

Pioneers in the East Texas Pineywoods called ocelots "leopard cats," distinct from much larger jaguars or "leopards."

## OCELOTS ON THE BRINK

Article by HENRY CHAPPELL

celots once ranged over southern Texas from the Brush Country south of San Antonio to the Rio Grande Valley, east to the Big Thicket and well into the Hill Country of Central Texas where they inhabited brushy bottomlands. Pioneers in the Pineywoods reported small "leopard cats," distinct from larger jaguars or "leopards."

In Biological Survey of Texas, 1889-1905, Vernon Bailey, chief naturalist for the U.S. Biological Survey, described the ocelot's status near the end of the 19th century: "The ocelots are still found in brushy or timbered country over southern Texas, as far north as Rock Springs and Kerrville, and up to the Pecos Valley to the region of Fort Lancaster. One killed near the Alamo de Cesarae Ranch in Brewster County, between Marfa and Terlingua, in 1903, was reported by Mr. G.K. Gilbert, and later its beautiful light-gray skin was purchased from Mrs. M.A. Bishop of Valentine. This seems to be the westernmost record for the state. Farther east, ocelots are still reported as very rare about Beaumont and Jasper, near the eastern line of the state, and farther north near Waskom and Long Lake. Early records carried their range across into Louisiana and Arkansas, but it is doubtful at the present time they are to be found in the limits of Texas."

South of the Rio Grande, ocelots ranged over nearly all of Mexico and Central and South America to Argentina.

Over this vast area, selection pressure formed several ocelot subspecies to fit conditions that vary from Amazon rainforest to the Wild Horse Desert of South Texas.

Today, perhaps 80 "leopard cats" remain in Texas in two dangerously isolated populations in deep South Texas.

Ocelots are roughly bobcat-sized, though lither and more elegant. They are about 3 feet long plus an 18-inch tail, and they weigh 25-35 pounds. Adult males are slightly larger

The ocelot's pelage is short and luxurious with parallel black spots on the nape, black spots and rosettes along the sides, and black stripes on the tail. Little wonder the cats reminded early settlers of leopards.

In Texas and northern Mexico, ocelots mate and bear young year-round. Females usually den in slight depressions in dense cord crass or brush and average 1-3 kittens after 70-80 days of gestation. Fall and winter kittens are vulnerable to occasional South Texas northers. Kittens open their eyes at 15 to 18 days after birth and begin hunting at about 3 months old.

Adult ocelots are highly territorial, solitary, but not antisocial. The ranges of males and females overlap and both fight over territory and mates. Older adults often sport battle scars. Typical home range for an ocelot runs one to



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Radio telemetry provides Mike Tewes (r) and his students important insight into ocelot habitat use and movement.

four square miles but up to seven square miles depending on habitat quality and prey abundance.

Ocelots are crepuscular and nocturnal hunters, feeding mostly on rabbits, birds, cotton rats, and reptiles, and occasionally on fish and amphibians. Ocelots pose little threat to livestock. Their small size, rarity and shyness and the unsuitability of their thornscrub habitat to agriculture keeps them out of trouble with humans.

Nevertheless, frontier era attitudes toward predators persisted well into the 20th century. In Biological Survey of Texas, Bailey quotes correspondence from "Mr. Howard Lacey, the wellknown naturalist of Kerr County":

"Once at the head of the Frio River in November, the hounds struck a hot trail and were just beginning to get off well on it when a splendid male ocelot sprang into a large cedar close to us. Thinking the hounds might be on a bear trail, I shot the cat at once ... They [the hounds] ran about two miles and then treed a female ocelot in the bottom of a steep canyon. This we also shot and I think the two were together when we started them ..."

Mr. Lacey lamented that he never found ocelot kittens but goes on to describe his friends' hunts in which female ocelotsincluding one only a few days from birthing kittens-were killed, and several kittens that had not yet opened their eyes."

"Impenetrable" isn't too strong a description of good ocelot habitat. That's certainly the case for humans, horses and other

large mammals. While a dense, thorny overstory of mesquite, lotebush, spiny hackberry, and blackbrush provides ample concealment from predators and cover for stalking prey, it shades out grass and herbaceous undergrowth, providing open pathways at the ocelot's level.

Although humans have hunted ocelots for fur and ceremonial purposes for thousands of years, serious population decline began with development of commercial fur markets and clearing of land that came with intensive settlement and commercial farming. In the Rio Grande Valley, 98 percent of ocelot habitat has been cleared for agriculture and development.

Legal trade in ocelot hides ended in the Unites States some four decades ago with the cat's addition to the Federal Endangered Species list, but an international black market, abetted by lax enforcement, continues to threaten populations south of the border and indirectly imperils Texas's tiny populations.

As a graduate student, Mike Tewes trapped his first ocelot on the Corbett Ranch in 1982 which was likely the first one trapped in the U.S. in the second half of the 20th century. Until Tewes saw that ocelot in his livetrap, no one could be certain that ocelots weren't extinct in Texas. That same year, he trapped another 10 at Laguna Atascosa National Wildlife Refuge.

The Corpus Christi-area native is now Regents Professor and coordinator of the Feline Research Program at Caesar Kleberg Wildlife Research Institute in at Texas A&M University-Kingsville. His focus can be summed up in the closing of an email he recently sent me: "Ocelots are my passion."

The cats need all of the passion and resourcefulness Tewes and his colleagues can summon.

Biologists recognize two ocelot populations in Texas: The Cameron County population of around 17 cats associated with the Laguna Atascosa National Wildlife Refuge and the Willacy County population, some 70 ocelots on private ranches north of the Rio Grande Valley. Of the two populations, the Cameron, which survives in scattered patches of thornscrub along a narrow strip of saline coastal prairie, is most vulnerable. Isolated by urban and agricultural development on both sides of the border, Cameron ocelots that leave the refuge face heavy highway traffic and other human-related threats. Studies suggest that vehicle impact is the most important cause

The Willacy population, though vulnerable, benefits from much more intact and interconnected habitat on large, private ranches remote from the hazards of the rapidly urbanizing Rio Grande Valley to the south.

In the 1970s and 80s, rancher Frank Yturria, noticed an increase in ocelot highway deaths as surrounding lands were cleared for agriculture. After Mike Tewes trapped a few ocelots on Yturria land, the lifelong nature lover, writer and avid quail hunter took action, starting with a 500-acre easement with the U.S. Fish & Wildlife Service. Easement deals with The Nature Conservancy followed. Altogether, Yturria has set aside nearly ten thousand acres for ocelot habitat conservation.

The El Sauz Ranch near Port Mansfield, owned and managed by the East Foundation, an organization supporting wildlife

research and healthy range management, boasts a population of about 30 ocelots, the largest on any private or public property in the United States. Here, sand dunes migrate across the land like glaciers, destroying habitat, and, in turn, laying the foundation for regeneration in 300-year cycles. El Sauz is not a refuge but a working ranch.

"We're showing that cattle ranching and conservation are entirely compatible," said Dr. Neal Wilkins, East Foundation president and CEO.

Both the Willacy and Cameron populations are threatened by genetic exhaustion, and there are no corridors between the larger more robust Mexican population. Research has shown genetic drift and inbreeding in both populations from 1985 and 2005. The genetic erosion surely continues.

In 2018, Yturria's friend Barry Putegnat reported ocelots at Rancho Caracol, his wing-shooting resort 150 miles south of Brownsville in the Mexican state of Tamaulipas. Tewes and his colleagues verified 34 ocelots at Rancho Caracol and trapped and fitted 11 with radio collars. The team also found cougars. jaguars, bobcats and jagaurundi. The rancho is surrounded by thousands of acres of thornscrub-prime ocelot habit.

Mexican drug cartels don't look kindly upon trail cameras and wildlife biologists who might appear at inconvenient times. Tewes called the team home when it became clear that Mexican law enforcement had lost control of remoter reaches of Tamaulipas.

Still, the cats could, in theory, cross the border to refresh the rapidly eroding gene pool in Texas.

In the early 1980s, the U.S. government, began acquiring land in order to preserve scarce habitat and to provide connectivity between ocelot populations in the Lower Rio Grande Valley. Thus far, the resulting Rio Grande Corridor hasn't provided the hoped for east-west pathway. Bounded by international bridges in Brownsville and Hidalgo, the corridor contains little protective thornscrub. More importantly, heavy development along the river, including four international bridges severely limits the corridor's usefulness to ocelots.

Likewise, the Coastal Corridor, created by federal acquisition of thousands of acres of coastal prairie and wetland hasn't provided safe connectivity between ocelot populations in Texas and Tamaulipas. The corridor consists mostly of mud flats and saline coastal prairie, with little ocelot habitat. Even with habitat restoration, which has proven painstakingly slow and difficult due to frequent drought and the high cost of raising seedling, ocelots that might venture into the corridor will be threatened by ever-increasing highway traffic in the area.

"These corridors may have achieved other important conservation goals, but we've seen no empirical evidence of significant ocelot use," Tewes said.

Likewise, highway undercrossings, developed by USFWS and Texas Department of Transportation have thus far been unused by ocelots.

This brings us to the proposed border wall. Opponents claim the wall will doom Texas's ocelots through genetic isolation from the Mexican population. Certainly, there are reasonable



While a dense, thorny overstory provides concealment and cover for stalking prey, it also shades out grass and herbaceous cover, allowing easy travel at ocelot eye level.

concerns about construction of a wall along the U.S. border with Mexico, but this one doesn't hold up.

"They could build the wall or not build the wall. It won't make a bit of difference to ocelots on either side of the border," Tewes said. "A very effective barrier has been there for a long time, in the form of highways and intense human development."

Research by Duquesne University professor Jan Janecka, one of Tewes's former students, shows no genetic exchange between ocelot populations in Texas and Mexico over the past several decades.

"We believe the disconnect occurred during the 1920s or 30s," Tewes said.

Little wonder, given that the city of Brownsville sits just 19 miles from the Cameron population. Cameron County's human population grew 21 percent between 2000 and 2010, the Brownsville-San Benito-Harlingen area is one of the fastest growing metropolitan regions in the United States.

For several years, American biologists have been working quietly with their counterparts across the border to bring a few ocelots up from Mexico to freshen the Texas gene pool. Despite concerns that the border wall and the Trump administration's tough stance on illegal immigration could sour translocation efforts, Tewes remains hopeful. Biologists tend to favor wildlife over politics; however, politicians and their appointees are

Tewes said, "Our highest priority is to work with landowners and convince them to conserve ocelot habitat."

Understandably, ranchers worry that the presence of endangered species could invite government interference and restrictions on land use. Fortunately, the U.S. Fish & Wildlife Service easements and similar arrangements with non-government organizations make habitat preservation more attractive. Potential income from hunting leases also encourages habitat conservation and improvement. In South Texas, management for popular game species can indirectly benefit ocelots.

As Wilkins noted, "Long term, without commitment and stewardship of private landowners, there will be no ocelots in Texas." @