



# REFUGE UPDATE

September 2019

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## Calendar

### **4th Annual Moth Night**

**Saturday, September 7th**

**7:00– 10:00pm**

Join Us, Saturday, September 7th Evening from 7 pm to 10 pm for our annual FREE, Family Program to identify a variety of moth species.

### **Decorate The Tree**

**Saturday, September 14th**

**1:00– 3:00pm**

Help us provide 10000 hand made ornament for the National Christmas Tree. See flyer on Page 6

**Saturday, October 19**

### **Silver Creek Geology**

**9 am – 3 pm**

Mountains, Canyons and Plateaus oh my! Join us for this geologic exploration of Silver Creek. Expect to see varied wildlife and remarkable views guaranteed! Hiking will be 2 – 3 miles, moderate and over uneven surfaces, in arroyos and up hills. Lace up your hiking boots, grab your hiking poles and dress for the weather. Don't forget to bring your lunch. Space is limited. Reservations are required, call 505 864-4021

**Saturday November 2**

### **Fall Family Fun Fair**

Family activities including archery, live animals, guided hikes and more.

**Friday, December 6**

**9 am – 3 pm**

### **Cibola Geology**

Tour the east side of the refuge, where the pronghorn roam, where Gunnison's prairie dogs are building their towns, and Long Term Ecological Research sites are concentrated. Tour includes a walk into picturesque Cibola Canyon, where seasonal water flows over exposed limestone bedrock and the surrounding area. Hiking will be 2-3 miles, moderate. A hiking stick may be helpful to navigate sloping rock surfaces and sandy inclines. Space is limited, reservations required, call 505 864-4021.

## Manager's Update

Kathy Granillo, Refuge Manager

I'm pleased to announce that we will have a prescribed burn on the refuge, hopefully on September 10. This will be about 4,000 acres in the short-grass prairie portion of the refuge (east side). The New Mexico Fire District staff will conduct the burn with assistance from fire fighters from Wichita Mountains NWR and Balcones Canyonlands NWR. Much of the burn will be done via aerial ignition with a drone. It will drop chemical-filled spheres, colloquially know in the industry as "ping pong balls," which ignite on impact with the ground. The spheres contain potassium permanganate, injected with ethylene glycol. These chemicals interact and generate enough heat to ignite. We look forward to getting some great video and photos of this effort.

Another item I'm pleased to announce is that we have made a selection to fill our vacant Heavy Equipment Operator position. We are still awaiting final approvals from our Regional Office, but hopefully we will have that person on board by the end of September.

Finally, hunting season starts September 1 with dove hunting on all three of our hunt units. Waterfowl will start towards the end of October. If interested in hunting on the refuge, please consult the refuge web page or stop by the Visitor Center for more information.

## **Amigos Board News**

Ann Adams, Board President

Hey there, Amigos!

Somehow summer has fled but it's forgotten to take the heat with it... What's up with that?! Our monsoon has been on and off, depending on where in the state you live. Both the Rio Salado and the Rio Puerco have been running... a bit.

On the refuge the new bridge across the Rio Puerco is complete.

You can take exit 175 off I-25, (Hwy 60 East Bernardo/Mountaineer) and go west to drive across it. The old bridge will remain but will not be accessible to walk, ride, or drive across. You can admire it from the new bridge and from the turnouts at either end of the new bridge. The state will be putting up an Historic Bridge sign in the near future.

We have lots of activities underway on the refuge as we head into Fall. The annual Butterfly Count took place Saturday Aug. 24<sup>th</sup>. Check our Facebook page for photos!! Looking forward to Moth Night, which is coming up on Sept 7<sup>th</sup>. As the kids go back to school we hope they will be looking forward to a visit by our new interns to enlist them in this year's Drawn to Sevilleta poster contest. You'll see the results of that competition at the Fall Family Fun Day in Nov. See the Amigos' social media sites for more info on all these activities.

Ann

## **Kangaroo Rat Research**

Author: Nikki Walker, master's student from Southern Illinois University in the Zoology department.

When you hear the word "stress" what comes to mind? Trying to meet a deadline at work? Driving in heavy traffic or bad weather? We often forget that wildlife can get stressed too!

For wildlife at the Sevilleta, stress could be the result of natural processes like drought, wildfire, or predators; or, it could be caused by human activities such as construction, prescribed burns, or invasive species removal projects.

Understanding how stress impacts wildlife species is crucial for addressing the inevitable increase of human influence on natural ecosystems.

Our project aims to explore how an animal's behavior might change when they are stressed, how such changes may in turn influence the plant community.

Our model species is the banner-tailed kangaroo rat, a common inhabitant of the grassland areas of the Refuge. These nocturnal rodents are relatively large (about 120 grams; for comparison, the average house mouse weighs around 30 grams) and they dig substantial burrows that can be up to five meters across at the surface. They spend most of their time foraging for seeds that they bring back to their burrows to cache for later consumption. Because these kangaroo rats are voracious seed gatherers and ecosystem engineers, they have a large influence on the local plant community. We seek to understand how increased stress might change the way these animals forage and shape the structure of their plant community.

Here's how our project works. We start by live-trapping adult kangaroo rats. When we catch one, we weigh and measure it, then fit it with a tiny tracking collar that uses the same GPS technology that is in your cell phone. These collars communicate to a local wifi network that we built on a grid around a kangaroo rat community on the Sevilleta, which collects and stores movement data for all of our collared kangaroo rats. We also collect any fecal pellets the animal deposited in the trap, which we analyze for stress hormones. This non-invasive method allows us to measure stress levels in animals because when animals are stressed, stress hormones are elevated. Along with the collar, we also carefully implant, under the skin, a small pellet containing corticosterone (a hormone involved in the stress response).

Over time the implant will artificially increase the animals' stress levels to mimic exposure to natural and human induced disturbances. We release the kangaroo rats and continue to track them via wifi for up to eight months. Back at the lab, we can test the fecal samples we collected to measure the amount of corticosterone they contain. Through long-term sampling of fecal samples we can monitor and track changes in the animals' stress levels over time and seasons. Finally, we will overlay our tracking data with the stress hormone data to find out if kangaroo rat movement behavior is affected by their stress levels.

We know wildlife experience stress on a regular basis and human activities can often be the cause. We hope that our study will help us learn more about how increased stress could impact not only the individual animal, but also their populations, plant communities, and ecosystems over time.

Pictures on next page



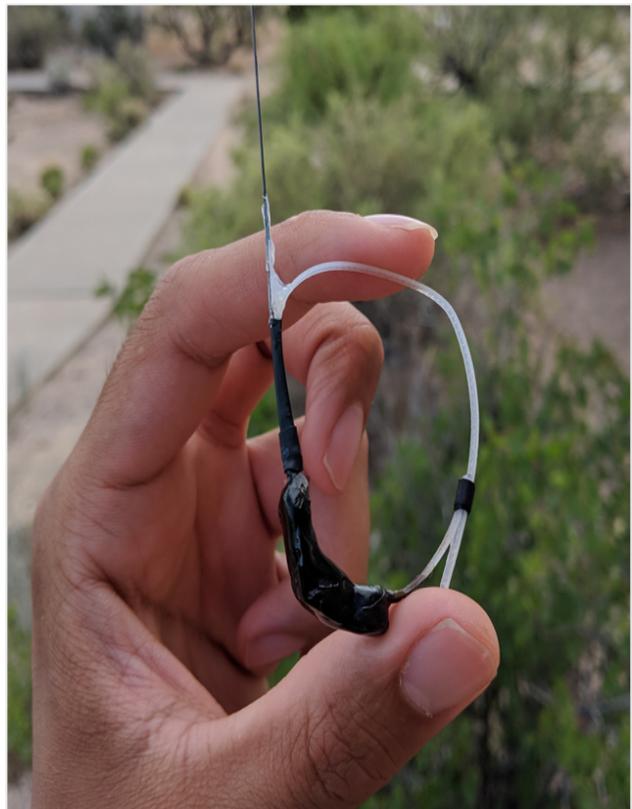
A banner-tailed kangaroo rat with cheek pouches full of seeds.



Omar Morales measures the tail length of a captured kangaroo rat.



Kangaroo rat wearing a tracking collar.



Tracking collar.

## **ADOPT A PRAIRIE DOG**

Submitted by Susan Richards



Add a Prairie Dog to your wildlife family. Sevilleta National Wildlife refuge has a program to humanely capture and relocate Gunnison's prairie dogs from the Albuquerque area to colonies on the east side of the refuge. Gunnison's prairie dogs were native to the Sevilleta area before ranchers exterminated most of them in the mid-1900's. When the wildlife refuge was created, one of the goals was to reintroduce native species, including prairie dogs.

You can support this multi-year project by "adopting" one of the little guys for just \$25. You'll get an adoption certificate, information on Gunnison's prairie dogs, a prairie dog print, and a Sevilleta bumper sticker. Most importantly, you'll get a good feeling knowing you are helping with this program that's been around since 2005. Funds go to help feed the dogs until they are established and to monitor their success in adapting to their new home.

Want to Adopt a Prairie Dog? Drop by the refuge (exit 169 off I-25), or give us a call: 505-864-4021.

### **VOLUNTEERS**

Submitted by Rex Myers

First person you met when you entered the Sevilleta Visitor's Center was probably a volunteer. Hiked a trail? A volunteer helped built and/or maintain it. Enjoyed a program? More than likely a volunteer was involved in making it successful. According to Jeannine Kimble, Visitors Services Manager, volunteers contributed 9,983 hours to the refuge last year – that's the equivalent of almost five full-time employees.

Volunteers come in many forms. RV volunteers live in their campers or recreational vehicles on the refuge and generally work in three-month periods. They staff the Visitors Center and Nature Store, fill bird and hummingbird feeders, put up the flag in the morning, keep the place clean, and perform myriad other tasks that help the refuge run smoothly. Naturalist volunteers contribute expertise in geology, flowers, birds, local history, and cacti. Community volunteers repair fences, maintain wildlife drinkers, clean up the I-25 interchange, paint crosswalks, help release prairie dogs, build trails, replace refuge signs, staff information tables, and do what's needed around Sevilleta. Groups such as Back Country Horsemen, scout troops, high school and NM Tech students work on special projects as needed. More than 90 different people volunteered last year.

It's fun, it's important, and it's easy to volunteer. Contact Jeannine Kimble: 505-864-4021.

### **HOW YOU CAN HELP SEVILLETA**

The Amigos de la Sevilleta provide valuable support to this unique refuge. There are several ways that you can help. Consider increasing your membership contribution to the next level or higher.

Give an Amigos membership to a friend or family member.

Make an annual or semi-annual donation.

Include the Amigos de Sevilleta in your will.

Donate appreciated property or stock.

If you are 70½ or older you can donate a part of your required minimum IRA distribution and avoid paying taxes on it.

Your broker can handle all the paperwork for you. You will need the Amigos' tax ID number (06-1819138) and the mailing address (Amigos de la Sevilleta, Box 1248, Socorro, NM 87801.)

Since the Amigos are a 501c(3) organization, all donations are tax deductible. Your generosity will ensure that Sevilleta continues its mission to provide for the wildlife in this spectacular refuge.

### Carol Madison

Hello! My name is Carol, and I am very excited to be interning here at Seville National Wildlife Refuge. I'm originally from Fort Lauderdale, FL, so the transition from ocean to desert is a large, but very welcomed change for me. Last spring, I graduated from Flagler College in St. Augustine, FL where I studied public history and environmental science. Since then, I have been traveling around doing different seasonal internships within the National Park Service, and the Bureau of Land Management. I am looking forward to my stay here at Seville and working with students on the 'Drawn to Seville' poster contest, and, the Decorate the Tree project.



# Decorate The Tree



Join artist, Janice Havlena, for a unique opportunity to make an eco-friendly bird ornament celebrating the National Wildlife Refuges of New Mexico and the Fish & Wildlife Service for the National Christmas Tree in Washington, DC!

Saturday, September 14<sup>th</sup>  
1pm-3pm  
at  
Sevilleta National Wildlife Refuge  
exit 169 off of I-25

Help us reach our goal of  
10,000 handmade ornaments  
from New Mexico!

New Mexico will provide one large tree for the White House West Lawn and 70+ smaller companion trees to adorn offices throughout Washington, DC.

No reservations required.



Cosponsored by the Friends of Bosque del Apache and the Amigos de la Sevilleta  
For more information call 505.864.4012, or find us on facebook!

<https://www.fws.gov/refuge/sevilleta/>



NEW AT THE NATURE STORE



Pewter key chains and zipper pulls  
Hand-made by local artist Gary Hutchinson

Kids and Adult t-shirts



Adults – Whiptail lizard (front & back design)



Kids – Prairie dog

**Amigos Contacts**

Amigos web site

<https://www.amigosdelasevilleta.org/>

Amigos on Facebook

<https://www.facebook.co/amigossevilleta>

Refuge Web Site

<Http://www.fws.gov/refuge/sevilleta>

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