampling was conducted by sampling 5, 25-m transects, where individual plant species and bare ground were measured. Of the 19 species included in the planted seed mix (Table 2), 15 of them were seen in the pasture 2-years post planting, and 56 total plant species were identified. Composition of the plot was roughly 18% cover of sown native grasses, 0.3% cover of sown native forbs, 19% cover of Texas wintergrass, 15% cover of desirable volunteer forbs and wildflowers, and 0.2 % cover of yellow bluestem. Canada wildrye and sideoats grama were the dominant sown grasses. Distribution of many of the tall- and mid-grass species was not uniform across the plot. Some areas had a high dominance of switchgrass, sideoats grama, and Canada wildrye; showing that some species establish better in different soil conditions. Additionally, all species did not fully establish simultaneously, and plant community composition shifts as the successional stages develop over time. These patches of different plant communities, structures, and densities provide options for different species of wildlife. Texas wintergrass is still abundant (~20%) throughout the pasture; however, this is not discouraging because it provides good forage for livestock and wildlife during winter months and it historically composed 15% of the climax plant composition in this area.

Species	*% Cover*	*Species*	*% Cover*
Bareground	5.43	Coastal Germander	0.33
Texas Wintergrass	19.07	Sweet Guara	0.30
Lavaca Canada Wildrye*	9.92	Rescuegrass	0.30
Texas Panicum*	5.81	Western Ragweed	0.25
South Texas Sideoats Grama*	4.78	Wright's Skullcap	0.25
Prairie Tea Croton	3.78	Yellow Bluestem	0.22
Common Yellow Woodsorrel	2.13	Orange Zexmenia*	0.20
Prickly Sida	1.91	Southwest Bedstraw	0.19
Alamo Switchgrass*	1.64	Mesquite	0.16
Cheyenne Indiangrass*	1.60	Tumblegrass	0.16
False Ragweed	1.26	Atascosa Texas Grama*	0.14
Buffalobur	1.13	Maria Hooded Windmillgrass*	0.08
Prairie Coneflower	0.83	Prickly Lettuce	0.06
Burclover	0.68	Redseed Plantain	0.06
Ozark Grass	0.67	Oso Hall's Panicum*	0.05
Little Barley	0.56	Little Bluestem*	0.04
Silverleaf Nightshade	0.46	Field Ground Cherry	0.03
Florida Pellitory	0.42	Illinois Bundleflower*	0.02
Toothed Spurge	0.37	Texas Geranium	0.02
Tropic Croton	0.37	Texas Vervain	0.02
Pepperweed	0.35	Awnless Bushsunflower*	0.01

*Table 2 - Coverage of bare ground and individual species found from June 2020 vegetation sampling or a 40-acre restoration project in the Edwards Plateau. *indicates seeded species*

Any type of management comes with costs and knowing the potential costs in a grassland restoration before the project is initiated could aid in financial planning for the project. A compilation of project costs for this project is shown in Table 3, but collectively the treatments and planting costs were $346/acre. There is no set recipe for restoration projects and there were other methods at our disposal that may have alleviated costs. For example, broadcasting the seed mix for the entire plot instead of using a no-till drill could have reduced planting costs substantially, but the level of success may have not of been as high given the soil conditions at planting time.

Process	*Cost*
Site Preparation*	$4,000
Seed Acquisition	$4,145
Seed Planting	$5,175
Buffer Seed	$500
Total	**$13,820**
Per Acre	**$346**

*Table 3.- Estimated cost of each restoration process in a project to restore a 40-acre field dominated with invasive grasses in the Edwards Plateau. *site preparation includes buffer disking and herbicide costs.*

Each restoration project will require different methods for success. But generally, successful restoration of native plant communities in areas where yellow bluestem, buffelgrass, Bermudagrass, and Kleberg bluestem are pervasive on cultivatable soils requires a wash, rinse, repeat treatment cycle to completely rid the area of these grasses before a single native plant seed is sown. It should be noted that these treatments are highly technical requiring adequate plant identification of seedlings during the treatment process. In addition, intimate knowledge of farming practices, herbicides, and plant community dynamics is a prerequisite. Personnel in the South Texas Natives and Texas Native Seeds Program are good starts for advice.

This pilot study shows the early stages of a successful native grass restoration on an Edwards Plateau rangeland. The critical execution of each step in this process highlights dedication that is imperative to the success of a restoration project. Plant identification, accessibility to herbicide applicators, lengthy treatment timelines, buffer upkeep, seed mix compilation, vegetation monitoring, and patience are needed to carry out this kind of technical process. Currently, it is unknown to what degree a stable perennial grassland community is immune to invasion in the area. Only time will tell if this plant community continues to progress towards a stable climax community, but we will keep you posted.

Recent Additions to the *CKWRI Science Team*

Like the South Texas brush, CKWRI changes and evolves with conditions. Wildlife science is advancing rapidly and so we are excited by the 3 recent additions to our Science Team, introduced here, who bring new skills and expertise to the Institute. We are in the process of hiring 3 additional scientists, so look for their introductions in future editions of Caesar Kleberg Tracks magazine.

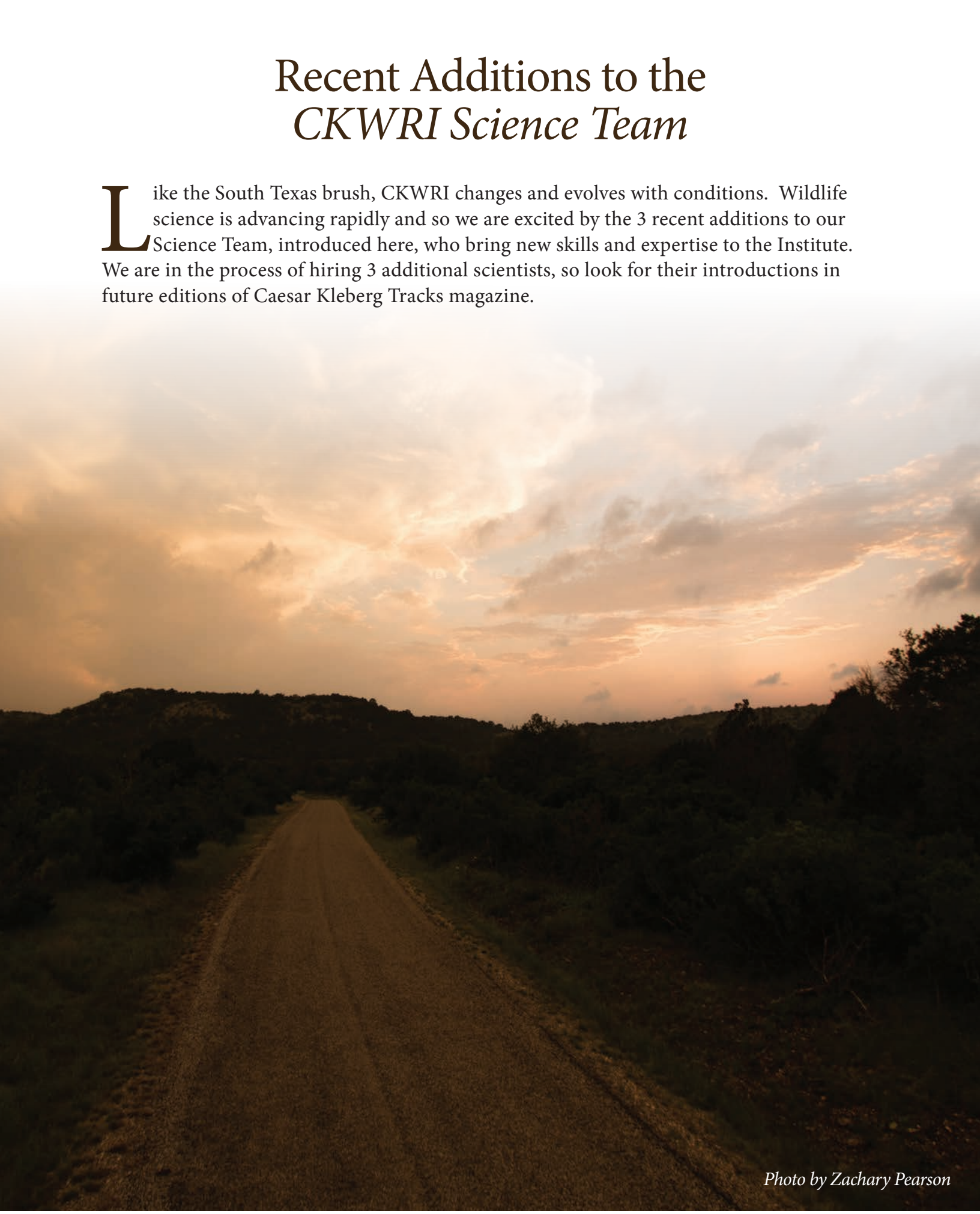


Photo by Zachary Pearson

Dr. Evan Tanner

Dr. Evan Tanner is currently an assistant professor and the Meadows Endowed Professor of Semiarid Land Ecology at the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville. He received a Bachelor of Science degree in Forestry, Resource Management (2009) and a Master of Science degree in Wildlife and Fisheries Science (2012) from the University of Tennessee-Knoxville. His M.S. research focused on population ecology of northern bobwhite on reclaimed surface coal mines in western Kentucky. He received his Doctor of Philosophy degree in Natural Resource Ecology and Management from Oklahoma State University in 2015. His Ph.D. research focused on understanding how extreme weather events and future climate change influence population dynamics of northern bobwhite and scaled quail along the periphery of their distributions. From 2016-2019, he worked as a post-doctoral fellow for Oklahoma State University. There, his research focused on understanding the dynamics of thermal conditions in human influenced landscapes and how these dynamics impact ecosystems. Furthermore, he assessed how human policies associated with the Conservation Reserve Program directly influenced populations of the lesser prairie-chicken throughout the species' distribution.

Dr. Tanner's research interests and goals are diverse but are centered around understanding how ecosystems and wildlife populations are influenced by inherent and introduced dynamics and disturbances. During his time in Oklahoma, Dr. Tanner developed a passion for understanding the ecology, conservation, and management of rangelands throughout the Great Plains and is eager to continue his research on the southern periphery of this iconic biome in South Texas.

A major goal of Dr. Tanner is to develop a thermal ecology research program at CKWRI. He has extensive research experience on understanding how temperature is structured by landscape features, how temperature influences the ecology of organisms, and seeks to develop projects focused on how habitat management plays a role in influencing thermal options for South Texas wildlife. Much of his past research in thermal ecology has focused on the impacts of extreme heat, which made South Texas an easy choice for a location to develop this research program.

Dr. Tanner releasing a banded gray-crowned rosy finch on the Sandia Crest in the Cibola National Forest, New Mexico.

Currently, Dr. Tanner and his graduate students are working on research focused on rangeland restoration in the Edwards Plateau, management and ecology of whitebrush in South Texas rangelands, thermal ecology of floral resources, thermal ecology of white-tailed deer, land cover dynamics across the Ogallala Aquifer, and addressing the range-wide decline of the chestnut-bellied scaled quail. He will shortly be starting two new research projects focused on population genetics of wild turkey in Oklahoma and the spatial ecology of pronghorn in the Panhandle of Oklahoma.

Dr. Ashley Tanner

Dr. Ashley Tanner is an Assistant Professor of Research at the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville. Her career path began at a small university in eastern Pennsylvania, Delaware Valley University, where she received a bachelor's degree in Animal Biotechnology and Conservation. She gained experience working in education, wildlife research, and resource management in South Carolina, Vermont, and Alaska before pursuing her master's degree at The University of Tennessee. Her master's research focused on habitat selection patterns of northern bobwhite on Peabody Wildlife Management Area, a reclaimed coal mine in western Kentucky. Dr. Tanner then moved to Oklahoma to pursue her Ph.D at Oklahoma State University, where she attached GPS transmitters to lesser prairie-chickens in order to understand their habitat selection and movement patterns in a landscape heavily influenced by human use and policy. Upon graduation, Dr. Tanner moved to New Mexico where she served as the Deputy Science Coordinator for the Middle Rio Grande Endangered Species Collaborative Program. There she worked with federal, state, local, non-government, and tribal organizations to develop and an adaptive management plan and address an array of conservation challenges facing threatened and endangered species in the Middle Rio Grande Valley of New Mexico.

Dr. Tanner joined the CKWRI Science Team in April 2020. Since joining, she has implemented collaborative, undergraduate research projects on black and turkey vultures, evaluating aspects of their roosting behavior, testing for the presence of disease, and collecting blood samples to determine lead levels in these important scavengers. She recently began an undergraduate research project in the Harlingen City Parks as well, tracking Texas tortoises to better understand their behavior in an urban environment. In the fall of 2021, Dr. Tanner welcomed a new graduate student who will be studying drivers behind the decline of the chestnut-bellied scaled quail.

In addition to her research responsibilities, Dr. Tanner also supports CKWRI's outreach and education mission, and is sometimes the voice behind CKWRI's social media posts! She looks forward to finding creative ways to continue contributing to this mission.

Dr. Michael J. Cherry

Michael Cherry received his Bachelor's in Forest Resources and Ph.D. in Wildlife Ecology and Management from the Warnell School of Forestry and Natural Resources at the University of Georgia. His dissertation research focused on the effects of prescribed fire on coyotes, white-tailed deer, and their interactions at the Jones Center at Ichauway. Before coming to the Caesar Kleberg Wildlife Research Institute in 2020, he was an Assistant Professor of Applied Ecology in the Department of Fish and Wildlife Conservation at Virginia Tech University. At CKWRI, Dr. Cherry is the Stuart W. Stedman Chair of White-tailed Deer Research. In this position, he oversees the Deer Research Program and serves as the facility manager for the Albert and Margaret Alkek Ungulate Research Facility. Dr. Cherry's research team conducts applied research in wildlife ecology and management investigating topics including habitat–species interactions, predator–prey ecology, and ungulate ecology and management with a focus on the influence of disturbance, land use, and habitat management on individual traits, population processes, and community interactions. His current research projects are examining deer-cattle competition, deer population dynamics in highly variable rangelands, elk restoration in the Appalachian Mountains, wild pig-Florida panther interactions, mule deer dispersal and chronic wasting disease epidemiology, deer behavioral responses to predators, effects of early life experience and environmental conditions on deer body and antler size, thermal ecology of deer, and efficacy of oral vaccines for anthrax. Dr. Cherry teaches a graduate course entitled Spatial Analyses in Wildlife Conservation. Dr. Cherry is a member of The Wildlife Society and has served as an officer in two state chapters as well as the Chair of the Hunting, Trapping, and Conservation Working Group. He is also an active member of the American Society of Mammalogists and serves as an associate editor for the Journal of Mammalogy.




The 40th Anniversary of the Caesar Kleberg Wildlife Research Institute

by Lorie A. Woodward

For the past 40 years, the Caesar Kleberg Wildlife Research Institute has kept the visionary spirit of Caesar Kleberg alive through applied research that is shaping the future of wildlife and habitat in South Texas and beyond.

"The Institute translates Caesar's vision of wildlife conservation into projects that address the current management needs of Texas' landowners to sustain wildlife and habitat now and far into the future," said Tio Kleberg, Caesar's great grandnephew who has served as a trustee of the Caesar Kleberg Foundation since 1976.

Founded in 1981 as a privately funded research institute within a public university, a one-of-a-kind arrangement, CKWRI is as unique as the region, known as "The Last Great Habitat," it was originally created to serve.

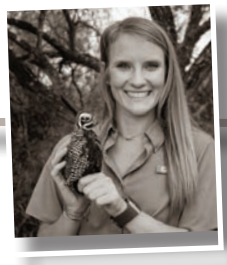
"As the largest privately funded wildlife research institute in the country, CKWRI is unusual. In fact, I don't know of another of our size and scope anywhere," said Dr. Charles "Charlie" DeYoung, who served as CKWRI's first Executive Director while simultaneously serving as the Dean of the College of Agriculture for then-Texas A&I University, which is now Texas A&M-Kingsville.

In 1982, a year after the Institute was first funded, it employed 6 administrators and support staff, 6 research scientists and a handful of graduate students. Today, the Institute houses 19 administrators and support staff, 31 faculty and research scientists, and 61 graduate students. In 2020 alone, Institute researchers published 60 peer-reviewed works and made 104 presentations despite the pandemic lockdown. In the same year, researchers were awarded more than $5 million in outside grants to support their research.

As CKWRI and its work product has grown, so has its endowment. In 1995, the fund contained about $3 million. Between 1995 and 2020, the fund multiplied 16-fold to more than $48 million.

"The secret to the Institute's ongoing success is our close-knit relationship with private landowners," said Dr. Fred Bryant, who served as CKWRI's Executive Director from 1996 until his retirement in 2016 and continues to assist Caroline Cage McAllister with development. "We've brought our donors into the CKWRI family as active participants in our mission."

Photo credit on page 12: King Ranch, Inc., Kingsville, Texas.

The Visionary and the Vision

Reared in an era when market hunting reduced once vast herds and flocks to near extinction across the nation, Caesar Kleberg viewed wildlife resources differently than most of his contemporaries.

"Caesar Kleberg had the foresight to recognize the inherent value of wildlife, both economically and ecologically," said Dr. David "Dave" Hewitt, CKWRI's Executive Director. "He instinctively understood that wildlife matters to people."
When Caesar arrived on King Ranch's famed Norias Division in the early 1900s, he saw a unique opportunity in South Texas to restore wildlife populations and change public attitudes. Instead of telling people what they ought to do, he showed them. For instance, he instituted harvest limits and other hunting regulations on King Ranch before the Texas Game, Fish and Oyster Commission, the predecessor to the Texas Parks and Wildlife Department, even existed.

"He was the Aldo Leopold of Texas," Bryant said.

His influence extended beyond Texas. Likely with his assistance and encouragement, his cousin, Congressman Richard "Dick" Kleberg authored what is commonly called the Duck Stamp Act. Passed in 1934, it is arguably the most successful conservation legislation in American history, generating more than $900 million to safeguard nearly 6 million acres of wetlands across the US.

As the end of his life approached, Caesar put his money where his heart was. In 1943, his last will and testament established the framework of the Caesar Kleberg Foundation for Wildlife Conservation (CKFWC).

For almost 40 years the Foundation's trustees managed the assets. When the endowment grew to a sustainable size, they began making annual donations to then-Texas A&I University. In the late 1970s and into early 1980 the size of the gifts increased noticeably, signaling increased support—and an opportunity to move forward.

On a fateful Friday afternoon in autumn of 1980, DeYoung, who was then Dean of the College of Agriculture, got a phone call from Dr. Duane Leach, the University's then-president who had recently joined the CKFWC Board of Directors. Leach told DeYoung to draw up a proposal for a wildlife research institute—and have it ready by Monday morning.

As instructed, DeYoung, on Monday morning, delivered an 11-page, double-spaced typewritten document laying out the framework for what would become CKWRI. The proposal identified four primary research topics: wildlife diseases, native plants, commercial utilization of wildlife and basic ecology of important native plant and animal species as the primary focus of the institute's efforts as well as specific education outreach efforts to landowners. The trustees approved the proposal as written. And the rest, as they say, is history.

The Trust Fund

The synergistic relationship that exists between Institute personnel and Texas landowners is built on trust.

"The key is trust—and more trust," Tio said. "Over time, the landowners have grown to trust the research scientists and allowed them access to their private ranches in order to find answers to the landowners' real world questions."

Institute personnel understand the privilege and responsibility that comes with access and financial support.




"As an Institute, we do what we say we're going to do, and our scientists deliver, which is somewhat unusual for university projects," DeYoung said. "And we're respectful of the land, which is our laboratory, and the landowners, many of whom are funding the projects on their own ranches."

According to Hewitt, private funding from private landowners gives the Institute three distinct advantages over traditional, publicly funded research concerns. First, private funding gives research scientists more research flexibility than government funding and reduces redundant, bureaucratic paperwork. Second, private landowners keep the scientists focused on the Institute's mission which is conducting applied research that benefits Texas. Third, Institute graduates come into the work force knowing how to interact with private landowners, which makes them extremely sought after, effective employees and professional leaders.

In addition to contributing access and money, landowners contribute their time and enthusiasm by serving on the Institute's Advisory Board. The advisors provide insight on management problems that need the Institute's attention and are the Institute's best ambassadors. Bryant, who reinvigorated the board during his tenure, noted that advisors are invited to serve for life and their commitment and willingness to serve is unlike any other board he's experienced. In fact, the 19 current advisors have logged 250 years of collective service.

"On most boards, people serve 3 – 5 years and can't wait to get off," Bryant said. "Our advisors, on the other hand, can't wait for the next meeting."

The landowners' enthusiasm and passion for the Institute's mission and work is mirrored and multiplied by CKWRI's world-class faculty, graduate students, and support staff such as Becky Trant, who has served at the right hand of the Director since the mid-1980s. The brightest minds coming together and working collaboratively (another unique trademark of the Institute) to solve Texas' most pressing conservation problems, results in not only answers but an intangible "magic" that then attracts more bright, passionate people to the work.

"Our strength is our people," Hewitt said. "Our collective dedication to a single mission binds us together and our collaborative spirit makes us so much stronger and more effective than any single person would be alone."

While Texas has changed drastically in the past 40 years, some things will remain the same even as time marches on.

"Institutionally, we will continue to exhibit the 'stable nimbleness,' that has brought us this far. Our leadership, our personnel and our guiding vision will remain true and intact, but we will respond to challenges as they arise," Hewitt said. "The bottom line for us, though, is habitat—always has been and always will be—because if we lose the habitat nothing else matters."

Just like Caesar Kleberg, today's Institute leadership takes a long view.

"Our time and effort on behalf of wildlife conservation is really an investment in forthcoming generations," Tio said. "Our work is not all about today but done with the knowledge that we if we take care of our wild places and wildlife today, then they will last way into the future."

Northern Bobwhite Hunting Dynamics & Modern Technology

by D. Abraham Woodard, Leonard A. Brennan, Tyler A. Campbell, Landon Schofield, Fidel Hernández, Humberto L. Perotto-Baldivieso, and Neal Wilkins

Technological advances are improving the effectiveness and efficiency of our lives. From doorbell cameras to "smart" appliances to self-parking cars, our everyday processes and functions are being impacted by technology at a remarkable pace and scale. Most hunters go to the field to unplug and escape the bombardment of technology, but can technological applications be helpful in the time-honored traditions of quail hunting? We believe they can.

Quail hunting is a fundamental component of northern bobwhite conservation and the economies of rural areas throughout the United States (Figure 1). In South Texas, annual lease revenues for bobwhite hunting can yield up to $20 per acre, generate more than $75 million in income, and create over 1,600 jobs (Dodd et al. 2013). The reason it generates so much income—bobwhite hunting in South Texas is arguably the best quail hunting in the world.

With that being said, it is our responsibility to manage our bobwhite populations sustainably, which includes our harvest practices. The recommended harvest rate for bobwhites in South Texas is 20% of the fall population annually, including crippling losses (Brennan et al. 2014). However, previous research has found that harvest timing, frequency, and distribution can also impact bobwhites (Radomski and Guthery 2000, Brooke et al. 2017, McGrath et al. 2018). For instance, as hunting pressure increases, bobwhites begin displaying avoidance behavior such as early or distant flushes, non-flushes or running, and complete avoidance of hunted areas. These behaviors, combined with reductions in local populations, have both economic and biological consequences. Therefore, managing a bobwhite harvest includes distributing hunting pressure across time and space, or in other words, across long hunting seasons and the pastures available to hunt.

Figure 1. Bobwhite hunting party on Buena Vista Ranch, Jim Hogg County, Texas. Hunting wild bobwhites adds over $75 million to the economy of South Texas — advances in technology can help managers sustain this important resource.

To assist managers with the strategic planning of harvest, the Caeser Kleberg Wildlife Research Institute and the East Foundation initiated a research project to analyze the spatial and temporal dynamics of bobwhite hunts in South Texas. The study took place during 3 bobwhite hunting seasons (2018–2019, 2019–2020, and 2020–2021) on 15,000 acres of East Foundation property in Jim Hogg County, Texas. The East Foundation is a nonprofit organization established in 2007 from the estate of Robert C. East that promotes the advancement of land stewardship through ranching, science, and education.

To analyze bobwhite hunting dynamics, we recorded detailed hunting logs and GPS tracks for each dog and hunting vehicle. We used the information collected to study "where" hunting occurred and "when" it occurred throughout each hunting season. In total, we documented 211 bobwhite hunts consisting of more than 1,805 covey encounters, 8,220 gunshots, 153 bird dogs, and over 1.9 million GPS locations.

We documented hunting activity on 77% of the total area available to hunt, with many areas hunted on multiple occasions within and between years (Figure 2). We found that bobwhite hunting parties effectively hunted 60 acres per hour, ranging from a low of 31 acres per hour to a high of 87 acres per hour. On average, hunters encountered 2.8 coveys per hour in the morning and 2.4 coveys per hour in the afternoon. Hunters retrieved 1.0 bobwhite per covey found and recovered a bobwhite for every 5.1 shots.

Hunting effort (i.e., total hunts and hours hunted) and efficiency (i.e., coveys per hour and harvest per covey) were highest during the middle portion of the hunting season (mid-December to late-January) and lowest during the early season (November to mid-December). In fact, we found that hunters found 13% fewer coveys per hour and harvested 31% fewer quail per covey during the early period. We also found that the spatial distribution of hunting pressure was negatively influenced by brush canopy cover and distance to the nearest road. Specifically, for every 5% increase in brush cover and 10 meter (i.e., 10.9 yards) increase in distance from a road, there was a 12% decrease in total hunting pressure.

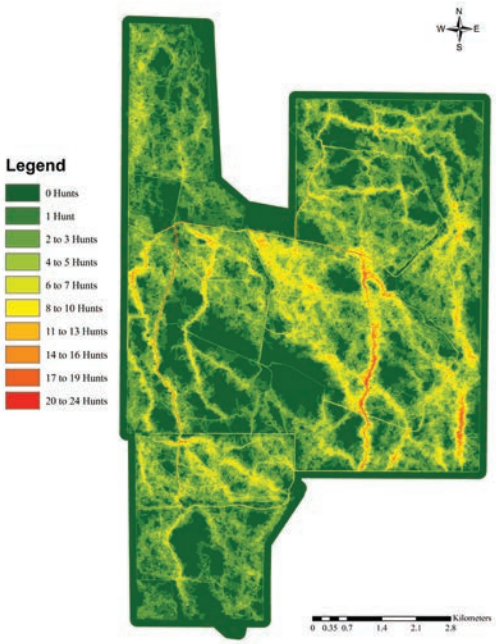
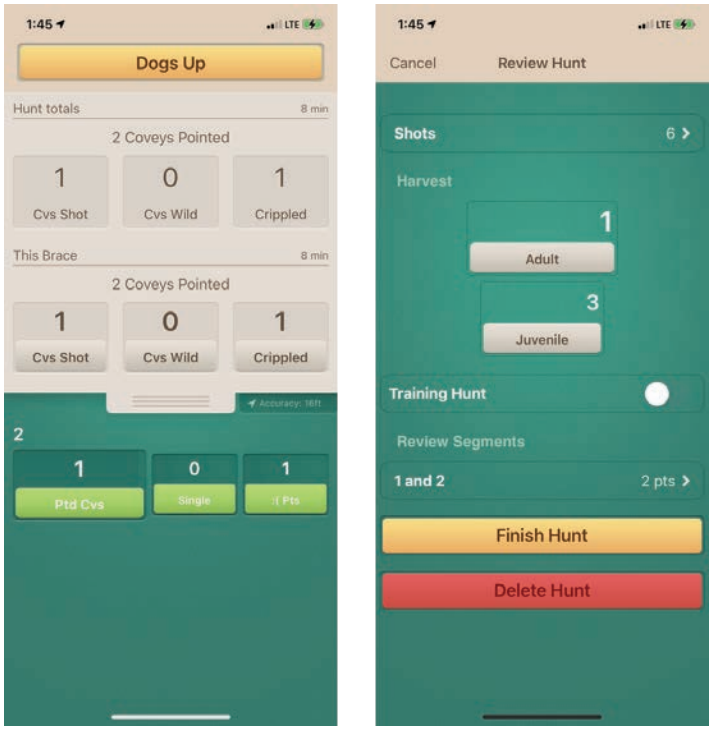


Figure 2. Total hunting pressure distribution for 211 quail hunts during 2018–2019, 2019–2020, and 2020–2021 bobwhite hunting seasons on Buena Vista Ranch, Jim Hogg County, Texas.

As the study progressed, it was clear that landowners, hunters, and biologists who wished to implement our findings would need a simplified manner to record hunting dynamics and spatial hunting distributions. Therefore, identifying such a program became a secondary objective. Although many options are available, we found the program CoveyIQ (CoveyIQ LLC, Charlotte, NC; www.coveyiq.com) was the most efficient. CoveyIQ was designed by quail hunting enthusiasts in North Carolina and incorporates many of the bobwhite hunting variables we documented (e.g., dog details, hunting times, covey locations, shots fires, bobwhites harvest, bobwhites crippled). The program involves a mobile application for collecting the field data and a secure website for reviewing and downloading the final hunting dynamics.



We assessed the CoveyIQ program by recording 31 hunts on the mobile hunting app during the 2020–2021 hunting season. Seven different observers recorded the hunts using various Apple products (Apple Inc., Cupertino, California, USA). We found that the mobile app has a straightforward design (Figure 3),

Figure 3. Covey IQ mobile hunting application hunt screen (CoveyIQ LLC, Charlotte, NC).

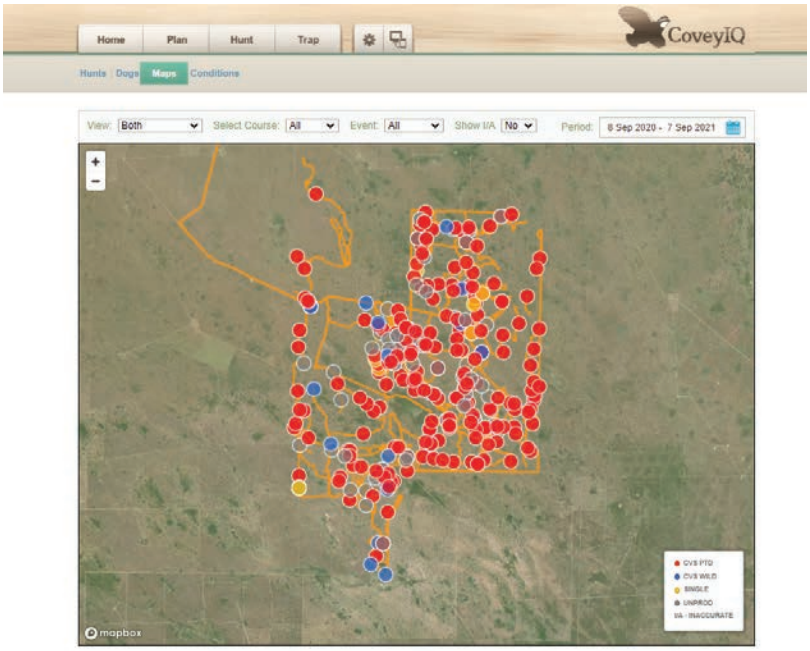


Figure 4. Hunting distributions and bobwhite covey encounter location maps from CoveyIQ website as recorded from mobile hunting application (www.coveyiq.com).

allowing for simplistic data entry in "real-time" that would not interfere with the hunts themselves. The app records the spatial position of the hunting path and each covey encounter (Figure 4) while simultaneously gathering hunting times and environmental conditions (e.g., temperature, humidity, wind speed). The application did not require cellphone service to record hunts, and the application would automatically upload to the CoveyIQ website after completing the hunt. The website was also user-friendly, with various options for viewing and organizing data (Figure 5). For instance, hunting dynamics can be sorted and organized by time (e.g., day, week, month), individual dog or hunting party performance (e.g., covey per hour, harvest per covey), or map layers of interest (e.g., hunting path, coveys pointed, unproductive points). In summary, the CoveyIQ program allows for recording fundamental bobwhite hunting dynamics within a simplified framework that provides data organization and summary analysis without tedious data processing.

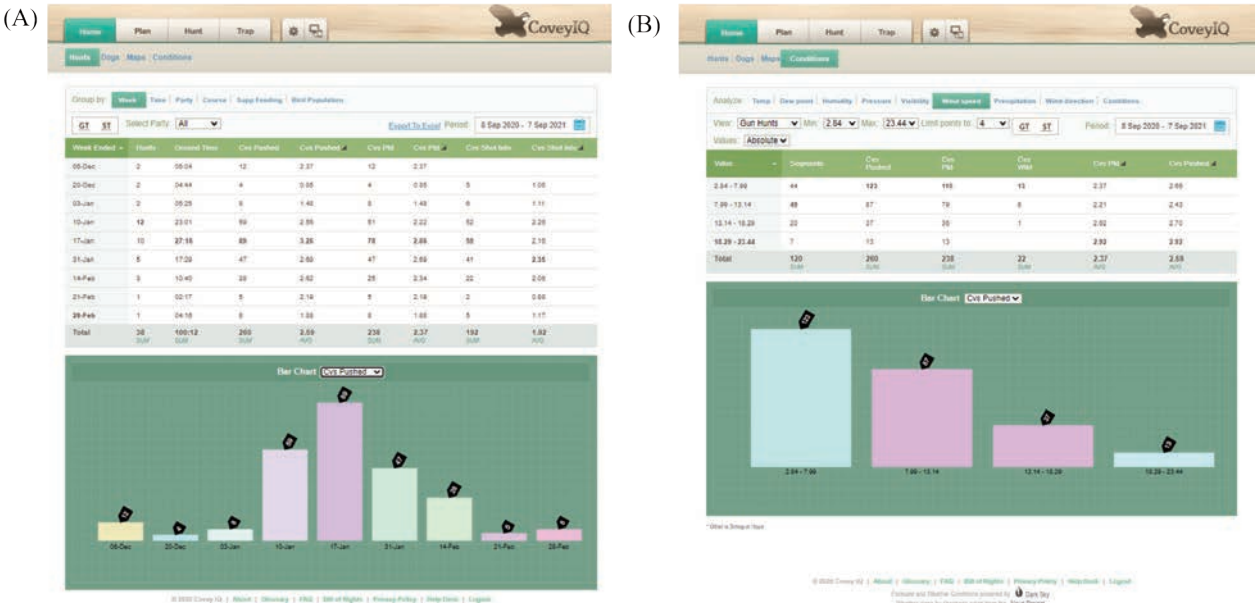


Figure 5. CoveyIQ hunting reports for windspeed (A) and coveys encountered per week (B) obtained from CoveyIQ website (www.coveyiq.com), recorded during the 2020–2021 hunting season on East Foundation's Buena Vista Ranch in Jim Hogg County, Texas.

There are very few activities or products in our lives that have not been influenced by modern technology. Despite the deep history and traditions of northern bobwhite hunting, there is practical use and need for incorporating modern technology. We've also found great enthusiasm from hunters, who now have records of where they have hunted and found coveys along with seasonal hunting dynamics. All of which makes for interesting discussions around the evening campfires with fellow hunters and quail enthusiasts. ↓

Collaring two bucks using GPS enabled collars that collected points every hour for one year.

Managing White-tailed Deer to Prevent Transmission of Cattle Fever Ticks

by Ashley G. Hodge, Jeremy A. Baumgardt, Randy W. DeYoung, Michael J. Cherry, Alfonso Ortega-Santos, David G. Hewitt, John A. Goolsby, and Adalberto A. Perez-de Leon

Cattle fever ticks are the common name for 2 related species of ticks whose presence has an outsize influence on management of both livestock and wildlife. The ticks can carry a microscopic parasite that causes babesiosis, also known as cattle fever, which can be fatal in up to 90% of naïve adult cattle. Chronic infections in cattle lead to anemia, weight loss, decrease in milk and meat production, and abortion. The presence of the ticks is a serious threat to the multibillion-dollar cattle industry. Fortunately, many people outside of the trans-border region have never heard of the cattle fever tick. This is due in large part to the heroic, behind the scenes, efforts of the state-federal partnership that keeps the ticks out of the United States.

The ticks arrived in the Americas in the 1500's, unwittingly transported on livestock introduced by Europeans. By the early 20th century, the ticks had spread from South America to the southern United States. The disease became especially problematic during the trail drive era, when northern cattle began dying of 'Texas fever' after exposure to southern cattle. In the late 1800's, scientists established the

link between the ticks and the disease. Cattle fever ticks are a 1-host tick, meaning they complete their life cycle on one animal. Therefore, treatment of infested cattle could control the ticks, and thus eliminate the disease.

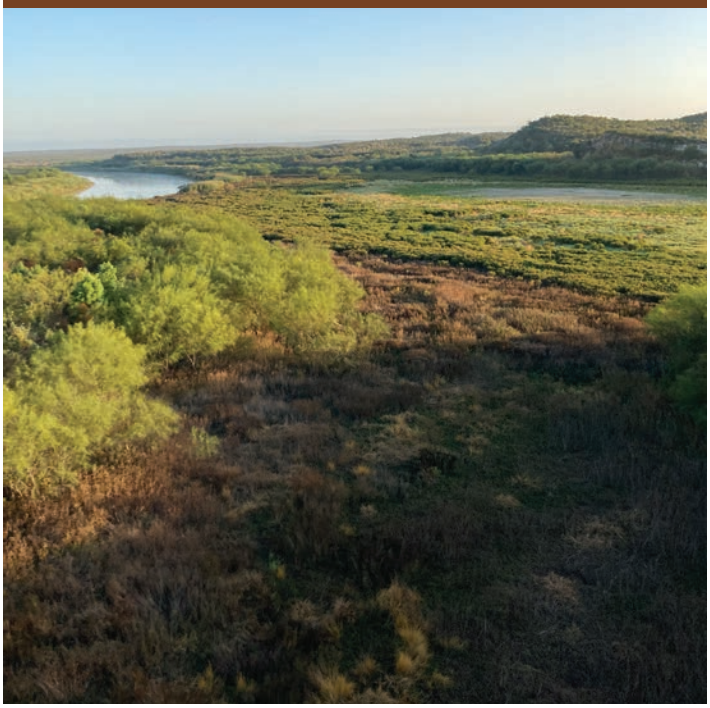
The Cattle Fever Tick Eradication Program was formed in 1906 to eradicate of ticks from the United States. Through much hard and diligent work, the ticks were eradicated from most of the country by the 1940s. The agency maintains a permanent quarantine zone along the southern border to prevent re-infestation from Mexico, where the ticks remain common. Today, the eradication program works with producers to inspect cattle leaving the quarantine zone or imported from Mexico, while "tick riders" patrol the region on horseback and watch for stray livestock.

Treatment of cattle has historically been the key to controlling tick populations. Properties with infected cattle could gather and treat the cattle every 2 weeks until no more ticks were found, or vacate the pasture of cattle for up to 9 months. The latter approach was often preferred due to lower cost and inherent simplicity– removal of the host species caused the one-host ticks to die out. In recent decades, tick control has become increasingly difficult. Although the ticks prefer cattle, they will also infest deer. Deer numbers in the quarantine zone have increased during the past 2-3 decades and deer now present a major problem for management of the ticks.

There are limited options to treat wildlife for ticks. The current approach is to feed corn laced with ivermectin, an anti-parasite medication, to deer. Unfortunately, the feed treatment can only be used outside the hunting season, as medicated feed must be withdrawn 60 days prior to consumption of the meat. Furthermore, deer move among properties and can distribute ticks into new areas and outside of the quarantine zone. Managers need additional tools to help control tick populations.

In early 2020, we embarked on a research project with the USDA Agricultural Research Service, the Cattle Fever Tick Eradication Program, and the Texas Parks and Wildlife Department. Our goals were to study deer movements and home range

Diverse vegetation structure near the Rio Grande river on International Boundary Waters Commission land in Zapata County, Texas.



sizes in the quarantine zone, and to determine if a reduction in deer numbers could aid management for ticks by removing extra host animals. We worked near Falcon Lake and the community of Zapata, Texas, on lands owned by the International Boundary Waters Commission. The area supports a high density of white-tailed deer that are difficult to manage through normal hunter-harvest approaches. The land surrounding is difficult to access due to lack of roads

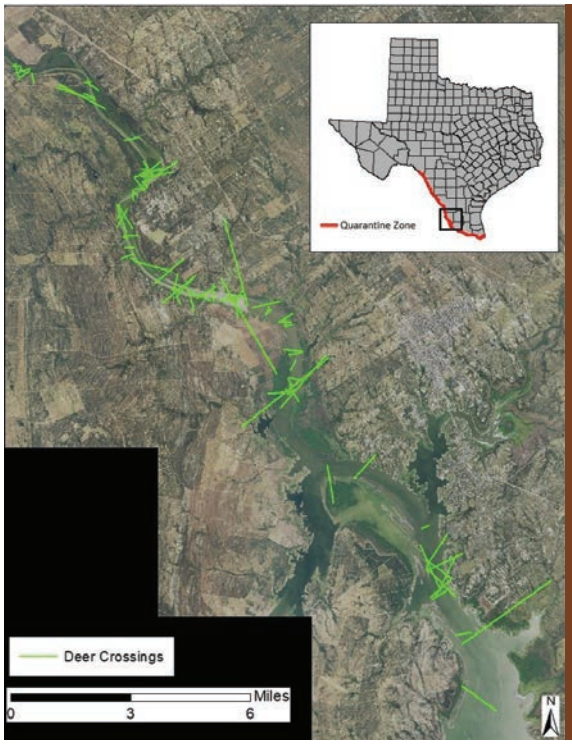
and need to travel through private lands to reach the Commission land. Ticks are prevalent in the area and have been an ongoing problem for several years.

In February 2020, we captured 100 white-tailed deer on Commission land and fitted them with GPS radio-collars to monitor deer movements. A month later, we captured 298 female deer over a 5-day period; animals were humanely euthanized, skinned and dressed, and placed in refrigeration trucks. With the aid of the county commission, all carcasses were distributed to the residents of Zapata County. The timing was especially fortunate, as this occurred during the early stages of the nationwide pandemic shutdown and ensuing shortage of grocery items.

By tracking deer movements, we found that the largest home ranges for both sexes occurred in May, and the smallest occurred in August. Deer home ranges were relatively small, seldom more than a few hundred acres, which means that many feeders are needed to treat deer with medicated feed. Collared deer crossed the border 96 times during our study period and many returned to Texas within hours or days. Areas of high crossing frequency may be sources of re-infestation for ticks. Understanding where and when deer cross the border is important, especially when we want to target treatment to animals that may be more at risk for spreading ticks.

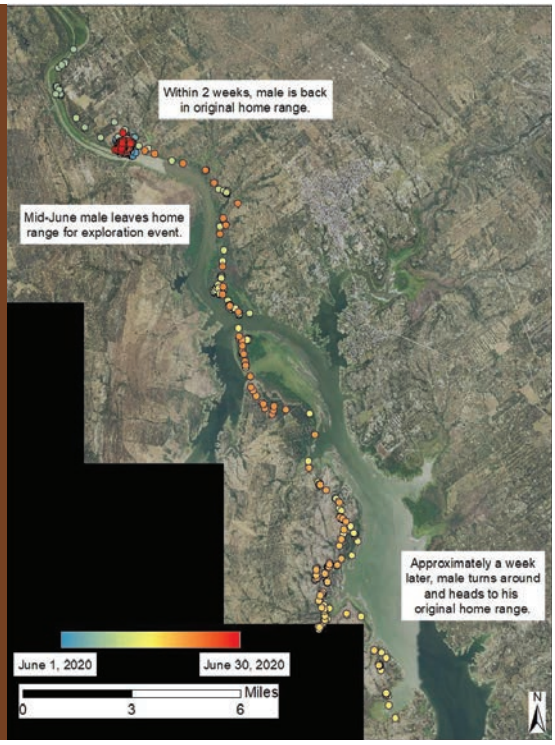
Over the next year, we will further evaluate how tick abundance may have been impacted by the large-scale removal. We will explore how deer use the area and the vegetation and landscape features that influence those choices. We will also create a predictive map of where cattle fever ticks are most likely to occur, based on vegetation type and

Top photo: Zapata County, TX residents lined up to pick up free deer meat during the removal effort.
Bottom photos: USDA-ARS and TPWD employees handing out carcasses from the removal effort to Zapata County, TX residents.



Left photo: Border crossing locations from February 2020-Febraury 2021 in Zapata County, Texas.

Right photo: Points from collar 42005, a yearling male during June 2020 on Falcon Lake Reservoir near Zapata, TX. Blue points indicate the beginning of the month and red points are the end of the month. Points shifting from light blue to green to yellow show a progression of the month.



ticks found on deer and livestock, and compare this with the GPS collar information to highlight areas to target for treatment. Finally, we will evaluate how social interactions among deer influence their chances of having ticks. The results of our study will aid the many stakeholders who are invested in controlling cattle fever ticks. Understanding how deer disperse ticks on the landscape will also provide us insight into options for managing this valuable natural resource.

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Donor Spotlight:
Ed Whitacre

Hooking people up is what Ed Whitacre has spent a lifetime doing. As a lifelong employee of Southwestern Bell, which later became AT&T, Whitacre spent the early part of his career literally hooking people up as he started out in the field working as a lineman, setting where poles needed to go to bring telephone service to area towns. Later in his career, as he worked his way up to eventually become president and then CEO and chairman of AT&T, a position he held for 17 years, Whitacre learned and put into practice the importance of hooking people up from the business perspective. "Hooking people up is very important in every aspect of life," says the 79 year-old Whitacre.

Whitacre grew up in Ennis just south of Dallas, population of about 5,000. He describes Ennis back then as a railroad town as most everyone, including his dad, worked for Southern Pacific Railroad. His dad was an engineer; simply put he drove the train. Though Whitacre grew up as a "town kid", he rabbit hunted and fished. Whitacre attributes his love of the outdoors to his grandfather, who was an avid outdoorsman, namely a fisherman. "He taught me how to cast, how to tune-up lures, what to use under what conditions, what to look for in the water, that sort of thing," says Whitacre. "He was very good at it."

An average student, Whitacre graduated from Ennis High in 1959. His mom was adamant that her son go to college, so with son in tow she went to see Cecil Tolleson, president of the local bank, about a loan. Tuition in those days was something like $50. "I still remember that meeting," says Whitacre. "My mother says to him, 'This boy's got to go to college.' He says, 'ok,' and loaned her $750 on faith as she didn't have any collateral to put up." Whitacre's mother, who lived to be 100, got to see her son become president of the largest telephone company in the world. "I had the world's best mother," says Whitacre. "I probably didn't know it at the time, but I did. She kept me on a pretty tight rein, but she was most encouraging. She taught me how to treat other people, what to strive for, and to never give up."

Whitacre attended Texas Tech University in Lubbock. He loved it from the get-go. With no spending money and no car, Whitacre's first plan of action was to get a job. That job came in the form of driving an ambulance for the local funeral home. The funeral home not only gave him a job but a free place to live, a small house, which he shared with four others with whom he rotated driving the ambulance. After a year, he went to work for Gristy Cleaners delivering clothes at night in a Volkswagen Microbus.

Whitacre chose Tech with the hopes of becoming a chemical engineer but found out straight away that he wasn't much good at the laboratory part. He switched to industrial engineering. Though he didn't have any idea what he really wanted to do, he reasoned that an engineering degree would enable him to get a job upon graduation. "That was driver number one," says Whitacre.

In between his junior and senior years at Tech, he "begged" one of the higher-ups at Southwestern Bell in Dallas for a summer job. They liked him so well that in the fall of his senior year, he was able to secure a part-time job with the company as a lineman. It entailed laying poles, cables and fiber optics. Upon graduation,

"Hooking people up is very important in every aspect of life." -Ed Whitacre

he was hired on fulltime with the company though it didn't take long to realize that being an engineer was not something he wanted to spend a lifetime doing. He wanted to work with people.

CKWRI researcher Bart Ballard (left) and Ed Whitacre (right).

About six months into his career, an opportunity to be a foreman came along. He was put in charge of a group of "old grizzled veterans" doing repair service. Whitacre was a young buck of 21. From these men he learned how to do some physical things – namely how to repair phone lines. He also learned from them one of the most important lessons of life – the importance of understanding people. "They called me high boy; they gave me hell," Whitacre quips. "I learned what makes people tick, and I found it fascinating. I still keep in touch with some of them."

He excelled at the people part and quickly progressed from repair foreman to the next level which was wire chief, and from there to supervising wire chief. He had a short stint away from the company while serving his country. After the Army, he returned and was promoted to district manager of all outside – essentially all the switching machines. He started that position in Tyler and then became district manager in West Dallas, Fort Worth East.

Back then Southwestern Bell was largely a monopoly. There were some private telephone companies in the smaller towns, but in the large cities Ma Bell was it. In 1982 the government made the decision to break up the company by forcing them to lease their lines. At the time, Whitacre was president of Kansas. Employees had the option of going with AT&T long distance or staying with Southwestern Bell which was the local service. Whitacre chose the latter.

In 1985, Whitacre was promoted again, this time to group president, which meant a move to the headquarters of Southwestern Bell in St. Louis. He was over everything from yellow pages to telephone equipment and retail – everything but the actual workings of the telephone.

"We didn't yet have cell phones, but we were getting close," says Whitacre. "They came along in 1988." First it was the big bag phones and then flip phones, which Whitacre proudly still uses, and then the iPhone. Coincidently, as chairman of AT&T he had a little something to do with that – he and Steve Jobs. Jobs had the iPhone, he had the network. The two teamed up to make it work.

On his way up, Whitacre did a little of everything, hop skipping across the country moving 21 or so times in all. He even spent some time in New York City writing technical specifications. And in Little Rock, Arkansas, while working as division manager, he made time to become acquainted with some pretty good fishing lakes nearby. Each move he saw as an opportunity, and a chance to grow.

Whitacre became CEO and Chairman of the Board of Southwestern Bell Corp. in 1990. During his tenure, he led the company through numerous changes and a series of mergers and acquisitions to become the largest provider of long distance and wireless service in the United States. One such acquisition was AT&T, which the company took the name of post-merger. By his own admission, Whitacre brought the company further than it had ever been. More importantly, employee morale during his chairmanship tenure, he opined, was out-

standing. "We made people proud to work for us again," says Whitacre. "Doing that was the highest accomplishment I could achieve. I felt pretty good about that."

In 2009, two years after retiring from the chairmanship, Whitacre got a phone call from the White House asking if he would consider becoming the interim chairman of GM as it was coming out of the government-induced Chapter 11 bankruptcy. He declined telling the White House that he knew nothing about cars. The White House called back the following day and told him to look at it as a service to his country. With that, he went from phones to cars.

The first thing he did was call in all the top managers to get their assessment on why GM went bankrupt. "The general response was that everything had been done right, but it obviously had not because the company went bankrupt." That left Whitacre with the difficult task of making a lot of management changes. He did so, and within six months the company was once again making a profit. "All of a sudden, people were not ashamed to work there," says Whitacre. "They were proud of the company again. That's the secret of everything - the people." From a corporate perspective a good leader hires people smarter than the leader. "Then you give employees accountability, responsibility and let them do their job without looking over their shoulder. And you treat people like you want to be treated," he says.

He stayed at GM for 2.5 years. Whitacre later wrote about it in "American Turnaround: Reinventing AT&T and GM and the Way We Do Business in the USA". When he stepped down from GM, he was asked by both sides of the political aisle to consider a run for Congress. He declined. He was tired, and wanted to spend time with his family and have quiet time at his ranch.

In retirement, Whitacre enjoys hunting, fishing and playing golf. He particularly enjoys spending time at his ranch in Pearsall as well as his Utah ranch near Park City. At this stage of life, Whitacre is also focused on giving back. He's been involved with the Caesar Kleberg Wildlife Research Institute for 10 or so years. He and his wife Linda are the benefactors of the Endowment for Waterfowl Research as he values science and considers it to be a necessary part of life.

"CKWRI has assembled a group of outstanding scientists who are trying to find out more and preserve things in the wild," says Whitacre. "I find that to be a worthy goal." He's also a big supporter of Ducks Unlimited and was recently part of the search committee to pick a new president of DU.

Perhaps his biggest contribution in terms of involvement has been to his alma mater. He served on the Board of Regents for a time, and in 2008, the College of Engineering was renamed the Edward E. Whitacre Jr. College of Engineering.

The lineman turned CEO has seen plenty of changes in his lifetime, the biggest of which is the change in technology. In the big scheme of things, though, Whitacre says technology is really not that different today in that the concept is the same. "Back then there were copper wires that went to everybody's house and in the switching machines," said Whitacre. "Now we do all that through fiber optics and solid state switching. Now we have cellular phones, text messaging and emails," he continues. "The technology has changed, the hardware and software have changed, but it's still the same thing – putting people in touch with one another. You got to hook people up to each other."

He admits that not all technology is necessarily good, and in particular living in this world of instant communication is not always beneficial. And while he understands some of its values and how to use such things as Facebook, Twitter and Instagram, it's a space in which he chooses not to participate.

To young people Whitacre says, "Be optimistic, be persistent. Persistence is the one thing that probably helped me more than anything else, and care about other people." Whitacre figures he's probably lived in the best of times. "I've got a great wife, two great daughters and four grandkids." Despite his worries about the country, he's optimistic about the future. "You've got to have hope," he concludes.

ALUMNI *Spotlight*

Donnie DRAEGER

CKWRI Class of 1996,
Director of Friedkin
Ranch Properties,
Comanche Ranch
Eagle Pass, TX

What is your background with the Institute?

From 1993 to 1996 I studied white-tailed deer at the Faith Ranch under the advisement of Dr. Charles DeYoung. I earned a master's degree in Range and Wildlife Management for completing my thesis dissertation of "Predicting Seasonal Flux In White-Tailed Deer Carrying Capacity In South Texas: Root-Plowed vs Undisturbed Soil Sites".

Donnie Draeger during his time with the Institute.

What are you doing now?

For the last 20 years I have been the Director of Ranch Properties for the Friedkin family. I oversee all aspects of ranch/wildlife management and guest services on four Texas ranches totaling of approximately 130,000 acres. I live and work daily on the Comanche Ranch in Dimmit and Maverick counties. There are three other ranches under my management umbrella: Apache Springs, Cascabel and Blue Creek ranches. We have an onsite ranch manager at each of our 4 ranches that run the day to day operations of the ranch and report back to me. I am also a member of Texas Parks and Wildlife Department's White-tailed Deer Advisory Board as well as Co-Chair for the Texas Wildlife Association's Big Game Committee.

How does your time at CKWRI continue to affect you today?

My years with the Institute were split between Kingsville (for classes) and the Faith Ranch (for field work). In both of those settings, I made lifelong friends and memories. I still keep up with most of my peers from those CKWRI years. I rely on them for friendship, advice and networking. Networking may be the greatest asset to come out of my CKWRI years. I have also been fortunate enough to continue to work closely with CKWRI researchers, Drs. DeYoung (both Charlie and Randy), Dr. Tim Fulbright, and Dr. Dave Hewitt. As a group we have researched and worked on some innovative long term studies (The Comanche-Faith Project and the Comanche Buck Culling Study). Also during that time, we have guided dozens of graduates through those same research projects. Besides the work and research, I can honestly say those CKWRI years were some of the most fun years of my life. We played and worked hard (the latter could be debatable). One of my current guilty pleasures is watching Charlie DeYoung's reactions to my friends and I reminiscing about our "adventures or mis-adventures" of those times, so much he didn't (and still doesn't) know about! Lastly, I should definitely apologize to Mrs. Becky Trant, (current Director of Admin – CKWRI) without malicious intent of course but none the less, I am pretty sure I made her life a living hell while I was there. I was never good at following the rules and always seemed to find a way to get things done that I needed, usually by "unconventional means". Becky came wise to that early on and kept a close eye on me. Becky, I am sorry for all the headaches and grief I caused, it may be 20+ years late, but as they say "better late than never".

Caesar Kleberg Wildlife Research Institute
700 University Blvd. MSC 218
Kingsville, Texas 78363

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Learn more about how you can make a difference for the wildlife of Texas by visiting www.ckwri.tamuk.edu/giving.

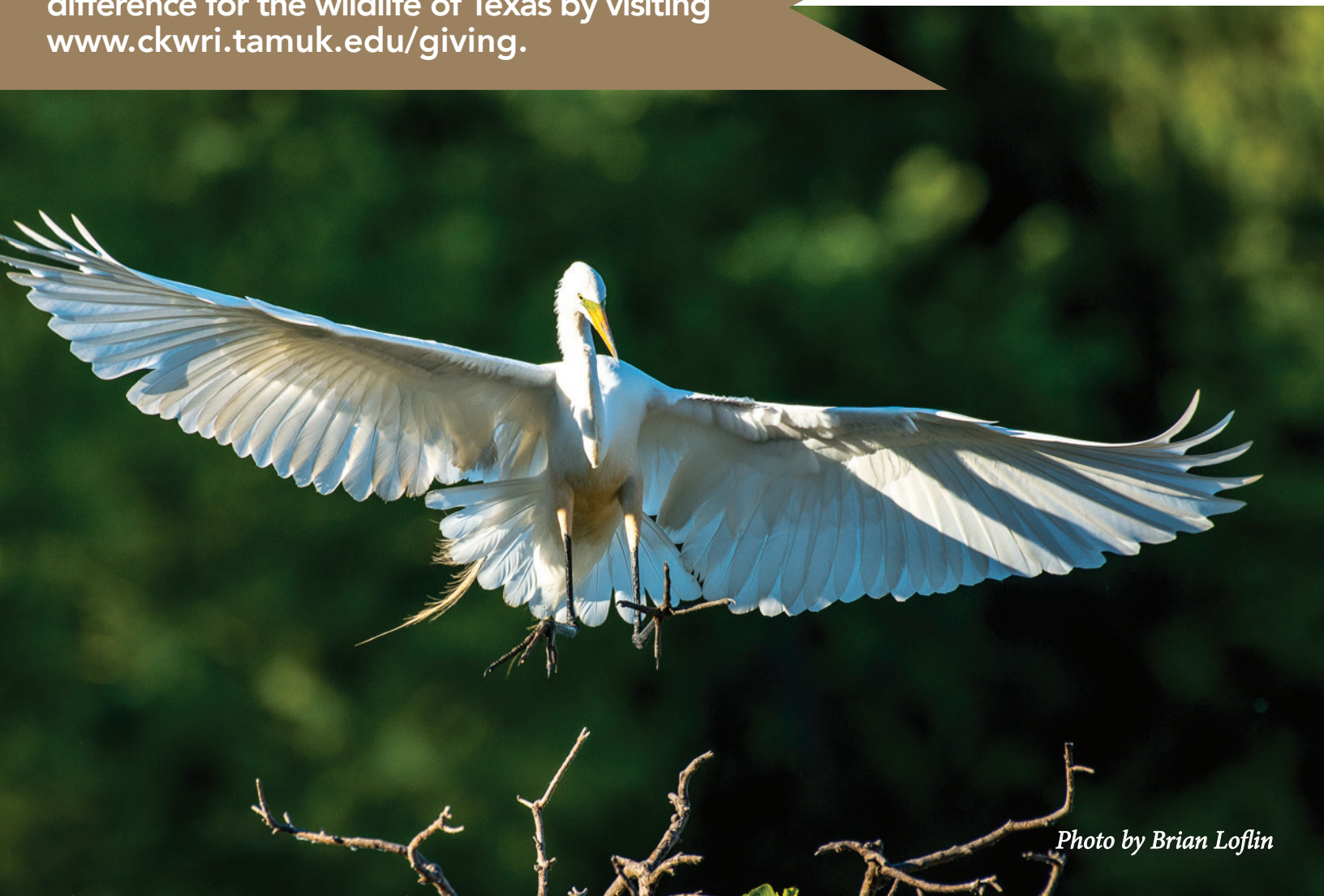

Photo by Brian Loflin