New Program Shares Scientific Discoveries

By Martha Merson

Wooden skewers and white foam spheres are essential for cave research, at least the way that Nick Hristov and Louise Allen practice it. Twice in 2014 park rangers halted visitors’ progress through the Main Corridor of Carlsbad Cavern (which connects the natural entrance on the surface to the Big Room 735’ below) to perform the job of mapping the cave. In June, five park rangers, three research assistants, two videographers, and one accompanied Hristov and Allen on a mission to scan the cavern from Devil’s Den to the underground lunchroom. Among us we carried two hefty garbage bags with a total of 72 foam spheres, two tripods, and two laser scanners along with video cameras to document the work.

Scanning the cave will give researchers a more detailed map, a reproduction of the space which will have such accuracy, formations, bumps, and contours will be distinct and measurable. This is a project Hristov and Allen started a couple years ago. The beauty of this equipment is that the LIDAR scanners emit laser beams that bounce off the walls, ceiling, and floor, collecting more than a million data points during a scan that lasts a mere two minutes. Teams like this one, interested in mapping caves, no longer need tape measures. They don’t need to get into uncomfortable positions or to estimate. They don’t need to touch any sensitive equipment, nor do they need to write notes on the walls. The scanner operators leapfrogged each other, moving 10 or 20 or 30 feet down the path. Corners and narrow, twisting passages need more scans. An LED light on the body of the scanner switches from blue to red when in use. In side, a mirror spins, systematically reflecting the laser beam. All was well until one of the scanners broke. In the dim light of the cave, it was impossible to get it to resume operating. Frustrated, Hristov growled, “We are now operating at 50% capacity.”

While waiting for an “all clear” signal, the park rangers explained the project and showed visitors on an iPad an animated, virtual 3D model of the cave, based on previous laser scans. A ranger who stopped visitors during a scanning session in early 2014 reported, “One couple I spoke to, it made their day if not their vacation. They said, ‘This is so special. We came on the right day.’”

Looking down a dark passage from the Main Corridor past the role where hundreds of thousands of Brazilian Free-tailed bats make their home in the warmer months of the year, it is impossible to see or hear the bats. Few people have traveled the third of a mile to the bat road. On the iPad, rangers can play an animation that gives visitors a sense of traveling through the passage head-first in mid-air, the way a bat might experience the journey. After experiencing the fly-through view of the cavern from the Natural Entrance near the bat cave sign, back to the bat cave, visitors often comment, “Wow” and “Cool.” One blinked his disbelief, “It’s amazing, the detail.”

Tablets in ranger’s hands are adding a new dimension to visitors’ and park rangers’ conversations about the cave and its popular residents, the Brazilian Free-tailed bats. Several rangers now carry iPads so they can illustrate their answers to visitors’ impromptu questions. The iPads are just one aspect of a project funded by the National Science Foundation. Interpreters and Scientists Working on Our Parks (iSWOOP) brings park rangers, scientists, and out-of-school educators together to design ways to highlight the process and results of active science research happening on national parklands.

At Carlsbad Caverns the research questions and applications of new technologies briefly the life of the painter and includes pictures of the original paintings on display there. Slightly eccentric and enthralled with nature, Cox, according to A Brush with Passion, dedicated a great deal of time and thought to the landscapes of West Texas. In his words, “Solitude awakens latent moods and creates the greatest urge for their expression and many a grm of thought lies forgotten tied up in packets and laid away in some old cedar chest like lost jewels.” The words of Clark Cox, as well as his meditative approach to painting and poetry, reminded me of another introspective student of Mother Nature’s ample urn, the major—devoted his time to reveling in the outdoor, Henry David Thoreau. While reading his classics as “the iceberg may not know that in the depths, one sees. But the viewer of the painting and the ocean, the painting itself, is what every-thing.” No doubt, the two forms of art are often that invisible root of an iceberg. In the case of Cox’s paintings, both pieces are revealed, a painting and poem together, each inspired by the sensational scenes found at the park. Almost 90 years after they were painted, the work of Clark Cox continues to inspire and intrigue guests and employees at the Pine Springs Visitor Center. A Brush with Passion, for sale at the visitor center, discusses...
Welcome to Carlsbad Caverns and Guadalupe Mountains National Parks. Carlsbad Caverns National Park, a World Heritage Site since 1995, features a spectacular cave system of highly distinctive chambers. Guadalupe Mountains National Park protects one of the world’s best examples of a fossil reef. Both parks are located within the Chihuahuan Desert, a fascinating place to experience desert life.

Our park staff are here to help make your visit a truly memorable event and will be happy to help you plan your visit to areas within and without the designated wilderness. Guided tours at Carlsbad Caverns can enrich your park experience. These tours offer a variety of caving experiences, from easy lantern tours to challenging trips involving crawling and squeezing through tight passages.

Guadalupe Mountains National Park has over 80 miles of hiking trails to explore, ranging from wheelchair accessible paths to strenuous mountain hikes, including an 8,4 mile roundtrip hike to Texas’ highest mountain, Guadalupe Peak (8,751’).

Many national parks across America offer a Junior Ranger program for children to encourage interest in their national parks and to promote a sense of stewardship and ownership for these special places that they come to visit. This self-paced educational program allows children to earn a patch and/or badge and/or certificate upon completion of required activities that teach them about park resources. Age appropriate activities are included in the Junior Ranger booklet, typically for pre-kindergarten through upper elementary-aged children.

At Carlsbad Caverns, the Junior Ranger program offers activities that teach children about the resources both above ground and below the surface (including plant and animal life of the desert, cave features, and history of the park). Younger children have opportunities to color and draw, find objects on a visual scavenger hunt, use their senses to experience their surroundings, and complete games. Older children will sequence events, complete word searches, and write stories and poems. Each activity in the booklet is an optional activity depending on interest and age-level. The Junior Ranger booklet is available at the visitor center information desk. Children of all ages may participate and earn a badge or patch— it’s their choice. The program is free.

At Guadalupe Mountains, children work through a separate activity booklet and visit points of interest within the park. The booklet accommodates families of varying travel plans.

To become a Volunteer-In-Park (VIP) visit www.volunteer.gov or contact:

Carlsbad Caverns National Park
Maggi Daly, Volunteer-In-Park Coordinator
575-785-2318 ext. 231

Guadalupe Mountains National Park
Fermin Salas, Volunteer-In-Park Coordinator
43-828-3431 ext. 231

We would like to extend our sincere gratitude to the dedicated effort and talent that volunteers have brought to Carlsbad Caverns and Guadalupe Mountains National Parks. Volunteers play a vital role in fulfilling our mission of preserving our natural and cultural heritage and sharing that heritage with the visiting public. Volunteers do everything from staffing the information desk, rowing interpretation, patrolling surface and cave trails, to trail maintenance, research, cave restoration, and more.

Volunteerism Makes a Difference

Many of the activities can be completed at the Pine Springs Visitor Center or Dog Canyon Contact Station. Children who complete three activities earn a badge and certificate, while those who do six, earn a patch, in addition to the badge and certificate. There is no charge for participation in the program. Junior Paleontologist, Wilderness Explorer, and Night Sky Explorer Activity Books are also available. Participants will earn a badge (Jr. Paleontologist) or patch (Wilderness Explorer, Night Sky Explorer) upon completion.

As you travel and spend time in the area please remember to keep safety in mind. Deer and other wildlife are plentiful— enjoy watching wildlife, but remember they often move across roads, especially in the evenings, be vigilant while driving during twilight hours. Hikers should be prepared for rapidly changing weather conditions. Hikers can become dehydrated in our dry climate, so carry plenty of water (one gallon per person per day is recommended). Always check with a ranger before venturing into the backcountry.

We are wholeheartedly committed to our mission of preserving and providing for the enjoyment of our nation’s most outstanding treasures. We wish you a rewarding experience in every way.

Douglas S. Neighbor
Superintendent
Carlsbad Caverns NP

Dennis A. Vasquez
Superintendent
Guadalupe Mountains NP
Carlsbad Caverns and the Antiquities Act

By Ben Hoppe

you heard of the Antiquities Act of 1906? If you haven’t, there is a good chance that you are missing out on national parks. If you’re visiting Carlsbad Caverns, then you’re enjoying one of the parks set aside by this legislation. In fact, a massive number of national monuments, and national historic parks that exist today are the result of the Antiquities Act.

In the late 1800s and early 1900s, concerns were growing about the protection of prehistoric human ruins and artifacts (antiqui-
ties) on federal lands. It’s not altogether surprising, think of when you stop at a national park today—you might see a unique rock, a beautiful flower, or if you’re really lucky you’ll find an arrowhead or a fossil! Kids want to take something home to show their friends. Even at the turn of the 20th century, people wanted to have a piece of history to take home. The resources needed protection.

On June 18, 1906, President Theodore Roosevelt—evolving the President’s power. Not only did the law prohibit the taking of artifacts from federal lands, it also gave the President of the United States a new power. By executive order, the President may proclaim any area of historic or scientific interest “as national monuments, and prehistoric structures and other objects of historic or scientific interest” as national monuments. The area set aside has to be considered to be of proper care and management of the objects to be protected.

The first national monument was established under the Antiquities Act by President Roosevelt on September 24, 1906. Perhaps you’ve visited it—Devil’s Tower National Monument. By the time Teddy left office in 1909, he had signed proclamations establishing eight national monuments.

So why is this executive power a big deal? If the President saw something that was worthy of protecting, he could protect it without needing to go through Congress. A national park must go through approval from Congress before it can be officially designated. A national monument must go through approval from Congress before it can be officially designated. A national park must go through approval from Congress before it can be officially designated.

For example, then-Senator (and former president) Benjamin Harrison unsuccessfully attempted to establish the Grand Canyon as a National Park in 1882, 1883, and 1886. Thanks to the Antiquities Act, President Roosevelt established Grand Canyon National Monument in 1908. Senate bills to redesignate it as a national park failed again in 1910 and 1912. Finally in 1996, the Grand Canyon National Park Act was signed by President Woodrow Wilson to make this change from Grand Canyon National Monument to Grand Canyon National Park.

The ability for a President to establish a national monument helps to assure that proper management, care, and attention is given to our nation’s treasures without having to jump through hoops, sacrificing precious time waiting for Congress to act.

Carlsbad Caverns was starting to get an increasing amount of visitors as the United States headed into the Roaring Twenties. One of those visitors, Albert A. Holsley, saw the need to protect it. Holsley was a mineral examiner for the General Lands Office. In April of 1933, he told his boss that he wanted the land to be protected to prevent “further dealings by blood suckers.”

President Theodore Roosevelt proclaimed Devil’s Tower National Monument on September 24, 1906. President Barack Obama proclaimed Organ Mountains-Desert Peak National Monument (located in southern New Mexico) on May 21, 2014, and expanded the Pacific Remote Islands National Monument (proclaimed by President George W. Bush on January 9, 2010) from 83,000 square miles to 490,000 square miles on September 25, 2014.

Did You Know?

Since the Antiquities Act was enacted in 1906, only three Presidents have not used the executive authority it granted—Richard Nixon, Ronald Reagan, and George W. Bush. Since the Antiquities Act was enacted in 1906, only three Presidents have not used the executive authority it granted—Richard Nixon, Ronald Reagan, and George W. Bush.

So on October 25, 1923, President Calvin Coolidge set aside 70 acres for Carlsbad Cave National Monument—officially putting it under the protection of the United States Government. President Calvin Coolidge’s enactment of the Antiquities Act allowed the President to protect the caverns in Carlsbad Caverns as a National Park. The Antiquities Act was able to protect the cave quickly, without having to wait for a bill to be passed by Congress. By the time the cave was declared a national park, the presence of bats had already taken over.

But bats are not the only animals to be protected. As Holsley noted, the ability to protect Carlsbad Caverns is crucial to the scientific research conducted on-site.

Since 2006, over five million bats have been killed by this disease and as of this summer, WNS has been detected in nine species of bats that hibernate. Death rates of various colonies have been from 90 percent to 100 percent of all bats in that particular colony. An additional concern is that WNS is spreading rapidly. It is now found in caves and mines in 14 states. With the recent occurrence of WNS was found in a cave in western Oklahoma.

States known to have WNS include: AL, AR, CT, DE, GA, IL, IN, ME, MA, MD, MO, NH, NJ, NY, NC, OH, OK, PA, TN, VA, VT, and WV. Provinces in Canada known to have WNS include New Brunswick, Nova Scotia, Ontario, Prince Edward Island, and Quebec.

If you are taking one of the ranger-guided off-park tours during the Antiquities Act celebration, you will most likely be sharing the solitude of the moment. You may also find a piece of yourself yet undiscovered in the solitude of the moment.

Deadly Disease Continues to Kill Bats

by Dale Paic

BATS ARE IMPORTANT FOR ECOSYSTEMS ACROSS the country and the world. They are excellent pollinators and eat millions of tons of insect pests a year. And they are important to protecting crops. A study completed in the 1990’s on the Brazilian (Mexican) Free-tailed bats from Carlsbad Cavern showed that 40 percent of the insects destructed by the bats were taken from agricultural pests of food crops. A study completed in the 1990’s on the Brazilian (Mexican) Free-tailed bats from Carlsbad Cavern showed that 40 percent of the insects destructed by the bats were taken from agricultural pests of food crops.

Unfortunately, beginning in the winter of 2006-2007 in caves near Albany, New York, a new and very deadly disease began to decimate bats that hibernate. Bat deaths were immediately associated with a white fungus growing around noses, ears, and on wing membranes. This condition was later named “White-nose Syndrome (WNS)”.

Since 2006, over five million bats have been killed by this disease and as of this summer, WNS has been detected in nine species of bats that hibernate. Death rates of various colonies have been from 90 percent to 100 percent of all bats in that particular colony. An additional concern is that WNS is spreading rapidly. It is now found in caves and mines in 14 states. With the recent occurrence of WNS was found in a cave in western Oklahoma.

There are lots of unknowns concerning WNS. At this time, it does not appear to be affecting summer bat colonies such as Bra-

The same can be said for attacking the experience from an artistic angle. The most accessible and possibly the most popular is photographing. But while photography in-stantly captures an exact copy of a subject, a painting may take several hours and will not always be accurate. A painting says as much about the painter as it does about what they are painting. Henry David Thoreau wrote, “It’s not what you look at that matters, it’s what you see.”

Painting is an excellent excuse and opportunity to further explore the natural world. If someone is new to painting, it can feel awkward or frustrating. But with the right attitude, the experience can be so novel, refreshing, and enthrancing, it is its own kind of meditation. Enbraptured by the beauty of the canyons and peaks in what is now Guadalupe Mountains National Park, Clark Cox endeavored to catalog the poetry of the moment with words and paint. I challenge all of our park visitors to do the same. They may also find new appreciation for the world life after the experience. They may also find a piece of themselves yet undiscovered in the solitude of the moment.

By the time the cave was declared a national park, the presence of bats had already taken over.

Caves in the park or the area to be aware of this problem and to help minimize the potential spread of this deadly disease.

Everyone can help in the following ways:

If you have been in a cave or mine that is infected, help prevent its continued spread to other areas and other bat species.

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Photography is permitted on most tours; however, please use proper etiquette. Warn those physically fit and healthy, sturdy footwear required. Highlights include the Natural Entrance, Devil’s Spring, Whale’s Mouth, and Iceberg Rock.

NATURAL ENTRANCE SELF-GUIDED ROUTE
Length: 1.25 miles, 1 hour
Fee: Entrance Fee
This hike is similar to walking into a steep canyon (a descent of about 800 feet in one mile). It is not recommended for those with respiratory problems; bring your inhaler just in case.

BIG ROOM SELF-GUIDED ROUTE
Length: 1.25 miles, 1.5 hours
Fee: Entrance Fee
Descend by elevator to start the tour in the Underground Rest Area. The non-skid trail is paved and mostly level, although there are a couple of short, steep hills. All visitors can explore Carlsbad Cavern should experience this tour.

LOWE CAVES
Fee: Entrance Fee and $5.00 Tour Ticket
Tours depart from the Underground Rest Area.

SPIDER CAVES
Fee: $20.00 Tour Ticket
The trail is paved. Sturdy, closed-toed shoes or hiking boots required. Helmets and headlamps provided. Backpacks not allowed. Tours depart from visitor center.

KING’S PALACE GUIDED TOUR
Length: 1 mile, 1 hour
Fee: Tour required. Tours depart from the Underground Rest Area.

There is no entrance fee for those who own any of the following passes (up to three individuals plus the cardholder):
- The Annual Pass, Annual Pass (Military), Senior Pass, and Access Pass (all three are part of the America the Beautiful—National Parks & Federal Recreational Lands Pass), Golden Age Pass and Golden Access Passport cover the basic entrance fee. Passholders must still obtain entry tickets.

Entrance fee applies to self-guided tours. Guided tours require an additional fee.

All fees and tours are subject to change.

Summertime

There are no entrance fees for those who own any of the following passes (up to three individuals plus the cardholder):
- The Annual Pass, Annual Pass (Military), Senior Pass, and Access Pass (all three are part of the America the Beautiful—National Parks & Federal Recreational Lands Pass), Golden Age Pass and Golden Access Passport cover the basic entrance fee. Passholders must still obtain entry tickets.

Entrance fee applies to self-guided tours. Guided tours require an additional fee.

All fees and tours are subject to change.

Reservations

We recommend that you make reservations for guided tours at least six weeks in advance. Some tours fill quickly. Reservations are not necessary for self-guided tours. To make reservations call the National Park Reservation System at 877-444-6777 or visit www.Recreation.gov

Reservations must be picked up no later than ten minutes prior to the posted tour starting time. Tickets will not be issued if within ten minutes of the start of any tour. No refunds for unsold tickets.

Have a Safe Tour

Cave temperature is 56° F (13° C) year-round. A light jacket or sweater and good walking shoes are recommended. Do not wear sandals. For your safety:
- Stay on the paved trail.
- Supervise children closely; children under 16 must remain with an adult at all times.
- Ask park rangers for help.
- Take prescribed medications with you.
- Be sure you have high humidity in the cave can affect respiratory problems; bring your inhaler just in case.
- If you are diabetic, be sure you have eaten enough calories.
- If you have an infant with you, child-carrying backpacks are recommended. Strollers are not allowed.
- Leave your pet at the kennel, not in your car.

Protect the Cave

- Never touch, tap or handle the cave formations; the oils on your skin damage the formations.
- Never take gum, tobacco, food, or drinks into the cave.
- Never throw coins or other objects into the pools.

Audio Guides

Enhance your visit with an audio guide rental. As you tour the caverns, you will learn about the natural and cultural history of Carlsbad Caverns National Park.

Audio guide rentals are administered by Carlsbad Caverns—Guadalupe Mountains Association (CCGMA), a non-profit organization. The cost is $5.00 and proceeds are donated to the park.

Carry water—weather may be very hot in summer and very cold in winter. Stay on the trail and wear sturdy hiking shoes.

Carlsbad Caverns Cave Tours

NATURAL ENTRANCE SELF-GUIDED ROUTE
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Fee: Entrance Fee
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BIG ROOM SELF-GUIDED ROUTE
Length: 1.25 miles, 1.5 hours
Fee: Entrance Fee
Descend by elevator to start the tour in the Underground Rest Area. The non-skid trail is paved and mostly level, although there are a couple of short, steep hills. All visitors can explore Carlsbad Cavern should experience this tour.

LOWE CAVES
Fee: Entrance Fee and $5.00 Tour Ticket
Tours depart from the Underground Rest Area.

SPIDER CAVES
Fee: $20.00 Tour Ticket
The trail is paved. Sturdy, closed-toed shoes or hiking boots required. Helmets and headlamps provided. Backpacks not allowed. Tours depart from visitor center.

KING’S PALACE GUIDED TOUR
Length: 1 mile, 1 hour
Fee: Entrance Fee and $8.00 Tour Ticket
Tours depart from the Underground Rest Area.

Reserved tickets must be picked up no later than ten minutes prior to the posted tour starting time. Tickets will not be issued if within ten minutes of the start of any tour. No refunds for unsold tickets.

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KING’S PALACE GUIDED TOUR
Length: 1 mile, 1 hour
Fee: Entrance Fee and $8.00 Tour Ticket
Tours depart from the Underground Rest Area.
King's Palace
Paved Trail; 80’ hill must be climbed on return trip
January 1 - February 28
Daily, 10:30 a.m., 1:30 p.m.
March 1 - May 23
Daily, 10:30 a.m., 1:30 p.m., 3:30 p.m.
May 24 - August 9
Daily, 10:30 a.m., 12 noon, 3 p.m.
Additional 1:30 p.m. tour on Sun/Tues/Thurs/Sat.
Meet at the Under-ground Rest Area
Adults
$8
Children (4-15), Senior Pass, and Access Pass cardholders
$4
A Federal Admission Ticket is also required.

Left Hand Tunnel
Uneven dirt trail and slippery slopes
January 1 - February 28
Sun/Wed, 10:30 a.m.
May 24 - August 9
MWF, 1:30 p.m.
Meet at the visitor center
Adults
$7.00 and General Admission Ticket
($10.00 ages 6-15, Senior Pass, and Access Pass holders)
6 2 hours 15

Lower Cave
Must negotiate fifty feet of ladders, low light, and slippery, dirt trails. Might get dirty.
January 1 - May 23
Tues/Thurs/Sat, 10:30 a.m.
May 24 - August 9
Sun/Tues/Thurs/Sat, 1:30 p.m.
Meet at the visitor center
Adults
$30.00 and General Admission Ticket
($10.00 ages 12-15, Senior Pass, and Access Pass holders)
12 3 hours 12

Slaughter Canyon
Strenuous climb required to reach cave entrance. Trail in cave is slippery, uneven and rocky.
May 24 - August 9
Friday, 9 a.m.
Meet at the visitor center
Adults
$15.00
($7.50 ages 8-15, Senior Pass, and Access Pass holders)
8 5.5 hours 20

WILD CAVAING—caving gear provided

HALF OF THE WHITE GIANT
Climbing and caving, tight squeezes, drop-offs, will get dirty
January 1 - May 23
Monday, 10:30 a.m.
May 24 - August 9
Monday, 8:30 a.m.
Meet at the visitor center
Adults
$20.00 and General Admission Ticket
($10.00 ages 12-15, Senior Pass, and Access Pass holders)
12 4 hours 8

SPIDER CAVE
Climbing and caving, tight squeezes, drop-offs, will get dirty
January 1 - May 23
Monday, 8:30 a.m.
May 24 - August 9
Wednesday, 8:30 a.m.
Meet at the visitor center
Adults
$20.00
($10.00 ages 12-15, Senior Pass, and Access Pass holders)
12 4 hours 8

RATTLESNAKE SPRINGS
This historic oasis includes a picnic area, shade trees, restrooms and excellent bird watching. Located 5.5 miles south of White’s City on Highway 62/380, then 2.5 miles west on County Road 481. Day use only.
HIKING & CAMPING
The park’s wilderness offers day hikes and backcountry camping (permit required). Rangers at the visitor center can provide free permits, trail and weather information, and backcountry camping tips. The bookstore sells topographic maps, which are considered essential for desert hiking.

BAT FLIGHT PROGRAMS (MAY-OCTOBER)
A few hundred thousand bats fly from Carlsbad Cavern each evening from mid-May until the bats migrate to Mexico sometime in mid-October. The ranger program generally begins each evening 30 to 60 minutes before sunset at the park amphitheater, though weather and lightning can cause cancellation of the program. Check at the visitor center for the exact time the program starts or call 575-785-3012.

Surfacing Activities
SERVICES
Facilities include a visitor center, exhibits, bookstore, restaurant, gift shop and kennel service. Ranger programs are offered daily. Other activities include:

NATURE TRAIL
This one-mile paved, partially wheelchair accessible trail begins near the visitor center and highlights desert plants.

SCENIC DRIVE
A one-hour drive through the Chihuahuan Desert, this 9.5-mile gravel road is suitable for high clearance vehicles. Brochures are available for 50 cents. The scenic drive is open 8:00 a.m. to 6:30 p.m. mid-May to mid-October. It is open 8 a.m. to 4:30 p.m. mid-October to mid-May. These hours are subject to change.

America the Beautiful—The National Parks & Federal Recreational Lands Pass

ANNUAL PASS
The annual pass sells for $80.00 and is good for one year from date of purchase. The pass covers entrance fees at National Park Service and U.S. Fish & Wildlife sites and standard amenity fees at Bureau of Land Management, Bureau of Reclamation and U.S. Forest Service sites. The pass can be purchased at federal recreation sites that charge entrance or standard amenity fees.

ANNUAL PASS—MILITARY
The Military annual pass is free to U.S. Military members with a current CAC card, and their dependents with ID card Form 179. The card is good for one year from the date it is obtained. The pass covers entrance fees at National Park Service and U.S. Fish & Wildlife sites and standard amenity fees at Bureau of Land Management, Bureau of Reclamation and U.S. Forest Service sites. The pass can be obtained at federal recreation sites that charge entrance or standard amenity fees.

SENIOR PASS
The Senior Pass sells for $10.00 and is good for life. Any U.S. citizen or permanent resident of the United States 62 years or older may purchase the Senior Pass. It covers the entrance fees to National Park Service and U.S. Fish & Wildlife sites and standard amenity fees at Bureau of Land Management, Bureau of Reclamation and U.S. Forest Service Sites. Some camping and guided tour fees are discounted 50% for cardholders. The pass can be purchased at federal recreation sites that charge entrance or standard amenity fees.

ACCESS PASS
The Access Pass is available for free to any U.S. citizen or permanent resident of any age that has been medically determined to have a permanent disability. The Access Pass covers the entrance fees to National Park Service and U.S. Fish & Wildlife sites and standard amenity fees at Bureau of Land Management, Bureau of Reclamation and U.S. Forest Service Sites. Some camping and guided tour fees are discounted 50% for cardholders. The free pass can be obtained upon signing a medical affidavit at federal recreation sites that charge entrance or standard amenity fees.

GUADALUPE MOUNTAINS NP ANNUAL PASS
Guadalupe Mountains National Park offers an annual pass for $20.00 for visitors who plan on visiting the park more than once a year, but may not visit other federal areas.

The pass covers entrance fees and is good for 3 individuals plus the cardholder (persons 15 years and younger are free with or without the Guadalupe Mountains NP Annual Pass). The pass is available for purchase at the park at the Pine Springs Visitor Center.

Visitor Guide
Guadalupe Mountains National Park

INFORMATION & EXHIBITS
Pine Springs Visitor Center
Elevation 5,730'. On Highway 62/180, 35 miles southwest of Carlsbad, 10 miles east of El Paso, and 65 miles north of Van Horn on Highway 54 and Highway 62/180. Open every day except December 25. Open daily 8 a.m. to 4:30 p.m. (Mountain Time Zone). Information, natural history exhibits, introductory slide program.

McKittrick Canyon History Museum
The ranch house features exhibits describing historic and current use of the Guadalupe Mountains. Grounds include a picnic area near a spring shaded by large oak trees. Open intermittently.

McKittrick Canyon
Highway entrance gate is open 8:00 a.m. to 4:30 p.m. (Mountain Time of El Paso, and 65 miles north of Van Horn, 110 miles east of White's City, NM), or 65 miles south (Van Horn, TX), 43 miles west (Dell City, TX), 35 miles east (Carlsbad, NM), or 65 miles southwest of Carlsbad, 110 miles east of White’s City, NM). There are no water sources in the backcountry.

Topographic maps, hikers’ guides, and information can be found at the Pine Springs Visitor Center and the Dog Canyon Ranger Station. Stock riding is limited to day trips only.

Wood and charcoal fires are prohibited. Camp stoves are allowed. Pack out all your trash. Pets are not allowed on park trails.

Preparation is the key to an enjoyable backpacking trip. Be prepared for changing weather conditions. Carry plenty of water—there are no water sources in the backcountry.

HIKING

Pinery Trail
Distance: 67 mile
Difficulty: Easy, wheelchair accessible, slight incline on return trip.

Discover the desert as you walk to the ruins of the Pinery, a stagecoach station on the Butterfield Overland Mail Route in 1848. Trailside exhibits. This is the only trail pets on leashes are allowed.

McKittrick Canyon Trail
Distance: to Pratt Cabin, 4 miles roundtrip, to the Grotto, 6.8 miles roundtrip
Difficulty: Moderate, level but rocky trail, 200’ elevation gain to Grotto.

Follow an intermittent stream through the desert and canyon woodlands to the historic Pratt Cabin. A guidebook is available at the trailhead. The Grotto Picnic Area and Hunter Line Cabin are one mile beyond the Pratt Cabin. Please do not drink the water or wade in the creek. To protect this fragile environment, you are required to stay on the trail.

Guadalupe Peak Trail
Distance: 8.4 mile
Difficulty: Strenuous. Approximately 3,000’ elevation gain, steep, rocky path.

Hike to the “Top of Texas” at 8,759’ for spectacular views. Avoid the peak during high winds and thunderstorms. During warm temperatures, carry a gallon of water per person.

CAMPING

Water and restrooms are available, but there are no showers, RV hookups, or dump stations. The fee is $8.00 per night, per site, $4.00 with a Senior Pass (or existing Golden Age Passport) or Access Pass (or existing Golden Access Passport). No wood or charcoal fires are permitted; camp stoves are allowed.

Pine Springs Campground
Located near the Pine Springs Visitor Center, there are twenty tent and nineteen RV campsites (including a wheelchair accessible tent site) available on a first-come, first-served basis. Two camp groups are available for groups of 10-20 people. Reservations (for group sites only) can be made by phoning 915-828-3321 x224 up to two months in advance. Campers planning on day hiking in McKittrick Canyon, to Guadalupe Peak or the Bowl will want to stay here.

Dog Canyon Campground
Located at the end of New Mexico Highway 137, 70 miles from Carlsbad and 10 miles from Park Headquarters, at an elevation of 6,290’ in a secluded, forested canyon on the north side of the park. The campground has nine tent and four RV campsites (including a wheelchair accessible tent site). There is one group site for groups of 10-20 people. Reservations for the group site only can be made up to two months in advance by calling 905-828-3321 x224.

BACKPACKING

Eighty-five miles of trails lead through forests, canyons, and desert to ten backcountry campsgrounds. A free permit is required if you plan to spend a night in the backcountry. Permits are issued at the Pine Springs Visitor Center and the Dog Canyon Ranger Station. For those coming through Carlsbad, Dog Canyon is a great place to begin a backpacking trip because it requires less elevation gain to get into the backcountry.

Weather

Temperature (° F) High Low Inches
Jan 56 34 0.67
Feb 59 36 0.90
Mar 65 41 0.58
Apr 73 48 0.60
May 82 46 0.91
Jun 88 55 2.18
Jul 88 64 2.37
Aug 86 63 3.29
Sep 81 58 2.54
Oct 73 50 0.34
Nov 63 41 1.97
Dec 56 33 1.05
Average annual precipitation for Pine Springs (1880-2000) 17.4

HORSEBACK RIDING

Sixty percent of the park’s trails are open to horseback riding. A Backcountry permit is required for all stock use. These free permits are issued at the Pine Springs Visitor Center and Dog Canyon Ranger Station. Stock riding is limited to day trips only.

Stock corrals are available at Dog Canyon and near Pinyon Ranch. Each has four pens and will accommodate a maximum of 50 animals. Reservations may be made two months in advance by calling 905-828-3321 x224.

OTHER POPULAR HIKES...

Trailhead Trail Distance Roundtripping Description

Pinery Springs Devil’s Hall Trail 4.2 miles Strenuous. Rocky hike in Pine Springs Canyon to the Hiker’s Staircase and Devil’s Hall. After the first mile, the trail drops into the wash. Turn left and follow the canyon bottom to Devil’s Hall, where a sign marks the end of the trail.

El Capitan Trail 11.3 miles Moderate. Desert lovers will appreciate the rocky arroyos and open vistas while skirting along the base of El Capitan. Recommended route: Tejas Trail to Pine Top, Bowl Trail to Hunter Peak, Bear Canyon Trail, Frizzle Trail back to campground. Trail climbs 2,500’. Bear Canyon Trail is very rocky and extremely steep.

Manzanita Spring 4.0 miles Moderate. Scenic hike along the base of El Capitan. Recommended route: El Capitan Trail, Salt Basin Overlook, and return to Pine Springs on the El Capitan Trail.

Schmidt Spring Trail 2.3 miles Easy. Trailside exhibits.

McKittrick Canyon McKittrick Nature Loop 0.9 miles Easy. Path is paved and wheelchair accessible. Hike to a small pond that serves as a desert oasis.

Perrin Reef Trail 8.4 miles Strenuous. For serious geology buffs, this trail has stop markers that can be used with a geology guidebook sold at the Visitor Center. There are excellent views into McKittrick Canyon from the ridgeline. Trail climbs 2,000’.

Indian Meadow Nature Loop 0.6 miles Easy. Enjoy a stroll around a meadow frequented by a variety of birds and other wildlife.

Marcus Overlook 4.6 miles Moderate. Follow the Bush Mountain Trail to the ridgeline for a view into West Dog Canyon. Trail climbs 1,500’. Strenuous. Climb out of Dog Canyon on the Tejas Trail to visit the conifer forest above. Outstanding views from Lost Peak. Lost Peak is a short distance off trail to the right, before the horse corrals. Trail climbs 1,500’.

Salt Basin Dunes 3.4 miles Moderate. Follow the old roadbed from the parking area, for a little over a mile, to the north end of the dune field. There is one high dune to ascend that some may find difficult. No shade. Enjoy the contrast of the pure white dunes with the sheer cliffs of the Guadalupeus as a backdrop. Great for sunrise or sunset hikes all year, and daytime hikes during the winter.

Services
Facilities and services within and near Guadalupe Mountains National Park are extremely limited. The nearest gas stations are 43 miles west (Dell City, TX), 35 miles east (White’s City, NM), or 64 miles south (Van Horn, TX). There is no camp store; bring everything you need with you.

Frijole Ranch History Museum
The ranch house features exhibits describing historic and current use of the Guadalupe Mountains. Grounds include a picnic area near a spring shaded by large oak trees. Open intermittently.

McKittrick Canyon
Highway entrance gate is open 8:00 a.m. to 4:30 p.m. (Mountain Time). Daylight Saving Time, hours are expanded.

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The Great El Paso Salt War

By Angela Rooker

**ASTRONOMY**—THAT GORILLA’S BREATH OF COOLNESS following the heat of summer. The time when we finally get to enjoy all of the produce that has been ripening in the fields. There is much to do—preparing for the return to school, for the winter season, for the holidays. In the past, autumn was one of the busiest times of the year. In a time when most people did not get their food from grocery stores, hard work and careful preparation ensured full bellies over the coming winter. Vegetables and fruits were canned or dried. Meat was acquired (either slaughtered or hunted) and then salted or smoked. The salt needed for this task was not always readily available, so it was a valuable resource. These preparations could literally mean the difference between life and death for the settlers.

Today, the average American does not have to worry about getting enough salt, but for most of human history, humans have been more likely to be salt deficient. Salt is necessary for human survival. Not only is salt necessary for curing meat, but it is crucial for human physiology. Salt is integral in the transmission of nerve impulses, the transportation and absorption of glucose across the cell membranes, and for muscle contractions, for example. Over human history, salt has been highly valued. In fact, wars have even been fought over salt. One of these wars occurred just west of Guadalupe Mountains National Park.

The year was 1848. The area was changing rapidly. An area that had once been part of New Spain, then part of disputed territory following the Mexican War of 1848, was about to become part of the Republic of Texas, was changing hands yet again, this time to become part of the United States. The Treaty of Guadalupe-Hidalgo promised that Mexican citizens remaining in the territory would become U.S. citizens and the would retain their property. This was supposed to ensure that the former Mexican citizens and the United States citizens would be treated equally in both the political and economic life of the community. Unfortunately, this was not to be the case. Frustration over such inequalities violently exploded in an incident referred to as “the El Paso (or San Elizario—a community just outside of El Paso) Salt War.”

In 1870, a group of investors from Franklin, Texas, were unsuccessful gaining sole possession of the title to a tract of land containing the Guadalupe Peak salt beds. A feud over land ownership began. William Wallace Mills supported the idea of individual land ownership. Louis Cardis favored the Mexican-American tradition of common ownership of natural resources. Albert Jennings Fountain championed county ownership, but with community access. Fountain, a radical Republican, was elected to the Texas State Senate where he began to work towards common ownership of the salt flats. This election cooled relations between Mills, a Republican, and Fountain. The rivalry turned violent with the assassination of Judge Gaylord Judd Clarke on December 7, 1870. Charles H. Howard, a lawyer from Missouri, arrived in 1872. He was determined to establish a strong Democratic Party in El Paso. Cardis, a leader in the Mexican-American community, offered his, and their, support.

The year was 1874. Through some political manipulation Howard was appointed to serve as a district judge. He no longer enjoyed the support of Cardis and thus, the Mexican-American community. In September, 1875, Judge Howard filed a claim for the Guadalupe Peak salt flats under his father-in-law’s name. He closed the roads leading to the salt flats (roads built by the Mexican-American community) and began charging for salt collection. People had gathered salt in front of Guadalupe Peak from time immemorial. This tax would unfairly affect the Mexican-American community (again). A riot began when Howard arrested two men attempting to collect salt without paying his fee. The angry mob captured Howard, holding him for three days. He was released on the condition that he would give up his claim to the salt flats and leave the area. He was also fined $12,000. Howard retreated to New Mexico, fuming at Cardis, whom he believed to have started the riot.

In October of 1877, Howard returned to Texas with the sole intent of killing Cardis. He shot Cardis in a store in El Paso. The Mexican-American community was outraged by this killing and demanded that Howard be brought to justice. He was quickly released on bail and fled back to New Mexico.

In December, 1877, Howard returned to San Elizario, Texas with some Texas rangers to prosecute some salt gatherers as trespassers. Instead, he and his party were besieged by a mob. After five days and two deaths (one of Howard’s side), Howard gave himself up. On the understanding that he was going to be taken to jail, the rangers surrendered as well. The rangers were allowed to leave, sans weapons. Howard and two companions, however, found themselves in front of a firing squad of Mexican citizens. The death of Howard did not, however, staunch the violence. Order was finally restored by another detachment of troops (justified by the fact that some members of the mob were Mexican citizens) and a posse of American citizens. San Elizario was looted; there were at least 20 deaths and any number of assaults and rapes. Many Mexican-American families living in the area fled to Mexico to escape the violence.

A war over salt may seem like much ado about nothing. Even though historically salt was a valuable resource, the El Paso Salt War was not only about salt. It symbolizes something greater—the conflict between the rich and poor and between Anglo and Mexican/Mexican-American; political corruption, and social justice. A lot has changed since 1877, and as we work for a more just society for all, we have an expansive salt flat that is the shadow of the Guadalupes to remind us of the complex causes of conflict and the opportunity to learn from the past.

**WHEN YOU HIKE IN MOUNTAIN LION COUNTRY:**

Travel in groups. Lions may key in on easy prey, like small children. Make sure children are close to you, and within your sight, at all times—do not let children run ahead of adults! Talk with children about lions and teach them what to do if they meet one.

**IF A LION IS SIGHTED, THERE ARE SEVERAL THINGS TO REMEMBER:**

Do not approach a lion, especially one that is feeding or with kittens.

Most mountain lions will try to avoid confrontation. Give them a way to escape.

Stay calm, speak calmly, yet firmly. Move slowly. Avoid prolonged eye contact.

Face the lion and stay upright. Do all you can to appear larger. Raise your arms, or open your jacket.

Protect small children by picking them up so they won’t panic and run.

Back away slowly, if you can do it safely. Do not run! Running may stimulate a lion’s instinct to chase and attack.

If the lion behaves aggressively, throw stones, branches, or whatever you can get your hands on without crouching down or turning your back. Wave your arms slowly and speak firmly.

Fight back if a lion attacks you. People have fought back successfully with rocks, sticks, jackets, and their bare hands. Protect your head and neck with your arms. Remain standing or try to get back up.

**PLEASE REPORT ALL MOUNTAIN LION SIGHTINGS TO A PARK RANGER**
Come face to face with a mountain lion at this unique zoo and botanical garden offering an opportunity to experience the Chihuahuan Desert first-hand. See a large collection of live animals, including the rare Mexican gray wolf, and the roadrunner, the state bird of New Mexico. There is also an unusual collection of cacti and other succulents from around the world.

The park is located high atop the Ocotillo Hills overlooking the northwest edge of Carlsbad, just off U.S. Highway 285, and features exhibits, an art gallery, gift shop, and refreshments.

Open all year—24 hours/day. Wheelchair accessible.

Fees
Day Use Only—$5.00 per vehicle
Camping—$14.00 per night ($10.00 for each additional vehicle driven into the same site)
Primitive Camping Area—$8.00 per vehicle per night.

BRANTELEY LAKE STATE PARK
575-457-2384
www.emnrd.state.nm.us/SPD/brantley-lakestatepark.html
Located 12 miles north of Carlsbad on U.S. Highway 285, the campground has 51 RV sites with water and RV electric hook-ups (a few with sewer), a dump station, playground, restroom with hot showers, shelters, tables and grills. Other facilities include picnic areas with sheltered tables and grills, playground, a fishing dock, boat ramps with docks, and a visitor center.

Open all year—24 hours/day. Wheelchair accessible.

La Cueva Non-Motorized Trail System
The trail system covers approximately 2,200 acres and contains more than 15 miles of maintained trails. The non-motorized trails are used by mountain bikers, hikers, and equestrians. The trails wind through the rolling limestone foothills of the Guadalupe Mountains and the rugged Chihuahuan Desert environment.

The area is located partially within the city limits of Carlsbad, NM. From Lea Street, go west to Standpipe Rd. Turn south and travel 3 miles to the gravel access road. Turn right and travel approximately 0.5 miles to the trailhead and parking area. There are no facilities other than the parking area and trail signs.

Open daily except December 25. Wheelchair accessible.

Summer Hours
(Memorial Day to Labor Day)
8:00 a.m. to 5:00 p.m.
Last tour entry—3:30 p.m.

Winter Hours (after Labor Day)
9:00 a.m. to 5:00 p.m.
Last tour entry—3:30 p.m.

Fees
Ages 13 and up $5.00
Children 7 - 12 $3.00
Children 6 and under free
Group (20+) discount available.