



FROM THE CEO NEAL WILKINS

SOUTH TEXAS NILGAI

“Cow-Deer-Goat-Camel”

You catch sight of something large across a pasture where the grass fades into a line of mesquite. A big animal, slate-blue in color. Your mind reaches for something familiar. A cow? A deer? Neither seems quite right. Then the animal raises its long, elegant neck and turns its head. Goat-like horns come into view, and it moves into a lurching stride with hind limbs shorter than its front legs. While running, its silhouette reminds you of a camel.

You’ve spotted a bull nilgai, the largest free-ranging mammal in South Texas. He acts as if he belongs here, but he is a long way from home. Nilgai are native to the Indian subcontinent, where they roam open plains and scrublands across India, Pakistan, and Nepal. The largest antelope in Asia, mature nilgai bulls often weigh more than 600 pounds.

Early naturalists apparently had the same reaction as many Texans today as they struggled to decide exactly what they were looking at. The taxonomic name given to this unusual animal, *Boselaphus tragocamelus*, reflects their confusion. Translated from its Greek roots, the name literally means “cow-deer” (*Bos-elaphus*) and “goat-camel” (*trago-camelus*) – the body of a cow, the long legs of a deer, the face and horns of a goat, and the neck and stride of a camel. In Hindi, the primary language across much of its native range, the word nilgai translates to “blue cow.”

SO HOW DID THIS ASIAN ANTELOPE END UP IN SOUTH TEXAS?

In the 1920s, a small number of nilgai were imported and released by Caesar Kleberg in Kenedy County on the Norias Division of the King Ranch. Later, some were introduced to nine additional counties in Texas and several locations in northern Mexico. Animals dispersed onto neighboring properties, and populations eventually spread throughout much of South Texas and into northern Mexico. In South Texas today, nilgai numbers are estimated at 37,000 to 50,000 animals – quite a success story for the species.



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ABOUT US

East Foundation promotes the advancement of land stewardship through ranching, science, and education.

We manage more than 217,000 acres of native South Texas rangeland, operated as six separate ranches in Jim Hogg, Kenedy, Starr, and Willacy counties. Our land is a working laboratory where scientists and managers work together to address issues important to wildlife management, rangeland health, and ranch productivity. We ensure that ranching and wildlife management work together to conserve healthy rangelands.

East Foundation was established with a bequest from the estate of Robert East in 2007. In pursuit of our mission, we use our resources to build future leaders through programs that introduce students to private land stewardship. We invest in future professionals through internships, graduate fellowships, and close engagements with university programs.

We care for our land and are always exploring more efficient ways to get things done and are continuously guided by our values to conserve the land and resources.

We do what's right for the land and the life that depends on it.

WHY DID THEY SUCCEED HERE?

Nilgai evolved in environments similar to South Texas. Much of their native range experiences hot summers, mild winters, and periodic drought. Their short, coarse hair and minimal external fat give them excellent heat tolerance, but they struggle to survive when freezing temperatures persist for more than a couple of days. This limits their established northward range to areas generally south of a line from Baffin Bay to Riviera to Falfurrias.

Westward, their expansion is generally limited by rainfall, and populations become sparse in ranch country west of Brooks and Hidalgo counties. Nilgai prefer landscapes where grasslands blend into brush country, places that provide both forage and cover. Those habitats are common across the ranchlands of the Rio Grande Valley and the South Texas Sand Sheet.

Flexibility is the key to their survival. Nilgai are intermediate feeders, capable of both grazing and browsing depending on what the landscape provides. Research in South Texas suggests their diet is roughly two-thirds grasses, one-quarter forbs, and smaller amounts of browse, allowing them to adjust as forage conditions change. When grass is plentiful, they graze. When drought reduces grass production, they shift to forbs and woody browse. In many ways, nilgai seem built for South Texas.

Nilgai maintain large home ranges, typically 2,000 to 5,000 acres, with bulls using somewhat larger areas than cows, and they travel considerable distances, often two to five miles per day. They cross fence lines regularly, often pushing beneath the bottom wire. So, when a pasture runs short of forage, or hunting pressure becomes too high, they simply move.

Nilgai have another trait that contributes to their success: strong reproductive capacity.

Research examining harvested animals in South Texas found that nearly 80 percent of adult females

were pregnant, and more than half of those pregnancies involved twins. Females may begin reproducing at just one year of age, and some remain reproductive well into their second decade of life. When conditions are favorable, nilgai populations can increase rapidly.

A COMPLICATED RELATIONSHIP

It is quite clear that nilgai are here to stay in South Texas. While they do present some challenges for ranchers, they also provide certain benefits. Nilgai are valued by hunters for their size, their wariness, and the quality of their meat, creating opportunities for ranch income through hunting.

At the same time, nilgai compete with livestock and native wildlife for forage. They can damage fences while moving across ranchlands, and they can serve as hosts for cattle fever ticks, a parasite capable of transmitting diseases that threaten livestock production. Although nilgai have been present in South Texas for nearly a century, we still do not fully understand how best to manage their populations.

Integrating nilgai into decision-making for ranching enterprises that combine livestock production, wildlife management, and native rangeland stewardship remains an ongoing challenge.

OUR WORK

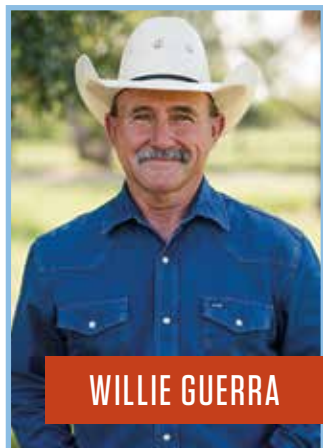
In this newsletter's "Science at Work" section, Range & Wildlife Biologist Landon Schofield describes our current field research aimed at better understanding how to manage nilgai populations. By improving our ability to estimate population size, age structure, habitat use, management response, genetic relatedness, and reproductive factors, this work will provide the information needed to make informed decisions and support better stewardship of our rangelands and ranching operations. ♡





OUR PEOPLE

Just as the East Foundation mission drives our organizational focus, our people are the boots on the ground who work diligently to promote land stewardship through our ranching operations, science-focused research, and informative educational programs. Below are highlights on the foundation's recent hires and program alumni.



WILLIE GUERRA

EMPLOYEE PROFILE

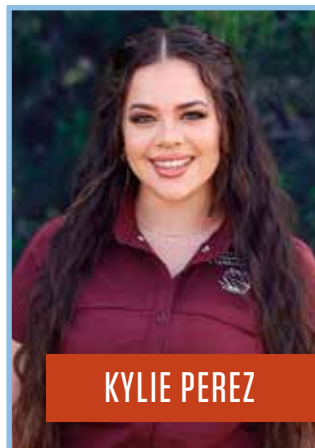
Willie Guerra is a Unit Foreman on East Foundation's San Antonio Viejo ranch.

He was born in Los Ebanos, Texas, and grew up on the Bentsen Ranch in South Texas, near Edinburg. At the Bentsen Ranch, he found a love

for ranching and learned how to cowboy from his father and godfather. He graduated from Edinburg High School in 1981. (Go Bobcats!)

In his role as Unit Foreman, he is responsible for cattle health and condition, grazing rotations, and maintenance of equipment and infrastructure.

Willie worked on ranches throughout South Texas, several feedyards, and at Tijerina Ranch as a Ranch Foreman for 22 years before joining us at East Foundation. In his free time, he enjoys driving the ranch, seeing the cattle, and team roping.



KYLIE PEREZ

ALUMNI PROFILE

Kylie Perez is originally from Norton, Kansas, where her interest in stewardship began through volunteering at her local veterinary clinic. These experiences sparked her passion for wildlife, animal health, and animal behavior. She attended


Kansas State University, earning a Bachelor of Science degree in Animal Sciences – Pre-Veterinary Medicine in 2020. During her time there, Kylie participated in undergraduate research on livestock stress. She also studied abroad in Costa Rica, where she worked on a project using DNA sequencing to identify shark fins.

Kylie continued this interest as she interned with East Foundation, where she spent six months conducting field research for a long-term monitoring project on small mammals and birds at East Foundation's San Antonio Viejo and El Sauz ranches. During this time, she assisted with trapping, handling, and data collection in remote field conditions. This hands-on experience provided her first exposure to applied

research on working lands and demonstrated how science can support land stewardship, ultimately shaping her decision to pursue a career in rangeland and wildlife ecology.

Kylie attended Texas A&M University and earned a Master of Science degree in Wildlife and Fisheries Sciences in 2023. Her master's research focused on habitat selection and bat occurrence in South Texas, primarily on the El Sauz ranch. Through acoustic monitoring and spatial analysis, she evaluated how vegetation cover influences bat activity and distribution.

She is currently pursuing a Doctor of Philosophy degree in Rangeland, Wildlife and Fisheries Management at Texas A&M University. Her doctoral research examines how vegetation structure and spatial variability shape ecological processes across diverse rangeland landscapes using very-fine resolution drone-based remote sensing data. Her work aims to develop practical approaches for informing land management decisions.

In her own words: "I am honored to have been supported by East Foundation and to work alongside their team, who showed me how research can directly support caring for the land every day. The landscapes of Texas are challenging, dynamic, and incredibly important. Being part of work that helps people better understand these lands has been one of the most meaningful parts of my research career." 



PROUD PARTNER



las huellas

South Texas

Las Huellas was founded in 2009 by a group of avid outdoorsmen with a passion for South Texas. Their intent was to educate South Texas about the conservation, management, and enhancement of wildlife and wildlife habitats to ensure nature preservation for future generations.

They serve as an advocate for the regions wildlife and for the rights of wildlife managers, landowners, and sportsmen in educational and wildlife habitat-related arenas. They are dedicated to educating people of all ages, especially the youth of South Texas, about the conservation, management, and enhancement of wildlife and wildlife habitats to ensure the preservation of our cherished resources for future generations.

Las Huellas is dedicated to advocating for nature and wildlife. Since their work began more than 10 years ago, they've given more than \$1.6 million to nonprofits supporting South Texas wildlife and wildlife education. 100 percent of the money they raise goes back toward conservation efforts, scholarships, and charities in the region.

Among efforts they have funded are wild turkey releases, nilgai studies, fever tick eradication efforts, and ocelot conservation.

Las Huellas has been a sponsor of East Foundation's Behind the GatesSM programs for over 10 years. With their support, we have been able to continue educating students in an immersive outdoor setting and better prepare our region's youth to serve as future leaders. Thank you, Las Huellas!



FROM THE RANCH

GARRETT STRIBLING



Technology Provides Operational Benefits

Managing rangelands is not without its challenges. As land stewards, we aim to leave the land better than we found it, enhancing its carrying capacity for both livestock and wildlife. The unique landscape of South Texas presents additional challenges for efficiently managing and gathering cattle. Implementing new virtual fencing technology has allowed us to address both challenges at once.

The idea of better controlling grazing pressure across a landscape is not new. Grazing systems that utilize high stocking densities and a lower frequency of use are becoming more widely used, but these systems can be labor and infrastructure intensive. Building miles of cross fencing is expensive, especially along the Gulf Coast of Texas, where the saline environment significantly impacts the functional lifespan of a fence, and running miles of





polywire electric fence is labor-intensive and does not hold up well against nilgai. Our El Sauz ranch has all of these challenges – large pastures with poor grazing distribution, salt flats and sea breezes, and large herds of nilgai.

Virtual fencing technology has been in development since the early 2000s; however, with the development of new systems it has become commercially available and represents a real opportunity to address these challenges. With virtual fencing collars, we can build miles of fence from our cell phone by simply drawing a grazing enclosure around the cowherd. As cows approach the virtual barrier, they receive an audible tone we have trained them to recognize as a cue to turn back. If they do not turn back and cross the barrier, they receive a small shock, like an electric fence, keeping the cattle where we want them with the added benefit of knowing their location 24/7 via the GPS locator in the collar.

This technology has the potential to benefit our operations in two ways. If we can better control grazing

pressure, we can allow areas of the ranch that receive little rest the ability to recover, and areas that have historically received very little grazing pressure to finally be utilized. In addition, always knowing where the herd is saves us time, labor, and money. Instead of gathering a 20,000-acre pasture, cattle will have been rotated around the ranch in significantly smaller acreages right to where we need them.

We work hard to adjust stocking rates and monitor changes in carrying capacity on a large scale. With the use of virtual fencing, we hope to scale it and efficiently break it down into pieces we can manage for the greater benefit of the resource. We have just started with this technology, but the opportunities for data collection about range utilization, range improvement and response, animal behavior, and other points of interest are just beginning to take shape. This technology provides operational benefits that have already been seen in the field, as well as valuable insight into how we can better utilize our resources and keep them productive in the future. [🔗](#)



Education INSIGHTS

Ensuring that tomorrow's leaders are land stewards

— Masi Mejia —

“Pair up and hold hands – you are now a cow-calf pair!”

Each February, we host students from regional schools during our Behind the Gates Field Days event on El Sauz. This year, we hosted our largest group of students

on El Sauz ever – more than 1,900 fifth graders! During the event, East Foundation staff and partners help students connect with the natural world while learning about ranching, wildlife, and land stewardship. We would not be able to accomplish this feat without our many valued partners who are aligned with our mission.

One of our signature topics is our Cattle Ranching Station. At this station, we emphasize how our rangelands are more than just places where cattle graze; they are living ecosystems. These landscapes provide many benefits to people and wildlife alike, including beef, clean water, fresh air, and vital habitat for many native Texas species.




At East Foundation, ranch managers and scientists work side-by-side to care for the land. Researchers study rangeland conditions, vegetation growth, soil health, rainfall patterns, and wildlife populations. This information helps ranch managers decide how many cattle the land can sustainably support. Our cattle team then highlights a calendar year's cattle production on the ranch, along with the many tools our cowboys use.

Students can see this process in a simple activity called the Cattle Grazing Game, an interactive simulation model that shows how ranch managers protect resources as stewards. Working in cow-calf pairs, students “graze” by collecting resources that represent food and water on the ranch. As the game progresses, students observe how resources change and discuss how land management can keep ecosystems balanced. Some of our favorite scenarios to include in this game are drought, disease, and predators. Have you ever listened to forty-five fifth graders getting upset because they didn't have enough water to survive? This simulation helps students understand the many scenarios that land managers and stewards must consider.

Active participation in our programming ensures that students walk away with a better understanding of land stewardship. For example, when asked a series of questions before and after participating in our BTG program, nearly 60% of students had

a better understanding of what goes on Behind the Gates of a working ranch.

Experiences like these reflect the heart of East Foundation's mission – to promote the advancement of land stewardship through ranching, science, and education. By opening our gates to students, we are helping the next generation understand where their food comes from, how healthy rangelands support both wildlife and agriculture, and why responsible land management matters. Inspiring young minds today helps ensure that tomorrow's leaders are land stewards who will continue caring for Texas rangelands for generations to come. 





CAREFULLY COORDINATED

NILGAI CAPTURES

East Foundation's nilgai research is built around a simple idea: you can't manage what you can't measure. That is especially important for nilgai, a non-native but well-established and ecologically and economically important species that moves across large landscapes, reproduces quickly, and interacts with native habitats and livestock in ways that are not always easy to observe. To support informed decision-making, East Foundation is working to better understand nilgai ecology in South Texas and how that ecology connects to broader rangeland management and operational goals.

This research program is designed to answer several important questions. Current efforts include estimating nilgai population densities across the South Texas range, studying movement ecology and recruitment, assessing genetic relatedness and diversity, and developing a nilgai

aging model. The work also aims to produce a decision-support framework for resource managers, including information on the scale at which nilgai can be managed effectively and the economic considerations tied to that management.

A key part of that work is capture. Nilgai captures are carefully coordinated air-and-ground operations designed to be efficient, controlled, and as low-stress as possible for the animal. Once netted, the nilgai is quickly handled by trained personnel on the ground, who work to ensure both animal welfare and crew safety throughout the procedure.

Once restrained, the animal's eyes are covered to reduce stress while researchers move through a data collection checklist. The team records body measurements,



evaluates overall condition, and collects biological samples that help answer questions about health, age, genetics, and reproduction. Researchers also deploy CERES solar GPS ear tags and apply identification markings before releasing the animal back into the brush. These captures are especially important for tracking cow-calf pairs, building known-age datasets, and linking animal condition to movement and habitat use over time.

This hands-on work is essential because many of the most important research questions cannot be answered through observation alone. Direct sampling allows researchers to connect field measurements with patterns occurring across the landscape, strengthening the science behind management decisions. Over time, that data will help clarify how nilgai use resources, how their condition

changes seasonally, and how managers can respond in ways that meet their operational goals.

East Foundation is uniquely positioned to carry out this kind of field-intensive research. With large, contiguous working ranch lands, a long-term commitment to data collection, and a team that includes wildlife professionals and veterinary expertise, the Foundation can turn complex capture efforts into practical science that supports stewardship well into the future. ◊





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