

Partners in Palo Duro Canyon Foundation



On the Edge!



Photo by David Sissom

Research Efforts in Palo Duro Canyon

by
Cindy Meador

Palo Duro Canyon State Park is an intricate and unique part of our ecosystem, a southern, shortgrass prairie. During the last two decades, graduate students from West Texas State A&M University have been actively conducting vegetation, invertebrate, and mammalian studies under the direction of faculty members in the Department of Life, Earth, and Environmental Sciences. These studies tell us about the interactions of organisms with their environments. Because of the diversity of these studies, this article deals with only four—scorpions, the Palo Duro mouse, ringtails, and bats.

Little is known about the unique and extraordinary natural history of scorpions in this area. Taylor G. Donaldson (under the direction of W. David Sissom, PhD, Department Head LEES), conducted an interesting and rare invertebrate study of scorpions, looking at the age, sex, and nightly activity of the three species of scorpions found in the Park. Black lights were used to determine scorpion activity of 58 scorpions per night.

Remember to shake out your sleeping bags!

Studies involving the ecology of mammalian communities at Palo Duro Canyon are under the direction of wildlife biologist, Ray Matlack, PhD. Studies on the Texas mouse and the Palo Duro mouse were conducted by Karah Gallagher, using live trapping methods. The Palo Duro mouse is a state-threatened species as documented by Texas Parks and Wildlife Department and is found in only three Texas counties:

Armstrong, Briscoe, and Randall, where it is found on steep, rocky, Juniper slopes. A number of other small mammalian species were studied and are listed in the complete study



Photo by Ray Matlack

Naima Montacer and Andrew Carrano used live-trapping camera motion sensing and radio telemetry to identify 8 mesocarnivores, mid-size carnivores, a community consisting of raccoons, gray foxes, coyotes, bobcats, skunks, badgers, and ringtails. The ringtail, commonly known as the “ring-tailed cat,” is an abundant, but elusive animal in the Park. Actually, it is not a cat but a member of the raccoon family, nocturnal, timid, and solitary. They even chatter like a raccoon and only interact with other ringtails to mate.

Have you ever seen one?



Photo by Ray Matlack

Bats, you say! Data show 14 species, 3 common (which include 5 year-round, 5 migratory/seasonal, 4 rare accidental) and 5 that reproduce in the Canyon. The study was conducted by Tamara Hartline Riddle, with the assistance of several undergraduate and summer intern students. The studies were conducted at night, and the students had to be vaccinated for rabies before beginning their work. Palo Duro Canyon is in the Llano Estacado (sometimes referred to as the Staked Plains) where the bat and migratory bird population is important to movement along the Central Flyway from Canada to the Gulf Coast. Bat species use the Caprock Escarpment to navigate through this portion of the Great Plains.



Photo by Ray Matlack

Other than the study of native species as represented by the four examples given above, at present there are 3 exotic (non-native) species of particular concern to the Park, including Aoudad sheep, feral hogs, and salt cedar.

Exotic species are considered a threat to native populations, because they can out-compete the native species and disturb the balance of nature in the Park. Currently, measures to control the growing feral hog population consist of nuisance control by the Park staff and controlled hunts open to the public. The salt-cedar has to be removed by physical processes, chemically, or by

biological control which employs the use of a beetle that feeds exclusively on the shrub. Park officials have noticed movement of the beetle up the Prairie Dog Town Fork of the Red River and into the Park, where there is documented evidence of their killing effect on the shrub.



Photo by Ray Matlack

The faculty and students of WTAMU thank the Texas Parks and Wildlife, Natural Resources, State Parks, especially David Riskin and Mike Lloyd, Kilgore Research Center, Dr. Rob Ballinger, and Dr. Greg Veneklasen, local veterinarians, employees of the Palo Duro Canyon State Park, and numerous WTAMU students and research assistants for support and funding made available on these projects.

Further information about the above may be obtained through LEES at WTAMU.
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(Editor's Note: Cindy Meador teaches biology at WTAMU and is on the Board of Partners in Palo Duro Canyon Foundation where she serves as First Vice President.)





Shannon Blaylock
Park Superintendent

Great work at Palo Duro Canyon State Park abounds. Park staff is working tirelessly to enhance the operation through improved customer service, increased programming, development of trails and facilities and improvement of existing facilities. But Park staff does not and cannot accomplish this alone. Volunteers contribute 280 full-time equivalents (personnel) to Texas State Parks. Palo Duro Canyon State Park is the recipient of the work of many volunteers, and, moving forward, we hope to increase volunteer involvement. The Park offers something for everyone, so if you are interested in learning about volunteer opportunities within Texas State Parks, visit <http://tpwd.texas.gov/involved/volunteer/spdest/>, or call the Park for information.

Presently, Park hosts help us by maintaining their assigned campground and in meeting the needs of Park visitors. The Palo Duro Corps of Engineers is a group of volunteers that have built miles of trails throughout the Park, using the Park's Master Plan as their guide. They work alongside Park staff to accomplish long-term-use goals of the Park. The Palo Duro Bike Patrol rides some of the Park's most popular trails during peak season, distributing water and assessing

needs of hikers and bikers. Their work has drastically decreased the number of heat-related emergencies on the trails. And you, as members of Partners in Palo Duro Canyon Foundation, help the Park to accomplish work that would be nearly impossible for us to accomplish alone. Furnishing the Mack Dick Pavilion and the purchase of capital equipment are some of the recent examples of YOUR work.

The staff of Palo Duro Canyon State Park appreciates your kindness and generosity. To each one of you, THANK YOU! *sm*



Bernice Blasingame
Park Interpreter

The winter months in Palo Duro Canyon provided me time to hike the newly completed Comanche Trail. It has quickly become one of my favorite trails. The part from the Mack Dick Pavilion parking lot to Hackberry Campground is one that I use for

school groups. It is long enough to make students think they have had a real hike.

To keep students engaged along the way, sometimes I have them do a digital scavenger hunt. They are to bring cell phones or cameras and take photos of specific items along the trail. One particular school divided their 5th graders into groups of 5 with an adult and began their search. The adult took photos of whatever the students discovered. I pointed out items they might not have noticed. By the time we reached the Hackberry Campground, they found everything required and then some. From there they hiked into the Chinaberry Day Use Area for a picnic and discussion of their photos. They had attained memories of their Palo Duro Canyon experience.

The first upper section of the Comanche Trail begins across from Chinaberry Day Use Area. It is one I thoroughly enjoyed exploring on a still, cool, cloudless day. It was a little steep starting out but well worth the time to walk it. I am not a “marathon” hiker but one who stops and looks at everything of interest along the way. A small spring crosses the trail, and it is indeed an oasis. Animal tracks were everywhere, and the shaded rest is stunning.

Observing the beauty of the Canyon from the trail is well worth the time to hike it. I walked all the way to the Rock Garden Trail intersection and was positive I was following a family of feral hogs. They had stopped to water at the spring, browsed along the way, and left much sign of their passing. Prickly pear cactus pads were still seeping from piglet bites. I just hoped that I did not encounter them, because a momma with babies is not always friendly.

Once I started down the Rock Garden Trail, it was nine-tenths of a mile to the road.

Total distance hiked was 3 miles and worth every step of the way.

That day made “Life Better Outside” for me. **Bb**



Quanah Parker
Last Chief of the Quahadi Comanches



Mack Dick Pavilion





**Horsehair Pottery
By Comanche/Apache Artist
Maria Zuni Plum**

My mother was my first-grade teacher in a farming community in New Mexico—Pleasant Hill. The school was (it no longer is) a mile across the Texas state line in New Mexico, approximately eight miles west of Bovina, Texas. The closest hill was at least twenty miles away

I won't go into the details of being a brat in my mother's classroom (first and second grade) other than to say that I stole my first kiss by duck walking down the aisle between my desk and hers (the girls) and kissing her on the hand. (I suppose I thought no one could see me.) I'm sure she was pretty, but I don't recall. Probably she blushed. I don't know. I duck walked back to my desk. After school, my mother made a few light taps with a hair brush on my posterior. Her lecture was worse, for kissing the girl and for misbehaving in class. To me, at the time, it seemed a natural thing to do. Today I would be arrested. Probably my mother also.

At any rate, it was in my mother's first-grade class that I was first introduced to how to make a clay pot, Native American and

Mexican style. No doubt the New Mexican influence prompted Mother's exercise in art. She was born in Portales, NM. I was born in Texas, so I'll use that as an excuse to explain my failure.



Infamous Kisser

I've never made a pot since (or tried to), but, as I recall, we took a wad of schoolhouse clay, rolled it into a thin, round ribbon, and coiled the ribbon into a circular form, starting with the bottom and then coiling the sides to the desired height. As I recall, (much recalling here), the sides on my pot collapsed, probably from frustration, as I had difficulty molding the coils together. All of this, of course, is irrelevant, except to serve as a lead-in to the horsehair pottery of Comanche/Apache artist, Maria Zuni Plum

For those who are unfamiliar with horsehair pottery, the following is a description of the procedure:

The process of making horsehair pottery is an ancient process, which has been updated for modern kilns, ceramics, and pottery. The pieces are fired at low temperatures (not to exceed 1700 degrees Fahrenheit), and the kiln is shut off and allowed to cool to approximately 1050 degrees Fahrenheit. The pieces are removed from the kiln one at a time, and strands of horsehair are dropped on the piece. The horsehair burns off and leaves the distinctive lines. The smoke from the burning horsehair also leaves distinctive shading on the glazes. Because of the single piece-at-a-time process and the fact that the horsehair is placed on each piece by hand, no two pieces will ever be exactly alike. Feathers and sawdust are also sometimes used in the process.

Partners' Canyon Gallery in the Visitor Center is the exclusive dealer of Maria's pottery in the Texas Panhandle. *cf*



Maria Zuni Plum

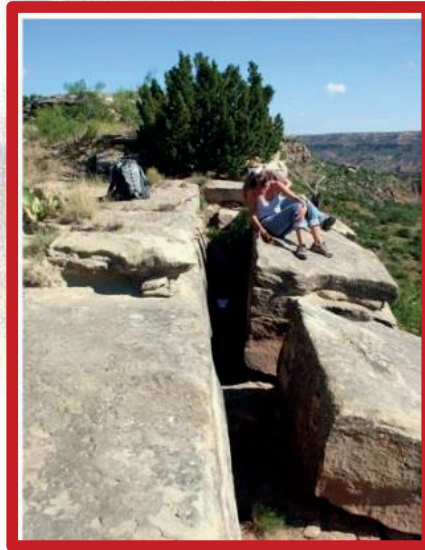
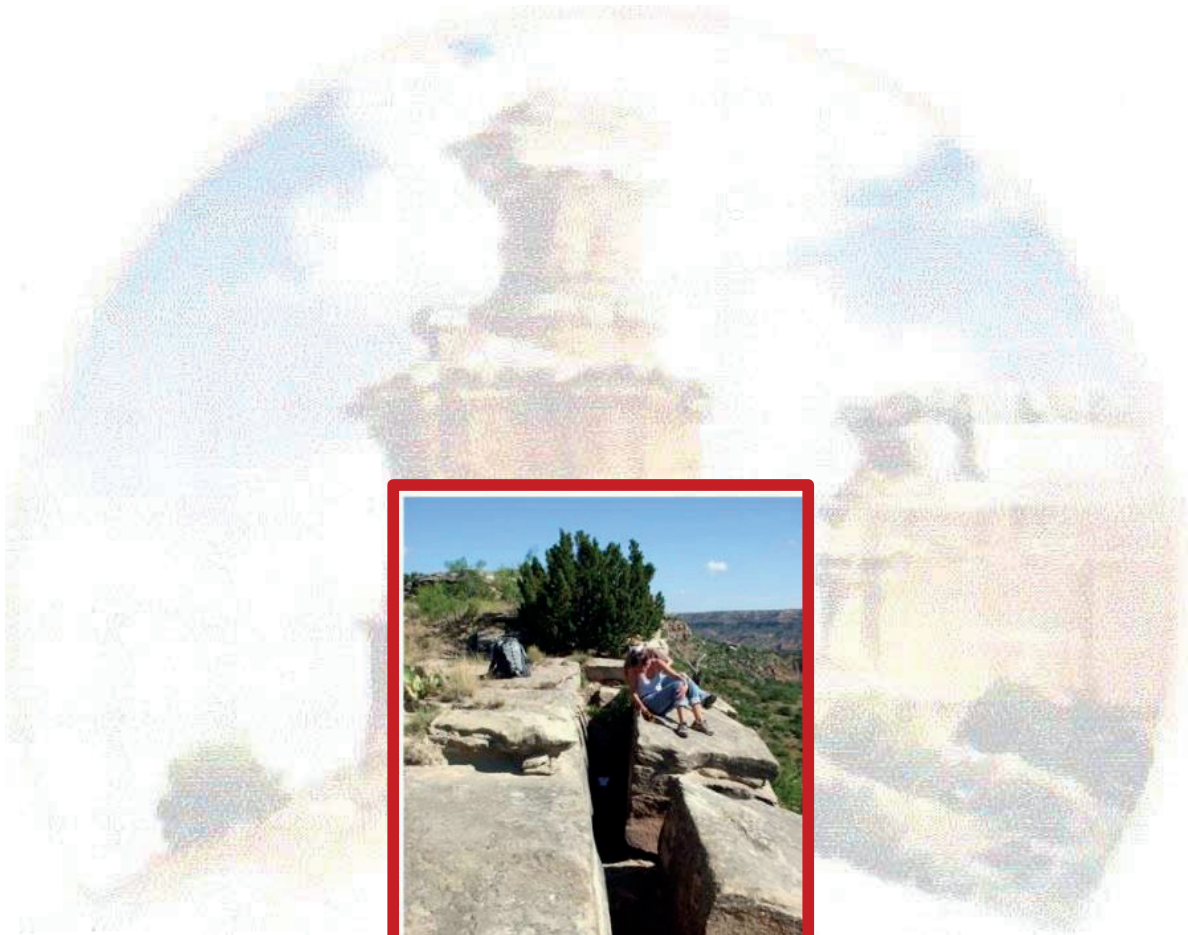


**Pottery by
Maria Zuni Plum**



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**WTA&M Student
Photo by Ray Matlack**

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