

# HUNTER'S ★ HORN™



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# ON LOCATION

## with a Black Bear Researcher in West Texas

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UNLESS OTHERWISE NOTED

Borderlands Research  
Institute Graduate Assistant  
Nicole Dickan covers a lot  
of ground in pursuit of  
learning more about black  
bears in West Texas.



If keeping up with a bear researcher who hikes for dozens of hours in the desert each week sounds like your kind of adventure, then hang onto your reading cap, because we're going for a ride.

Nicole Dickan, a graduate assistant with the Borderlands Research Institute at Sul Ross State University in Alpine, is pursuing her master's degree in Range and Wildlife Management. Over the past year, she has acclimated to some of the most grueling outdoor hikes to be found in Texas's most remote and mountainous locations.

Nicole has scaled inaccessible peaks at elevations of 6,500 feet, camped for days on end to be as nearby as possible when a bear trap was triggered, and raced the summer heat to record important ecological information in the deepest recesses of Black Gap Wildlife Management Area. In fact, that's where we were headed one warm summer day, in a hurry to beat the heat and be off the trails by early afternoon.

Nicole's task is to gather information about what bear "cluster" sites look like in the desert southwest. That means she has to go where bears have lingered, or clustered, for at least six hours, to see what they're doing there.

"They make it a challenge to reach them," Nicole warned, as we set out to investigate the locations she had mapped from her satellite data.

Earlier in the year, Nicole and fellow black bear researcher Matt Hewitt placed tracking collars on 14 bears. This allows the researchers to track bear movements remotely. Whenever the tracking data shows that a bear has stayed in one location for six or more hours, Nicole logs the location as a cluster site that may yield data about the bear's foraging and resting habits. This data helps paint a picture of black bear ecology and what bears look for in their environment.

Nicole waits until the bear has left the area before investigating in order to avoid interrupting the bear's natural behaviors. But time is a precious resource when it comes to finding definitive evidence of bear activity in this harsh, arid ecosystem, so she tries to get on location as quickly as possible.

Her research is laying the foundation for the next several years of an ongoing black bear project begun by the Borderlands Research Institute. Many funders are helping this project come to life, including Coypu Foundation, Dallas Safari Club Foundation, H-E-B, Houston Safari Club Foundation, The Horizon Foundation, James A. "Buddy" Davidson Charitable Foundation, Texas Parks and Wildlife Foundation (TPWF), TPWF's Stewards of the Wild Austin Chapter, Tim and Karen Hixon Foundation, and West



**Top:** Nicole navigates an arroyo in West Texas to track down a black bear cluster site.

**Center:** Nicole records data about a black bear cluster site.

**Left:** Earlier this year, Nicole and other Borderlands Research Institute researchers took samples and recorded measurements and vitals from a captured bear before placing a satellite collar on him. (Photo courtesy Borderlands Research Institute)



Texas Chapter of Safari Club International.

Black bears are a relatively new addition to the landscape for most people in West Texas. Bears were extirpated from the state by the 1950s, so not many people have experienced living amongst this native mammal.

Nicole arrived in Texas with plenty of practical bear experience from her previous work as a wildlife technician in Oklahoma, Idaho, and New York. She has studied both black bears and grizzly bears and has participated in 50 bear captures. Despite becoming familiar with bear behavior in other areas of the U.S., Texas desert bears have surprised her again and again. Nicole was shocked when she first arrived and saw the hot, dry Big Bend region with its lack of tree cover. “How could there be bears here?” she wondered.

But not only are bears here, they are thriving. “It’s really expanded my understanding of what bears are capable of,” she noted.

Even though black bears had been extirpated from Texas decades ago, they continued to breed in the secluded mountain ranges of northern Mexico. Once regulations were put in place to protect them on both sides of the border, their numbers began to improve, leading to new populations eventually entering the United States. At first, they entered through the protected corridor of Big Bend National Park, but in recent years, there have been bear sightings across the West Texas region, from the Davis Mountains to Del Rio.

This poses a potential problem for wildlife managers and the human inhabitants of the region, both of whom are learning again what living with black bears entails.

It’s important for researchers to learn about these mammals as they repopulate the region so they can be managed to achieve the best outcomes for both people and wildlife.

Back in the field, we scrambled uphill for what seemed like hours through a boulder-laden arroyo. Nicole said the map-line distance was somewhat misleading. For every step we thought we would take, we actually took three or more, maneuvering obstacles like thick, thorny brush and monolithic rocks.

It was less brushy than some places the bears seem to like in the Trans-Pecos, Nicole observed. In other places, bears have made narrow passageways through brushy thickets. The only way to track them was to crawl through the same paths, not without bumps and scrapes.

We were headed to a bear cluster site that had been logged about a week ago by a bear identified as BBM006, who is notorious for hanging out in inaccessible mountain terrain.

Nicole is motivated to gather as much data on West Texas black bears as possible. She wants future students who study black bears to have a good foundation of data.

Plus, she feels a kinship to bears. She likes to rock climb in her spare time; much to her surprise, desert bears are also capable rock climbers—she’s seen them climb up sheer cliff faces on this project. Nicole revels in the wide expanses of wilderness the bears inhabit. And just like bears, Nicole appreciates a good shady spot, even if it means the shady oases preferred by bears are hard to reach.

Her devotion leads her to put in 80-hour weeks at times, half in the field and half managing and analyzing the data she brings back.

On field days, she carefully prepares for the unforgiving elements of the Chihuahuan Desert, bringing gallons of ice water to drink and to soak her clothes with when she needs to cool down.

Despite the challenges of rough terrain and exposure, Nicole remains focused, steadfast, and sharp. “One of the biggest challenges

in this project is to correctly identify bear behaviors in the field,” Nicole said. “The sign they leave behind can sometimes be ambiguous, and without having watched the bear directly, it can be hard to definitively say what they were doing there.”

The location data researchers receive could indicate any number of bear behaviors. Researchers need to know how to interpret remotely gathered data in order for it to be more useful. What is the environment like where bears tend to linger? What are the bears doing? What are they eating? What impact are they having on the landscape? And how does that correlate to patterns of satellite GPS points? Once researchers are more certain about the connection between bear movements and their ecology, they can better predict and interpret behaviors by simply analyzing GPS points without hiking for miles in sweltering temperatures.

Upon arriving at the cluster site deep in the wilderness of Black Gap Wildlife Management Area, Nicole quickly scanned for the most likely spots where the bear would have lounged. There was a cave-like nook in the bank of the arroyo, protected by a thick overgrowth of brush. There was also a rocky overhang created by dislodged boulders—both good candidates for bed sites.

Nicole found a pile of faded fuchsia bear scat next to a smooth slab of rock under the overhang. It was clear the bear had been eating mostly prickly pear tunas, which are abundant in the desert during the summer. “It’s very likely that he was using this spot to sleep, but we’re looking for more evidence than just a scat pile, such as hairs or an excavated depression, to be sure he bedded down here rather than just passed through,” Nicole said.

She took her time looking for bear hairs, which are scant in the summer season due to the bear’s sleeker summer coat and the fact that hairs don’t catch on smooth surfaces as easily—two likely reasons why the smooth boulder “bed” turned up empty.

Nearby there were plant clumps that showed the telltale signs of foraging. Sotol stalks had been pulled up from the base and dropped in a neat pile after BBM006 had presumably munched the tender parts at the base. Bear foraging signs can look similar to javelina foraging, but Nicole noted that javelina is more likely to trample plants while bears leave behind neat piles or clumps of stems and leaves.

Some bear cluster sites have multiple piles of bear scat. This site only had one and had not been used long by BBM006, a small, young male.

Nicole carefully recorded descriptions of the site and of all the bear evidence she observed. She also recorded data about the site itself, measuring canopy cover, slope, and elevation, as well as vegetation characteristics.

That concluded the fieldwork, another successful day of locating a bear cluster and recording data in the books. As we made our way back down the arroyo, we heard the clear call of cactus wrens in an otherwise quiet expanse of nature.

Nicole’s bear cluster site investigations will continue for another eight months, at which point she will analyze her data with the mentorship of Borderlands Research Institute faculty. The data she presents in her thesis defense will lend a strong foundation of information about the resilient black bear as it recolonizes its historic homelands in Texas. This information will provide the public with a strong understanding of how these bears live on the landscape and what habitat best meets their needs. It will help Texans be the best stewards they can be for this incredible animal. ★