

CONSERVATIO

By Joe Nick Patoski

he historic El Sauz Ranch sprawls from the shoreline of the Laguna Madre west towards the town of Raymondville. Ownership of the land dates to 1793 as part of the 601,657-acre San Juan de Carricitos land grant let on behalf of the King of Spain to Jose Narciso Cavazos. Captains Richard King and Mifflin Kenedy took ownership of much of a portion of that land grant for what became the El Sauz division of King Ranch in 1881. The ranch was later partitioned, owned, and operated separately from the King Ranch.

The East Brothers Cattle Company completed acquisition of what is now the East Foundation's El Sauz Ranch in 1972 and Robert East bequeathed it as part of his estate to the East Foundation upon his death in 2007. Today, along with the Foundation's other ranches, El Sauz is both a working ranch and a laboratory for knowledge creation.



The East Foundation aims to be a game-changer for modern cattle ranching. By providing the land to test theories and work out ideas, the Foundation can offer informed guidance to stewards of working lands. Some fifty-plus research projects are presently conducted on East Foundation ranches, with the foundation's staff working in partnership with academic institutions and government agencies.

The research addresses questions relating to managing native rangeland, wildlife, people, and livestock on a working cattle ranch. Research is conducted long-term, rather than limited to one or two years as is the case with most research projects, to yield robust data.

For example, Foundation scientists are testing the idea that twenty percent of the South Texas quail population can be harvested annually without long-term negative impacts to numbers. With the luxury of testing that theory over many years, landowners who actively manage quail populations will have more reliable and useful information to use on their own land.

Of the six East Foundation ranches, the 28,000-acre El Sauz is the most diverse – a convergence of South Texas brush country, sand sheet, coastal grasslands,

oak mottes, Tamaulipan Thornscrub, Gulf prairies and marshes, sand dunes, and several miles of coastline fronting the Laguna Madre. Little lagunas and pilas scattered throughout the property fill with water from seasonal rains. Periodic prescribed burns – part of yet another management-focused study – mimic how these habitats periodically burned before settlers arrived and introduced fire prevention.

Coyote, white-tailed deer, and javelina share this range with Santa Gertrudis and Red Angus-crossed cattle, as well as exotic Nilgai antelope. Introduced to Texas in 1929, the Nilgai are native to South Asia. They adapted to the South Texas environment to the point they can be a nuisance, as well as attractive big game for hunters. Today, an estimated 30,000 roam across South Texas. The Foundation studies their behavior to determine how Nilgai compete with cattle, deer, and other wildlife.

Texas tortoises, a state threatened species, roam the ranch. Scissortail flycatchers and green jays are among the hundreds of bird species recorded at El Sauz and other Foundation ranches. The rattlesnakes are big and plentiful when it's hot, which is most of the time.

"El Sauz is a pretty active site for us," said East Foundation chief science officer Jason Sawyer.

"Thirty-five to forty percent of our projects are specifically located at El Sauz, and a bit over half of our projects include El Sauz."

Partners conducting research on the ranches include Texas A&M, Texas A&M-Kingsville, Texas Tech University, University of Texas at Arlington and eleven other ag research universities. Caesar Kleberg Wildlife Research Institute, the King Ranch Institute for Ranch Management, Texas Parks & Wildlife, and others also partner with the Foundation.

Educating students, as well as landowners, is a core component of the Foundation's mission, and the centerpiece of the ranch's education mission is the Elliff-El Sauz Education Center that hosts more than 1,700 school children every February for El Sauz's Behind the Gates Field Day event.

However, nothing gets attention around El Sauz like the little cat that almost no one ever sees, the ocelot. El Sauz harbors the largest known ocelot population in the United States; their only other known population is found at the Laguna Atascosa National Wildlife Refuge, whose northern border is about 10 miles south. For the past decade, East Foundation, along with scientists at Caesar Kleberg Wildlife Research Institute, have documented their abundance, movements. reproduction, and habitat use.

I met the El Sauz cat crew mid-morning in late March at El Sauz's barndominium-style headquarters and maintenance facility. Other researchers were already in the field, evidenced by a line of parked vehicles with license plates from six states alongside trucks from Texas A&M AgriLife Research and Texas Parks and Wildlife's wildlife division.

Landon Schofield, East Foundation's range and wildlife biologist, and Dr. Ashley Reeves, East Foundation's research veterinarian whose expertise is cat reproduction, were in good moods. "It's been a great winter," Reeves said.

It had been a busy week. Two ocelots and three bobcats had been trapped and worked before being released.

Trapping season runs from November through April the coolest months of the year, under protocols approved by the US Fish & Wildlife Service. Traps are checked at daybreak and when an ocelot is trapped, the research team is alerted by text, and a team of three to five head to the ranch.



We started on the south side of the ranch, winding along a caliche road for about 15 minutes before pulling over. We walked a few yards through brush to a metal cage under the shade of a large oak.

"This is one of our trap sites," Schofield explained. "We leave them closed during the day, open them in the evening, and they're checked at daybreak."

"Our ocelot trap is a [generic] live trap," Reeves added, "It'll trap anything." Badgers, javelina, coyotes, raccoon, pigs, and roadrunners have found their way into traps on the ranch.

Many data points and biological samples are taken including blood, semen from males, and a pregnancy check for females, to name a few.

Assisted reproductive technologies, such as semen collection and cryopreservation and artificial insemination in felines is Reeves' area of expertise. She trained under Dr. Bill Swanson at the Center for Conservation and Research of Endangered Wildlife (CREW) at the Cincinnati Zoo, she related as Schofield drove. "I completed my reproductive training under Dr. Swanson, who has spent his career fine-tuning feline reproductive technologies, with a special interest in ocelots in zoos."

Current efforts are aimed at translating reproductive technologies and methods implemented in zoological institutions to the wild, where conservation efforts are needed. If methods prove to be effective for wild populations, Reeves will have a model for conserving endangered species through reproductive technologies, improving genetics in isolated populations, establishing methods for future populations, and doing it all in concert with cattle-raising.



Alongside semen collection efforts, artificial insemination (AI) procedures are performed with human-managed ocelot females in North American zoos using semen sourced from populations in South Texas.

Is the AI strategy working?

"Certain components are," Schofield said. "We're proving successful in collecting semen. Ashley has spearheaded those efforts and improved the collection techniques. The next part of that puzzle is getting captive females pregnant."

"We've performed eight AIs," Reeves added. "Out of those eight, we haven't been successful so far, but semen quality was not great with those procedures. We have tried a few techniques for semen collection and have settled on the most effective thus far [electroejaculation].

"We believe this could be our best chance to move these genetics around," Reeves said. "We're adjusting our protocols a little bit and if this doesn't take, we will regroup and plan for next year. But we hope this is our year."

"This year we've trapped eight males, of which six provided semen samples of good quality. Whoever's semen thaws with the best quality, will be used for artificial insemination procedures this year."

Ocelots on the ranch may be protected from development, but the possibility of a future weather event adds urgency to their work. This urgency arises from modeling that indicates a direct hit from a severe hurricane and the accompanying storm surge could wipe out ocelots at El Sauz. New populations on higher ground need to be established.

The East Foundation is already working with Texas A&M to identify candidate areas for a potential new population. Historically, ocelots ranged along the Texas coast into Louisiana and up to Arkansas. Site selection will be based on behavioral data tracking ocelot movement, habitat selection, along with historical records that identify where cats were once sighted.

Work is its own reward. "We hopefully will see this come full circle: the recovery of an endangered species in our lifetime," Reeves said. And if they can crack the code, it could result in a successful birth of ocelot kittens with semen from a wild male, improve genetics in current populations, and establish an experimental population at a future release site. Reeves anticipates teaching the model the team developed to other researchers working to save and sustain other endangered species in the future.

"If we're successful, it will come with its own set of questions. How do you train captive born cats to be wild? What would we do different?" She is eager to share the knowledge.

In the midst of all the ocelot and endangered species talk, cattle frequently came up. "Those two species

have gotten along out here for centuries," Schofield noted. "Cattle ranching has been extremely important in terms of maintaining habitat that's beneficial to wildlife, including the ocelot. What's good for cattle is good for lots of different wildlife species."

The ocelot footage Ben Masters shot for his 2022 documentary American Ocelot was filmed at El Sauz – a photodocumentary on ocelots never done before. Masters set up game cameras around the ranch until he got hits from ocelots. Once successive hits were recorded, he set up HD cameras for a couple of years.

When a female cat with a GPS collar started exhibiting unusual behavior suggesting she was pregnant and close to giving birth, Masters set up a camera network and was able to document ocelot kittens in the wild.

Since completion of the film, Masters has returned to El Sauz to follow the same mama cat. "We're now into the third generation from that female," Schofield noted. "We're learning a lot from their behavior. It's art meeting science."

Ben Masters knows he couldn't have made his film anywhere else. "The East Foundation and El Sauz represent hope that private land stewardship is a model in which endangered species can not only exist but thrive. The East Foundation isn't coping with an endangered species, they're celebrating that their land stewardship values wildlife and habitat so much, that the most endangered and beautiful cat in the United States is still thriving there. They're a beacon of hope in South Texas."

Dr. Lisanne Petracca, assistant professor of carnivore ecology at the Caesar Kleberg Wildlife Research Institute and a relative newcomer to the project, assists with ocelot research on East Foundation lands. "This project provides a fantastic opportunity to lead the recovery of an endangered felid whose only American range is in South Texas," she said. "What's also unique is the remaining ocelots are largely found on private lands, which necessitates some creative strategies to achieve conservation goals."

This dynamic team of researchers are now asking questions about what's not known about ocelot in the wild. Petracca credits the East Foundation's commitment to wildlife conservation and the incredible access it affords researchers while continuing operations as a working cattle ranch.

"We are trying to better quantify abundance, reproduction, genetic diversity, and dispersal of individuals among subpopulations. Ultimately, the goal is to get a better understanding of the current population trajectory of wild ocelots to best inform recovery efforts."

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