

Southern Arizona, October 9-14, 2021

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Cave Creek Canyon in the Chiricahua Mountains (left) and Santa Rita Mountains (right), Arizona.

I have always wanted to visit the deserts of southern Arizona. After I learned of Mammal Watching, I eagerly read the reports about the diverse mammalian fauna there. In autumn 2021, I had the opportunity to make a trip and sent an inquiry to the Mammal Watching website about recommendations for a possible guide to the area. Jon Hall responded and recommended José Martínez-Fonseca, a PhD student at Northern Arizona University. As a retired professor, I know that PhD students have a very busy schedule, but José was to finish his comprehensive oral exam on October 8 and was up for a mammal expedition to unwind. So, we agreed that I should fly to Phoenix and meet him on October 9. Here is a report of our fantastic trip, where we encountered 50 species in 6 days (actually 4½ effective days of searching). In this report, each sighting is presented in bold font and the first sighting of each species is also underlined.

October 9, Phoenix to Cave Creek Ranch

José met me at Phoenix Airport at 13:00 and we drove directly to the Sweetwater Wetland in Tucson, where he hoped to find Round-tailed Ground Squirrels and Arizona Cotton Rats. The search did not go well until we saw a **Bobcat** at a short distance. After that, we soon saw 1 **Round-tailed Ground Squirrel** and 1 **Arizona Cotton Rat**. We were on a roll.



From left to right, Bobcat, White-backed Hog-nosed Skunk, and Striped Skunk.

We arrived at Cave Creek Ranch in the Chiricahua Mountains (which we can recommend) around 20:30. We were greeted by 5 **Striped Skunks** and 1 **Hooded Skunk**. After finding our cabin, we took a night drive through the forest to Herb Martyr Trailhead. We saw 1 **White-backed Hog-nosed Skunk** near the entrance to Sunny Flats Campground (and 2 more were waiting for us at our cabin). Along the drive, we also saw a **White-tailed Deer** (the small Coues' subspecies), a mouse with long ears that José thought probably was a **Brush Mouse** (confirmed the next day), and a relatively bright-colored cottontail, which we considered to be a **Hotzner's Cottontail** (=formerly Eastern Cottontail). After returning, we saw many bats, both small Myotis and larger bats, flying around our cabin in the warm evening. Using an Echo Meter Touch 2 Pro detector, we detected **California Myotis**, **Western Small-footed Myotis**, **Arizona Myotis**, **Cave Myotis**, **Western Yellow Bat**, and **Silver-haired Bat**. We made it to bed at 00:30 and concluded that 15 species during a half day of searching was "not bad"!

October 10, at and around Cave Creek Ranch and south of Aminos, New Mexico

We started the day at 05:00 and saw 2 **Cliff Chipmunks** at our cabin. We examined 2 mice, 1 **White-footed Mouse** and 1 **Brush Mouse**. It was good to confirm yesterday's probable sighting of a Brush Mouse. We drove up the mountain to Rustler Park, looking for a Mexican Fox Squirrel and Common Gray Fox, but it was cold (42°F, 5°C) and very windy at the higher elevations. On our return, approaching the Cave Creek Road, we spotted a **Harris' Antelope Squirrel** next to the road. At the Ranch, we met Elaine and Reed. They knew very much about the mammals in the area, were enthusiastic and helpful, and had a list of mammals that had been checked by professionals. They told us that Western Spotted Skunks were there earlier, but had not been seen for several months. As we talked, a **White-nosed Coati** came to take food from the bird feeder. We took a nap, thinking that 19 species in 24 hours was actually not bad!!



From left to right, Brush Mouse, Cliff Chipmunk, and White-nosed Coati.

After our nap, we returned to Rustler Park. Still no fox squirrels or gray foxes, but we saw 1 unidentified Cottontail and many **White-tailed Deer** on the way back to the cabin. Near the cabin, we identified several **Desert Cottontails**, a **Western White-throated Woodrat**, and 3 **White-footed Mice** and later detected the **Mexican Free-tailed Bat** and **Big Brown Bat**. We also saw bats feeding at the hummingbird feeders, which we had been told were **Lesser Long-nosed Bats** and **Mexican Long-tongued Bats** (confirmed by photography the next day).

Then we left for Animas, in the southwestern corner of New Mexico. White-sided Jackrabbits are found in the desert south of Animas. One the road between Cave Creek and Animas, we saw 2 groups of **Northern Raccoons** (5 in total). We started our night drive south of Animas on road C001 and turned around after driving 38 miles. This is very close to the Mexican border and we

saw many Border Patrol vehicles, but we were not stopped. Just in case, we stayed away from the border and had our passports handy. The trip was productive, with observations of 3 **Kit Foxes**, 1 **Collared Peccary** (Javelina), 5 **Black-tailed Jackrabbits**, and 4 **White-sided Jackrabbits**. The moon was in “waxing crescent” phase and it was already down when we saw the White-sided Jackrabbits. We also saw 2 **Merriam’s Kangaroo Rats**, basing the identification on the soil type, which was gravelly, packed clay and 3 **Mule Deer**. We got to bed late, but were satisfied with 32 species in 2 days, which is really not bad!!



From left to right, Desert Cottontail, Kit Fox, and Black-tailed Jackrabbit.

October 11, at and around Cave Creek Ranch and Rodeo, New Mexico

We were up early again today and saw a **Cliff Chipmunk** at the office. We drove upstream, up the Portal Road and finally saw a **Mexican Fox Squirrel** 0.5 mi up from Sunny Flats Campground and 2 more at the research station. Elaine at Cave Creek Ranch told us that Eastern Cottontails had been documented at Walker Bed and Breakfast in Paradise. Visitors are welcome and the owner was very friendly and helpful. He confirmed that Eastern Cottontails had been documented there by biologists and we saw 1 young **Holzner’s Cottontail** (new name based on the cottontail revision in Diersing & Wilson 2021*). We continued on and saw a **Rock Squirrel** 0.25 mi later, still in Paradise, and another almost at the northern end of the paved section of Foothill Road. We drove to Rodeo for lunch.

After a nap, José set up his camera at the hummingbird feeders and documented that both **Lesser Long-nosed Bats** and **Mexican Long-tongued Bats** were using them. Then we took another night drive up the paved section of the canyon in high winds, but we were able to see 2 **Common Gray Foxes**, 2 **Holzner’s Cottontails**, and 2 **Ringtails**. After returning, José caught a **Western White-throated Woodrat** in his bare hands. Then we took the trip again, seeing 1 **Common Gray Fox** and some **White-tailed Deer**. Despite the wind, the office area was relatively protected and there was an amazing amount of bat activity. We detected **California Myotis**, **Western Small-footed Myotis**, **Yuma Myotis**, **Cave Myotis**, **Long-legged Myotis**, **Western Yellow Bat**, **Canyon Bat**, **Silver-haired Bat**, **Mexican Free-tailed Bat**, **Big Brown Bat**, **Western Bonneted Bat**, **Hoary Bat**, and **Western Red Bat**. All detected bats were on the area’s list of documented species, except Western Bonneted Bat, but the distribution and habitat fit for this high-flying bat. When we finally made it to bed, we had encountered 42 species in 3 days—not bad at all!!

*Diersing & Wilson. 2021. Systematics of the mountain-inhabiting cottontails (*Sylvilagus*) from southwestern United States and northern Mexico (Mammalia: Lagomorpha: Leporidae). Proc. Biol. Soc. Washington 134:42-79.



The tail membranes are diagnostic for the Mexican Long-tongued Bat (left) and Lesser long-nosed Bat (right). (Photographs by José G. Martínez-Fonseca)

October 12, from Cave Creek Ranch to Madera Canyon, Santa Rita Mountains

We were off at 07:00 and identified a **Cactus Mouse**, **Mexican Woodrat**, and 2 **Western White-throated Woodrats** near Rodeo and the Sulphur Canyon Road on the way to Madera Canyon, where we stayed at the Santa Rita Lodge (which we also recommend). We drove to the end of the canyon road to Old Baldy Trailhead and walked into the wilderness area, almost to where the trail crosses the creek, where we saw 3 **Arizona Gray Squirrels**. Back at the lodge, we saw a **White-nosed Coati** checking out what was under the bird feeders. The personnel were not as knowledgeable about mammals as at Cave Creek Ranch. In the evening, we saw what we assumed to be **Lesser Long-nosed Bats** and **Mexican Long-tongued Bats** at the hummingbird feeders, but we did not take the time to photograph them.



Left to right; Western White-throated Woodrat (just before José grabbed it), Arizona Gray Squirrel, and Ringtail.

We wanted to find an Antelope Jackrabbit, so we took a night drive to the eastern unit of Saguaro National Park and drove the loop just before they closed the gate for the evening. We saw a **Merriam's Kangaroo Rat**, which is the only kangaroo rat on their list of documented species. The soil type was very similar to that where we saw the kangaroo rats south of Animas. Thus, we consider this species sighting to be confirmed.



From left to right; Cactus Mouse and Northern Raccoon.

We then drove to the Wildhorse Trailhead on Speedway Boulevard, seeing a **Coyote** on the way. There and in the park, we detected the **Mexican Free-tailed Bat**, **Big Free-tailed Bat**, **Hoary Bat**, and **Yuma Myotis**. We also drove around the copper mines near Tucson, before returning to the lowlands below Madera Canyon. On White House Canyon Road, also called Madera Canyon Road, we saw what we believed to be an Antelope Jackrabbit. The ears and sides seemed to fit, but it was the same size as a Black-tailed Jackrabbit, and the only car we met in that area that evening came at exactly the same time, which distracted us for the critical seconds we needed. It turned out to be a deputy sheriff's car. He stopped us, of course, but seemed to be perfectly satisfied with the explanation that we were looking for an Antelope Jackrabbit. He did not even ask for José's driver's license. We did not give up and saw another **Coyote** along the same road, before driving up the canyon. Near Santa Rita Lodge, we saw 1 **Common Gray Fox** and 1 **Northern Raccoon**. We drove to the end of the canyon road, looking for the Pallid Bats that sometimes roost in the outdoor toilets there at night. We found fresh droppings, but no bats. Still, 47 species in 4 days is actually not bad!!

October 13, Madera Canyon to Patagonia

Today we drove to Patagonia. While crossing the low divide to the east side of the Santa Rita Mountains, we saw 2 **White-tailed Deer**, 2 **Harris' Antelope Squirrels**, and 1 **Rock Squirrel**. There are many Southern Pocket Gopher mounds (documented by scientific specimens) in the city park along the "main drag" in Patagonia. We opened many of them and watched, but no activity. So, we went to the hummingbird center run by the Tucson Audubon Society. It has amazing hummingbirds. There we also saw about 7 **Arizona Gray Squirrels** and 2 **Rock Squirrels**. After lunch, we tried the mounds again. No luck. Then a city employee signaled that we should get off the "grass", so we moved to the sidewalk and, lo and behold, there was a mound with very fresh dirt. We removed it, opening the tunnel, and a **Southern Pocket Gopher** came within only a few minutes to fill the hole. Thank you, City of Patagonia!!!

José was bound and determined to find me (and himself) an Antelope Jackrabbit for our life lists. So, we returned to the lodge, took a rest, and drove from 17:00 to 01:00. At the cabin, before leaving, we saw an **Arizona Gray Squirrel** being chased by a pair of angry acorn woodpeckers. We drove to the outdoor toilets three times, looking for the Pallid Bats, but without luck. We did see 2 **Northern Raccoons**, 2 **Common Gray Foxes**, 1 **White-backed Hog-nosed Skunk**, and 1 **Hooded Skunk**, though. We also detected the **Mexican Free-tailed Bat**, **Big Free-tailed Bat**, **Silver-haired Bat**, **Canyon Bat**, **Big Brown Bat**, and **Hoary Bat**. We wondered if the several

days of cold evening temperatures in the higher elevations had affected bat activity, especially the *Myotis* bats and perhaps also the Pallid Bats.

Then, FINALLY, at midnight on the White House Canyon Road, José's perseverance paid off and we were able to see an **Antelope Jackrabbit**!! We were tired but elated!! We concluded that, actually, 49 species in 5 days is absolutely not that bad!!

October 14, Madera Canyon to Phoenix

Today was “just” a travel day, but we started it by identifying a **Bailey's Pocket Mouse**!! That made 50 species in 6 days, or 4½ days of effective searching; way better than “not bad”!!

Acknowledgements

I am truly thankful to Jon Hall for recommending José. More than that, I am thankful to José, who took time out of his busy PhD-student schedule to take me on this great adventure. José has told me that he has been thinking of doing some mammal guiding after he finishes his degree. Therefore, I want to give my wholehearted endorsement of him as a guide. He is a genuinely nice guy—great social skills, an excellent organizer, intelligent, an amazing wildlife spotter, determined, thorough when identifying species, an expert photographer, and EXTREMELY knowledgeable—after all, he will soon be a PhD-level scientist. I not only had a fantastic time, but I also learned very much about the ecology of mammals (and reptiles, amphibians, and birds) in the desert Southwest and the evolutionary and conservation importance of these “sky islands” of desert mountains. His knowledge of the fauna and their ecology in Central America is just as impressive. I could not have had a better guide. This was my first privately guided trip, so I already feel bad for my next one, who has to be compared to José!! Thank you, José. You can “meet” him on his Mammal Watching Podcast Episode 7 and contact him at jmartinezfonseca89@yahoo.es. Thanks also to Vladimir Dinets for informing us all on Mammal Watching about the cottontail taxonomy paper.



José Martínez-Fonseca with a Bailey's Pocket Mouse, shown again on the right—the pocket mouse, that is.

Species list:

Rock Squirrel *Otospermophilus variegatus*

Round-tailed Ground Squirrel *Xerospermophilus tereticaudus*

Harris' Antelope Squirrel *Ammospermophilus harrisi*

Cliff Chipmunk *Tamias dorsalis*

Mexican Fox Squirrel *Sciurus nayaritensis*
Arizona Gray Squirrel *Sciurus arizonensis*
Southern Pocket Gopher *Thomomys umbrinus*
Bailey's Pocket Mouse *Chaetodipus baileyi*
Merriam's Kangaroo Rat *Dipodomys merriami*
White-footed Mouse *Peromyscus leucopus*
Brush Mouse *Peromyscus boylii*
Cactus Mouse *Peromyscus eremicus*
Mexican Woodrat *Neotoma mexicana*
Western White-throated Woodrat *Neotoma albigula*
Arizona Cotton Rat *Sigmodon arizonae*
Desert Cottontail *Sylvilagus audubonii*
Hotzner's Cottontail (=formerly Eastern Cottontail) *Sylvilagus holzneri*
Black-tailed Jackrabbit *Lepus californicus*
White-sided Jackrabbit *Lepus callotis*
Antelope Jackrabbit *Lepus alleni*
Lesser Long-nosed Bat *Leptonycteris yerbabuenae*
Mexican Long-tongued Bat *Choeronycteris mexicana*
Big Brown Bat *Eptesicus fuscus*
Canyon Bat *Parastrellus hesperus*
Yuma Myotis *Myotis yumaensis*
Arizona Myotis *Myotis occultus*
Western Small-footed Myotis *Myotis ciliolabrum*
California Myotis *Myotis californicus*
Long-legged Myotis *Myotis Volans*
Cave Myotis *Myotis velifer*
Silver-haired Bat *Lasionycteris noctivagans*
Western Red Bat *Lasiurus blossevilli*
Hoary Bat *Lasiurus cinereus*
Western Yellow Bat *Lasiurus xanthinus*
Mexican (Brazilian) Free-tailed Bat *Tadarida brasiliensis*
Big Free-tailed Bat *Nyctinomops macrotis*
Western Bonneted Bat *Eumops perotis*
White-tailed Deer *Odocoileus virginianus*
Mule Deer *Odocoileus hemionus*
Collared Peccary (Javelina) *Tayassu (Pecari) tajacu*
Bobcat *Lynx rufus*
Coyote *Canis latrans*
Kit Fox *Vulpes macrotis*
Common Gray Fox *Urocyon cinereoargenteus*
Ringtail *Bassaricus astutus*
Northern Raccoon *Procyon lotor*
White-nosed Coati *Nasua narica*
Striped Skunk *Mephitis mephitis*
Hooded Skunk *Mephitis macroura*
White-backed Hog-nosed Skunk *Conepatus leuconotus*