



Desert Feast

by Kevin Mohr

WHEN PEOPLE THINK OF WILD PLANTS AS FOOD, most people do not imagine the Chihuahuan Desert as an abundant or reliable source. Think about it; the desert is full of spiny cactus and thorny shrubs that seem to scream “Don’t touch me!” In reality, that’s their protection against herbivores and their way of saying, “Don’t eat me!” Unbeknownst to most, the Chihuahuan desert that blankets these national parks has several edible plants to have a feast.

Before cowboys with their cattle and agriculture made their mark on the west, American Indians lived in this desert environment. They needed to survive off of what was provided naturally, the native plants and animals. Plants, however, played the predominant role in their diets. Spanish explorers

named one tribe Mescalero Apache, because of the plant that was a staple of their diet, the mescal agave. The Apache would roast the heart of the plant for several days in earthen pits called ring middens. With a flavor similar to yams and squash, the baked mescal was removed from the pit and eaten. However, in order to have this grand feast, they needed the essential ingredient, fire. Not only do the plants provide the food, they can also provide the fuel in which to cook the food. Although, one plant would not make a three course meal, many other plants accompanied the harvest as well.

Before devouring the main dish, American Indians could snack on a few appetizers to get things started. They enjoyed nutmeats and berries from an assortment of plants

found in the desert. Raw Mexican walnuts or perhaps some dried seeds from a Torrey yucca to name a few. Mix those in with some vibrant red Texas madrone berries, a few small, decadent netleaf hackberries, or several delicious red juniper berries and they had a berry, nutty treat!

Forget not the hearty bread. No meal would be complete without it. American Indians made nutritious flour and cakes from grinding up seeds and pods of the mesquite and catclaw acacia shrubs. To sweeten up the final product, today you can add a few jams and jellies from the local vegetation. Prickly pear cacti, with their large, deep purple fruit called tunas, are used to make this finger-lickin’ good jelly. Sometimes referred to as *see DESERT FEAST on p. 3*

Creepy Crawlies of the Chihuahuan Desert



Tarantula
©1977 Trudy Schick

by Kristin Nicole Johnson

A FAMILIAR SIGN AT THE ENTRANCE TO ALL national parks and monuments reads: “No collecting or disturbing of any plants, animals, or minerals.” But wait a minute—any animals? Leave the bears, the bats, and the mountain lions alone, yes, but surely the centipedes, beetles, and spiders are fair game for the stomping!

Well, technically even the smallest and most annoying gnat is protected within the bounds of National Park Service (NPS) areas. The founding mandate of the NPS is to “conserve the scenery and the natural and historic objects and the wildlife therein” in an unimpaired state for the enjoyment of future generations. Thus Carlsbad Caverns and Guadalupe Mountains provide protected habitat for all native wildlife, not just those of the cute and cuddly variety. This means the creepy crawly invertebrate species of the desert are protected, too.

And with good reason—as well as playing an important role in the ecosystem, some of the bugs here are just too cool to overlook! Take the tarantula hawk, for instance. It purportedly boasts the most painful of all insect stings in North America. But don’t worry; as long as you don’t dress up like a tarantula for the day, the large blue-black wasps will avoid you in their flight over the desert landscape. The female tarantula hawks are seeking tarantula burrows, hoping to lure out tarantulas they can use as hosts for their eggs. The battle between the two can be quite long, but the tarantula hawk is usually the victor due to the paralyzing sting she inflicts upon her opponent. She will then drag her prize back to a pre-dug burrow, lay her eggs in the still-living tarantula, and cover the den back up again. When the eggs hatch into larvae, the defeated tarantula will be their first meal.

Another icon of the Southwest is the giant desert centipede. It is an arthropod you don’t want to mess around with. It can reach lengths of 6-8 inches, has sharp, poisonous claws capable of lacerating and inflaming *see CREEPY CRAWLERS on p. 3*

Surfing the Guadalupe: The Story of an Ancient Sea

by William Leggett

To walk on the Earth is to walk on a living past, on the open pages of history.
—Linda Hogan, in *Dwellings: A Spiritual History of the Living World*

SOMEONE ONCE ASKED IF THE MOUNTAINS OF the southwest were once islands and the broad valleys stretching between them the ancient sea floor. It’s not difficult to imagine this, as the isolated ranges truly resemble an ancient archipelago now laid bare in the absence of some long departed sea. This, however is not the case. The basin

and range topography of west Texas and southern New Mexico is actually the result of tectonic upheaval as the southwestern margin of North America slowly expands and breaks apart. Approximately 30 million years ago, the compression and uplift which raised the Rocky Mountains ended. In the absence of this pressure, the crust gradually began to relax, resulting in the formation of deep cracks in the Earth’s crust. These cracks, or faults, allowed the crust to settle as it responded to the slow stretching of the continent. As some portions of the crust sank along the faults, others were pushed up, causing mountains to rise and valleys to

form between them. The result is a topography where isolated ranges stretch between deep basins, filled with the debris eroded off the rising peaks. This process has been the dominant force of landscape formation in the southwest for millions of years.

There is a place, however, where the basin is the floor of an ancient sea and the mountains rising above are the edge of a long extinct coastline. This place, perhaps the only place in the world where an entire fossilized seascape has been resurrected, is the Guadalupe Mountains. *see SURFING the GUADALUPES on p. 7*

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NPS Photo/Peter Jones

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NPS Photo/Nick Hristov

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NPS Photo/Dave Bieri

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Telephone and Web Directory

Official National Park Service sites include .gov in their web address.

Carlsbad Caverns National Park

3225 National Parks Highway
Carlsbad, NM 88220
575-785-2232
www.nps.gov/cave

Guadalupe Mountains National Park

400 Pine Canyon Dr.
Salt Flat, TX 79847
915-828-3251
www.nps.gov/gumo

Carlsbad Caverns-Guadalupe Mountains Association

Operates both parks' bookstores. Books may also be purchased by mail or online.
P.O. Box 1417
Carlsbad, NM 88221
575-785-2484
575-785-2318 FAX
www.ccgma.org

Food, Lodging and Camping

Carlsbad Chamber of Commerce

575-887-6516
www.carlsbadchamber.com

Van Horn Texas Visitors Bureau

432-283-2682
www.vanhornadvocate.com/community-adl.shtml

Weather Conditions

Carlsbad Weather Watch
575-885-1848

Road Conditions

New Mexico: 800-432-4269
Texas: 800-452-9292

Emergency: Call 911

GPS Coordinates

Carlsbad Caverns NP Visitor Center

Coordinate System: Lat/Long
Datum: WGS 1984
Latitude: 32.174212° N
Longitude: 104.445855° W

Guadalupe Mountains NP Visitor Center

Coordinate System: Lat/Long
Datum: WGS 1984
Latitude: 31.89370° N
Longitude: 104.82214° W

Greetings

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 decorated chambers. Guadalupe Mountains National Park protects one of the world's best examples of a fossilized reef. Both parks are located within the Chihuahuan Desert, a fascinating place to explore desert life.

Spring and summer bring warmer temperatures and an increase in animal activity ranging from the graceful flight of two-tailed tiger swallowtails to the mesmerizing soaring of turkey vultures. Flowers adorn roadsides after the briefest of rains and the air resonates with birdsong. At Carlsbad Caverns, the most famous return visitors would be the Brazilian free-tail bats. Batflight programs begin in mid-May and typically run through mid-October. Ask a ranger for the program time.

Park staff are here to help make your visit a truly memorable event. They will be happy to help you plan your visit and provide information. 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 (8,749').

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.

Sincerely,

John C. Benjamin
Superintendent
Carlsbad Caverns NP

John V. Lujan
Superintendent
Guadalupe Mts. NP

Volunteerism Makes a Difference

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, roving interpretation, patrolling surface and cave trails, to trail maintenance, research, cave restoration, and more. To become a volunteer contact:

Carlsbad Caverns National Park

Rachel Zimmer
575-785-3130

Guadalupe Mountains National Park

Craig Tanner
915-828-3251 ext. 112

Junior and Senior Ranger Programs

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 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, but donations are always welcome.

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. Many of the activities can be completed at the Headquarters Visitor Center located at Pine Springs. 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, but donations are always welcome.

Senior Ranger programs are a new development, currently available at limited locations, aimed at an audience that enjoys a challenge and wants to use an activity book to learn about the park and help plan their visit. A Senior Ranger program is available at Guadalupe Mountains National Park.

Senior Ranger books are available at the Headquarters Visitor Center at Pine Springs for anyone 13 years and older. Activities include visiting sites, learning about the park's history, geology, flora and fauna. Upon completion, participants earn a patch and certificate.

Traveling with a Pet?

ON A WARM DAY THE TEMPERATURE INSIDE A CAR CAN KILL a pet. Do not leave your pets unattended.

At Carlsbad Caverns National Park, pets are not permitted in the cave or at bat flight programs. During the day, your pet may be cared for at the kennel for a small fee. A citation will be issued if animals are left in vehicles when ambient air temperatures are 70° Fahrenheit (21° Celsius) or higher.

At Guadalupe Mountains National Park, pets are allowed only on the Pinery trail while on leash, but are not allowed on other trails, in the backcountry, in buildings or at evening programs; they are permitted in the Pine Springs and Dog Canyon campgrounds. In any national park, your pet must be physically restrained at all times.

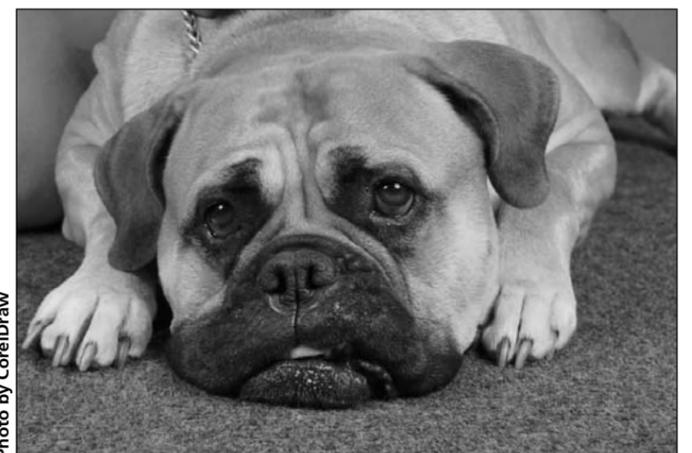
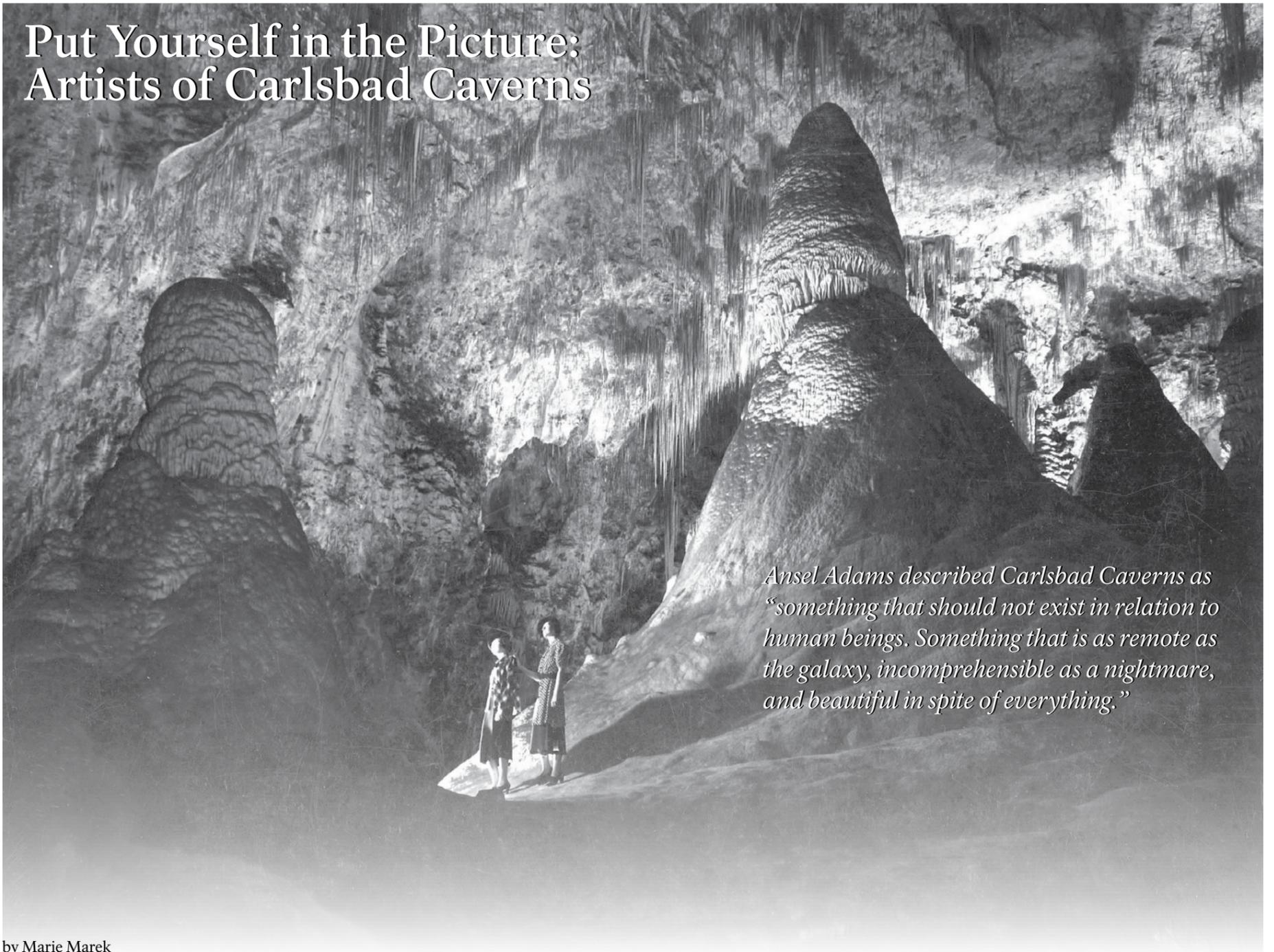


Photo by CoreiDraw

Put Yourself in the Picture: Artists of Carlsbad Caverns



Ansel Adams described Carlsbad Caverns as “something that should not exist in relation to human beings. Something that is as remote as the galaxy, incomprehensible as a nightmare, and beautiful in spite of everything.”

by Marie Marek

IT'S A HIT! WHO WOULD HAVE THOUGHT THAT the simple image of a park ranger holding a lantern in the cave would be so near and dear to the hearts of visitors to Carlsbad Caverns? Maybe because in the blink of an eye they can become a park ranger—whoosh! The magic happens when children from 2-102 put their face in the cut-out hole where a face should be and the family whips out their camera to capture that moment forever. In that very second, park visitors become part of an elite



club with a huge membership—artists and photographers who have been inspired by our National Parks.

Many artists, amateur and professional, have attempted to photograph the underground wonders hidden in the depths of Carlsbad Caverns. The darkness and the difficulty of capturing these images digitally or on film or canvas have been obstacles to many. Even to Ansel Adams, iconic American landscape photographer, who wrote a letter to friend and fellow photog-

rapher Alfred Stieglitz, asking him to “pray for me” as he tried to capture the caverns on film. Did he succeed or fail?

Visitors can now judge for themselves as they view original photographs by Ansel Adams and other artists at the Visions Underground gallery in the park visitor center. First opened in 2008, the gallery contains over 40 pieces of artwork that reveal artists’ visions of geology, history, and exploration both in the caves and on the desert surface. The park owns many of the pieces and others are on loan. Each year in the fall some of the artwork is rotated off exhibit and new pieces are revealed.

DESERT FEAST continued from p. 1
the desert holly, an algerita’s small red fruit is also made into a sticky jam.

Another good choice of healthy provisions to go along with the main course were vegetables. Many roots, stalks, and flower stems were roasted and eaten by the early inhabitants. Despite their dagger-like appearance, lechuguilla, Torrey yucca, and sotol were good sources of those wholesome vegetables. Additionally, American Indians would have certainly included a serving of fruit from the strawberry’s desert twin, the strawberry hedgehog cactus. And there’s always room for dessert, right? People have made candy out of prickly pear fruit, and by using extracts from the common horehound flower, a plant native to Europe.

Now, as the feast draws to an end, you may need something to quench your thirst. There are many plants that can provide an after dinner drink. For example, as implied by its name, Mormon tea. The name was derived from Utah pioneers that dried the stems to make the tea. If you are a bit under

the weather due to the chilly winter season, you might want a traditional therapeutic drink instead. A majority of the teas made from shrubs like mariola, creosote, and littleleaf sumac, were medicinal in nature to the local people. But if you are looking for something a bit more pungent and strong, then try gray oak coffee. American Indians used the seeds of this tree to brew a coffee-like beverage.

Finally, you need to wash your hands and do the dishes. If you can find everything else in the plants, why not soap? And it’s quite obvious by their names, the soap tree yucca and the western soapberry. American Indians developed soap from these plants in the past, and in some remote areas of Mexico, the process to create the soap continues to this day. So the next time you’re out in the desert, don’t think about the foliage trying to grab, stab, and sting you, but the amount of food, nourishment, and other vital supplies they can actually offer. However, please remember that the flora of the Chihuahuan Desert is protected in the park and is not to be collected or damaged. Bon appétit!

Big Room by Ansel Adams (1936)

The book *Visions Underground—Carlsbad Caverns Through the Artist’s Eye* by artist and caver Lois Manno is a delightful history of artists and photographers at the caverns. It is available at the Caverns Bookstore in the visitor center.

So join the club and channel your inner artist and take those photos of the family with the stunning backdrop of the Rock of Ages or the Temple of the Sun. See if you can meet the challenge and create your own masterpiece at Carlsbad Caverns. Move over Ansel Adams!

CREEPY CRAWLERS continued from
human flesh, and has venomous fangs strong enough to pierce through leather gloves. And if that weren’t enough, the centipede is scary fast. Its thick yellow legs can propel the centipede at speeds as high as two feet per second. They are long-lived creatures, as well. Some centipedes may live for several years.

If you are lucky, maybe you will come across a giant centipede on your visit today; perhaps it will be feasting on a dead bat or lizard. And while centipedes typically seek shelter during the daytime, it is not uncommon to see that occasional fast flash of black and red as they make a mad dash across the visitor center lobby.

Just remember to give the centipede, the tarantula hawk, and all their buggy brethren wide berth. For not only are some invertebrates dangerous, they are also federally protected within park bounds. The Guadalupe



Tiger Beetle of the Guadalupe Mountains is even considered a species of concern by the US Fish and Wildlife Service. Threatened and endangered species listings are just now starting to include invertebrates around the world, so it is only a matter of time before the overlooked critters crawling beneath the prickly pear are given more of the attention and respect they deserve.

Carlsbad Caverns Cave Tours

Summer Hours

(May 28 to September 6)

Natural Entrance	8:30 - 3:30
Big Room	8:30 - 5:00
Visitor Center	8:00 - 7:00

Spring, Fall & Winter Hours

Natural Entrance	8:30 - 2:00
Big Room	8:30 - 3:30
Visitor Center	8:00 - 5:00

Entrance Fees

Adults—age 16 and older\$6.00
Children—15 and youngerfree
plus Audio Guide\$3.00

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

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.
- 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, food or drinks into the cave.
- Never throw coins or other objects into the pools.

Photography

Photography is permitted on most tours; however, please use good etiquette. Warn those around you before you flash, keep tripods on the trail, and do not use the rocks as your personal tripod. Video cameras are permitted on the Big Room, Natural Entrance, and King's Palace tours. Please use caution and do not use the ultra-bright lights available on some cameras. Photography is **not** allowed at the Bat Flight Program offered from mid-May to mid-October.



NPS Photo/Peter Jones

NATURAL ENTRANCE SELF-GUIDED ROUTE

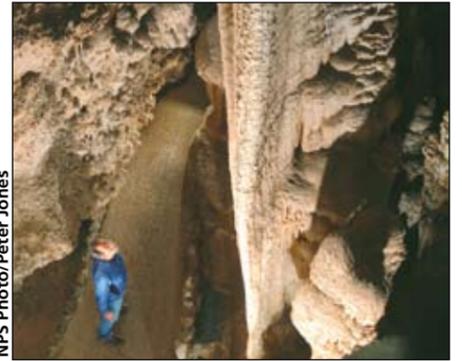
Length: 1.25 miles, 1 hour
Fee: Entrance Fee
This hike is similar to walking into a steep canyon (a descent of about 800 feet in one mile). It is recommended only for those physically fit and healthy; sturdy footwear required. Highlights include the Natural Entrance, Devil's Spring, Whale's Mouth, and Iceberg Rock.



NPS Photo/Peter Jones

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 to Carlsbad Cavern should experience this tour. Highlights include the Lion's Tail, Hall of Giants, Bottomless Pit, and Rock of Ages. This trail can be navigated by wheelchairs, with assistance. The park does not provide wheelchairs. This trail can also be accessed after hiking the 1.25-mile Natural Entrance Self-Guided Route.



NPS Photo/Peter Jones

KING'S PALACE GUIDED TOUR

Length: 1 mile, 1.5 hours
Fee: Entrance Fee and \$8.00 Tour Ticket (Half price for children and Senior Pass cardholders)
Tours depart from the Underground Rest Area. Tickets may be purchased at the visitor center; however, reservations are recommended. You will visit four highly decorated chambers: King's Palace, Papoose Room, Queen's Chamber and Green Lake Room. The tour guide will turn out the lights for a blackout experience. The trail is paved; however, there is a steep hill that you must walk down and then back up.



NPS Photo/Peter Jones

LEFT HAND TUNNEL

Fee: Entrance Fee and \$7.00 Tour Ticket (Half price for children and Senior Pass cardholders)
On this lantern-lit tour your guide will highlight cavern history, formations, cave pools and Permian Age fossils. Moderately difficult on dirt trail and uneven ground. Be aware that the dirt trail winds over small uneven or slippery slopes and careful footing is required to avoid cavern pools and fragile formations. Lanterns are provided. Tour departs from the Underground Rest Area.



NPS Photo/Peter Jones

LOWER CAVE

Fee: Entrance Fee and \$20.00 Tour Ticket (Half price for children and Senior Pass cardholders)
This moderately strenuous tour begins with a ranger-supervised descent down a 10-foot flowstone slope using a knotted rope, followed by a 50-foot series of three ladders. Bring gloves, four new AA alkaline batteries per person and optional kneepads. The park provides helmets and headlamps. Tour departs from the Underground Rest Area. You will see cave pools and beautiful formations.



NPS Photo/Dale Pate

SLAUGHTER CANYON CAVE

Fee: \$15.00 Tour Ticket (Half price for children and Senior Pass cardholders)
This strenuous tour is through a well-decorated backcountry cave. It is mandatory for each person to bring a minimum of a heavy duty two C-cell battery flashlight with fresh batteries. An additional headlamp is also recommended. Penlights are not sufficient. The route is slippery, muddy and may require an ascent of a 15-foot slope using a knotted rope.



NPS Photo/David Harris

HALL OF THE WHITE GIANT

Fee: Entrance Fee and \$20.00 Tour Ticket (Half price for children and Senior Pass cardholders)
This is a strenuous, challenging tour to a remote chamber in Carlsbad Cavern. You will be required to crawl long distances, squeeze through tight crevices and climb up slippery passages. Bring gloves, kneepads and four new AA alkaline batteries per person. We provide helmets and headlamps. Tour departs from the Underground Rest Area.



NPS Photo/Peter Jones

SPIDER CAVE

Fee: \$20.00 Tour Ticket (Half price for children and Senior Pass cardholders)
On this strenuous tour you can expect tight crawls, canyon-like passages and bizarre formations. Bring gloves, kneepads and four new AA alkaline batteries per person. The park provides helmets and headlamps. The tour departs from the visitor center for a short drive and then a short hike to the cave.



NPS Photo/Dale Smith

Do not drive to the visitor center for this cave tour.

Allow plenty of time to drive to Slaughter Canyon and 45 minutes for the steep and strenuous half-mile hike to the cave entrance. Attempt this hike only if you are in good health.

Carry water—weather may be very hot in summer and very cold in winter. Stay on the trail and wear sturdy hiking shoes. *Tours depart from the cave entrance at the scheduled time.*

53RD ANNUAL BATFLIGHT BREAKFAST

SATURDAY, JULY 17

5:00 A.M. TO 7:00 A.M.

See thousands of bats re-enter the cave after a night of feeding while you eat breakfast. Check our website (www.nps.gov/cave) for breakfast cost and schedule of free programs.

For Reservations call 877-444-6777

Tour	Trail Surface	Offered	Departure Time	Adult Fee	Age Limit	Tour Length	Group Size
King's Palace	Paved Trail; 80' hill must be climbed on return trip	Daily	Summer (5/28 - 8/15) 10,11,12,2, & 3 p.m. Spring, Fall, Winter 10 & 2	Adults \$8 Children (4-15), Senior Pass holders \$4 A General Admission Ticket is also required.	4	1.5 hours	55
Left Hand Tunnel	Uneven dirt trail and slippery slopes	Daily	9:00 a.m.	\$7.00 and General Admission Ticket (\$3.50 ages 6-15, Senior Pass holders)	6	2 hours	15
Lower Cave	Must negotiate fifty feet of ladders, variable dirt trails, might get dirty.	Monday through Friday	1:00 p.m.	\$20.00 and General Admission Ticket (\$10.00 ages 12-15, Senior Pass holders)	12	3 hours	12
Slaughter Canyon Cave	Strenuous climb required to reach cave entrance. Trail in cave is slippery, uneven and rocky.	Daily in Summer (5/28 - 8/15) Saturday and Sunday (rest of year)	10:00 a.m.	\$15.00 (\$7.50 ages 8-15, Senior Pass holders)	8	2- 2.5 hours	25
Wild Caving—kneepads required							
Hall of the White Giant	Climbing and crawling, tight squeezes, drop-offs, will get dirty	Saturday	1:00 p.m.	\$20.00 and General Admission Ticket (\$10.00 ages 12-15, Senior Pass holders)	12	4 hours	8
Spider Cave	Climbing and crawling, tight squeezes, drop-offs, will get dirty	Sunday	1:00 p.m.	\$20.00 (\$10.00 ages 12-15, Senior Pass holders)	12	4 hours	8

Surface 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 most vehicles except trailers and motor homes. 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 8:00 a.m. to 4:30 p.m. mid-October to mid-May. These hours are subject to change.

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 62/180, then 2.5 miles west on County Road 418. 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 (SUMMER ONLY)

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. Cameras are **not allowed**. The lights and high frequency sounds made by the cameras disturb the bats. This rule is strictly enforced.



NIGHT SKY WATCHING

Full Moon Walk
March 27, 7:00 P.M. to 9:00 P.M.

After the batflight, join park rangers for an evening of star gazing and talks on the animals and insects that inhabit the night. Telescopes provided, bring a flashlight.

June 12, 8:30 P.M. to 11:00 P.M.
July 10, 8:30 P.M. to 11:00 P.M.
August 14, 8:30 P.M. to 11:00 P.M.
September 11, 7:30 P.M. to 10:00 P.M.
October 9, 6:30 P.M. to 10:00 P.M.

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



ANNUAL PASS

The America the Beautiful—National Parks & Federal Recreational Annual Pass replaces the Golden Eagle Passport, the National Parks Pass, and the National Parks Pass with Golden Eagle Sticker. The annual pass is replaced each year. A federal lands photo contest is held each year, with the winning image featured on the subsequent year's annual pass. Information on the current contest for the 2011 annual pass image can be found at www.sharetheexperience.org.

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.



SENIOR PASS

The new Senior Pass replaces the Golden Age Passport. Golden Age Passports will continue to be honored.

The Senior Pass sells for \$10.00 and is good for life. Any 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.

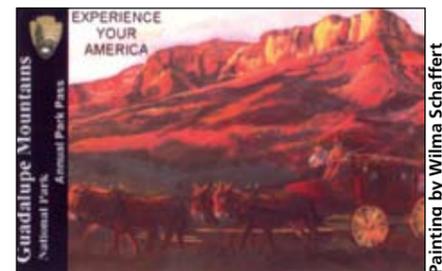


ACCESS PASS

The new Access Pass replaces the Golden Access Passport. Existing Golden Access Passports will continue to be honored.

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 that severely limits one or more major life activities.

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 regional visitors who plan on visiting the park more than once a year, but may not visit other federal fee 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.

Painting by Wilma Schaffert

Guadalupe Mountains National Park

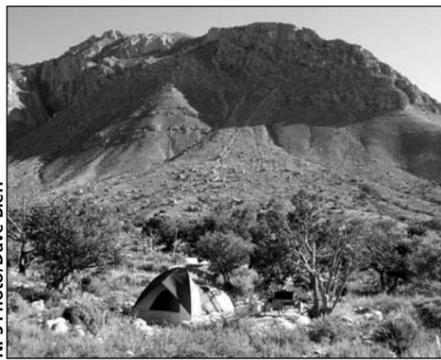


Entrance Fee \$5.00/person (16 & older)
Free for Senior, Access and Annual Pass
cardholders

NPS Photo/Michael Haynie



NPS Photo/Dave Bieri



NPS Photo/Dave Bieri



NPS Photo

SERVICES

Facilities and services within and near Guadalupe Mountains National Park are extremely limited. The nearest gas stations are 32 miles west or 35 miles east. There is no campstore; bring everything you need with you.

INFORMATION & EXHIBITS

Headquarters Visitor Center

Elevation 5,730'. On Highway 62/180, 55 miles southwest of Carlsbad and 110 miles east of El Paso. Open every day except Christmas. Open Memorial Day to Labor Day 8:00 a.m. to 6:00 p.m. (Mountain Time Zone); after Labor Day, 8:00 a.m. to 4:30 p.m. Information, natural history museum, introductory slide program.

Frijole Ranch History Museum

The ranch house features exhibits describing historic and current use of the Guadalupe. Grounds include a picnic area near a spring shaded by large oak trees. Staffed intermittently.

McKittrick Canyon

Highway entrance gate is open 8:00 a.m. to 4:30 p.m. Mountain Standard Time. During daylight savings time, hours are expanded 8:00 a.m. to 6:00 p.m. Restrooms, outdoor exhibits, slide program, picnic tables.

Hike Safely...

- There is no water available along park trails, so be sure to bring plenty with you. One gallon per person per day is recommended.
- Trails are rocky—wear sturdy shoes.
- Carry a trail map.
- Pack warm clothing and rain gear; sudden weather changes are common.

Protect the Park...

- Stay on trails; don't cut across switchbacks or create new trails.
- Carry out all trash, including cigarette butts.
- Report any trail hazards to the visitor center.
- Collecting of natural, historic or prehistoric objects is prohibited.

Weather

	Average Temperature (° F)		Average Rainfall
	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	56	0.91
June	88	62	2.18
July	88	64	2.37
Aug	86	63	3.29
Sep	81	58	2.54
Oct	73	50	1.34
Nov	63	41	0.97
Dec	56	33	1.05
Average annual precipitation for Pine Springs (1980-2003)			17.4

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 1858. Trailside exhibits. Pets on leash are allowed on this trail.

McKittrick Canyon Trail

Distance: to Pratt Cabin 4.8 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 miles
Difficulty: Strenuous. Approximately 3,000' elevation gain, steep, rocky path.

Hike to the "Top of Texas" at 8,749' 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 Headquarters 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 group campsites are available for groups of 10-20 people. Reservations (for group sites only) can be made by phoning 915-828-3251 up to 60 days 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 110 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 60 days in advance by calling 915-828-3251.

BACKPACKING

Eighty-five miles of trails lead through forests, canyons, and desert. A free permit is required if you plan to spend a night in the backcountry. Permits are issued at the Headquarters 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.

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

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. Topographic maps, hikers' guides, and information can be found at the Headquarters Visitor Center and the Dog Canyon Ranger Station.

Other Popular Hikes...

Trailhead	Trail	Distance Roundtrip	Description
Pine Springs	Devil's Hall Trail	4.2 miles	Moderate. Rocky hike in Pine Spring Canyon to the Hikers' 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.
	The Bowl	8.5 miles	Strenuous. The Bowl shelters a highcountry conifer forest. Recommended route: Tejas Trail to Pine Top, Bowl Trail to Hunter Peak, Bear Canyon Trail, Frijole Trail back to campground. Trail climbs 2,500'. Bear Canyon Trail is very rocky and extremely steep.
	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: El Capitan Trail, Salt Basin Overlook, and return to Pine Springs on the El Capitan Trail.
Frijole Ranch	Manzanita Spring	.4 miles	Easy. Path is paved and wheelchair accessible. Hike to a small pond that serves as a desert oasis. Dragonflies, butterflies, and birds are active here in the warmer months. During winter, bluebirds frequent the area. Opportunities for chancing upon other wildlife are higher here as well.
	Smith Spring Trail (entire loop)	2.3 miles	Moderate. Look for birds, deer and elk as you pass Manzanita Spring on the way to the shady oasis of Smith Spring. Trees around Smith Spring include madrones, maples, oaks, chokecherry, ponderosa pines and others.
McKittrick Canyon	McKittrick Nature Loop	0.9 miles	Moderate. Climb the foothills and learn about the natural history of the Chihuahuan Desert. Trailside exhibits.
	Permian 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 ridgetop. Trail climbs 2,000'.
Dog Canyon	Indian Meadow Nature Loop	0.6 miles	Easy. A guide pamphlet describes ecology and geology.
	Marcus Overlook	4.6 miles	Moderate. Follow the Bush Mountain Trail to the ridgetop for a view into West Dog Canyon. Trail climbs 800'.
	Lost Peak	6.4 miles	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 hitches. Trail climbs 1,500'.

SURFING the GUADALUPES cont. from p. 1
 Approximately 265 to 260 million years ago, a vast tropical sea stretched across what is now west Texas and southeastern New Mexico. Our planet looked very different then. All of the continents were joined together to form Pangea, a supercontinent that stretched from pole to pole. The portion of Pangea which would later split off to become North America rested just north of the equator on the west-central side of the supercontinent. Vast mountain ranges marked the stretches where the ancestral continents had sutured together. A deep depression formed north of the mountains where North and South America had collided. This depression allowed the ocean to flood in from the west, forming an inland sea called the Permian Basin. This basin was divided into three smaller parts. The westernmost of these, the Delaware Basin was characterized by warm, clear, tropical waters, providing the perfect setting for the formation of one of the most extensive barrier reef systems the Earth has ever known.

With the exception of a few small gaps, the Capitan Reef formed the entire perimeter of the Delaware Basin and hosted a rich diversity of ancient life forms including horn-shaped corals, twig-like and fan-shaped bryozoans, and fields of sea lilies. However, unlike modern reefs, which are dominated by corals, the Capitan was built primarily from sponges and thick mats of algae. Over time, the reef built up and then outward into the basin, forming a steep undersea escarpment. Outboard of the escarpment lay a deep basin, submerged beneath 2500 feet of water. In the sunlight-rich, warm waters just below the surface, microscopic, single-celled plants called phytoplankton thrived. Today these organisms account for over 90% of the biomass in the Earth's oceans. In the oceans surrounding Pangea, and in the waters of the Delaware Sea it was no different. Over the course of millions of years,

as these organisms died, they settled on the seafloor. However, due to oxygen-poor conditions in the depths of the Delaware Basin, their organic material was preserved rather than oxidized. As a result, thousands of feet of black, organic-rich mud layers accumulated over the course of five million years until changing conditions caused the seas to recede.

At the end of an epoch that geologists refer to as the Guadalupian, the channel which allowed seawater to flow into the Delaware Basin closed. Without a constant supply of seawater, the basin began to dry up. It did not, however, dry up all at once. Monsoonal climate conditions on the equatorial west coast of Pangea provided abundant seasonal rainfall, filling the basin with runoff from the surrounding region. However, during the remainder of each year, arid conditions allowed evaporation to take over. The resulting annual fluctuations between flooding and evaporation caused alternating deposition of carbonate mud and gypsum salt layers. Over the course of hundreds of thousands of years these sediments filled in the Delaware Basin, burying the reef and adjacent seascapes.

For over a quarter of a billion years the Capitan Reef and Delaware Basin lay buried beneath the planet's surface. Heat rising from the Earth's interior baked the organic-rich mud layers in the basin's depths into petroleum which then percolated up through the porous rocks of the Capitan Reef to collect within massive underground reservoirs along the ancient coastline. These reservoirs now comprise one of the richest petroleum deposits on Earth and serve as the primary source of oil in the Permian Basin.

On the northern edge of the ancient Delaware Basin, uplift associated with basin and range faulting over the last 20 million years caused the once buried coastline to be raised

several thousand feet above sea level. Rapid erosion of overlying salt-rich layers allowed the emergence of the ancient reef and the undersea escarpment which once loomed over the basin's depths. This escarpment is visible now as the southeastern slope of the Guadalupe Mountains.

To those who have walked the massive halls of Carlsbad Caverns, there is little doubt as to why such a magnificent feature deserves the distinction of being a national park. However, to visitors of Guadalupe Mountains National Park the answer is not always so evident. Certainly it becomes more clear after standing beneath the towering walls of McKittrick Canyon or taking in the 100+ mile views visible from the top of Guadalupe Peak. The ultimate answer, however, is that there is nowhere else on Earth where the fossilized remains of an ancient barrier reef and its adjacent seascapes are so beautifully exposed and completely preserved. There is nowhere else on Earth where one can stand on the floor of an ancient sea and look up at the continental shelf, preserved as it was over 260 million years ago.

As you stand outside the visitor center at Pine Springs, look up and imagine over 1500 feet of water rising above your head. As you stand there squinting in the bright light of the desert sun, imagine standing on the Delaware Basin seafloor in the cold dark depths below the Capitan Reef. As you look out over the open spaces stretching to the southeast from the visitor's center at Carlsbad Caverns, or from the summit of Guadalupe Peak, imagine looking out from the edge of an ancient sea. When you drive along the highway between the two parks, stop to examine the white gypsum hills just northeast of the state line. Look close and count the zebra-striped layers and ponder that each dark and light pair represents one annual cycle of flood and drought on the ancient plains of a forgotten supercontinent.

The slow evolution of Earth is often difficult to comprehend. Landscapes, which to us are permanent, become temporary and fleeting features on the ever-changing surface of a dynamic planet. In most places, imagining the layout of ancient landscapes and the complex processes that created and destroyed them is nearly impossible. This, however, is not the case in the Guadalupe Mountains. In these mountains, the open pages of one chapter in our planet's history are written in clear, bold print, waiting to be discovered.



From the CCGMA Bookstore

THE CARLSBAD CAVERNS-GUADALUPE Mountains Association (CCGMA) is a private, nonprofit organization whose main objectives are to provide interpretation for the park visitor and to support the purposes and mission of the National Park Service at Carlsbad Caverns National Park, Guadalupe Mountains National Park, and the lands related to them in New Mexico and west Texas since 1957. To date, CCGMA has donated over \$2.7 million to both Carlsbad Caverns and Guadalupe Mountains National Parks. The goals of CCGMA are accomplished through educational programs using a variety of educational media and scientific investigations resulting in a greater appreciation of those resources being conserved for this and future generations. CCGMA has three retail bookstore outlets located at Carlsbad Caverns, the Guadalupe Mountains, and the administration office building in the city of Carlsbad. Plans are underway to open additional outlets in Carlsbad.

Books may also be purchased by mail or online:
 PO Box 1417
 Carlsbad, NM 88221
 (575) 785-2484
 (575) 785-2318 FAX
 www.ccgma.org

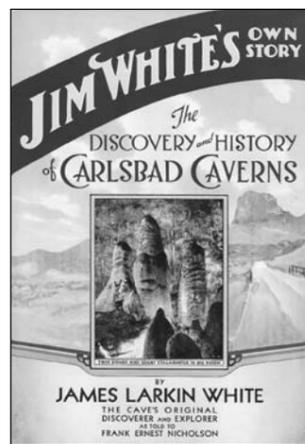
Consider joining CCGMA. As a member you will receive a 15 percent discount on

all purchases. This discount is extended to several cooperating associations of other national parks as well. You will also receive the CCGMA newsletter and the Visitor Guide for Carlsbad Caverns and Guadalupe Mountains National Parks (2 issues a year). In addition to these benefits, you will receive a free dvd on Carlsbad Caverns National Park or Guadalupe Mountains National Park. Most importantly, your contribution helps further our mission of providing aid to these parks.

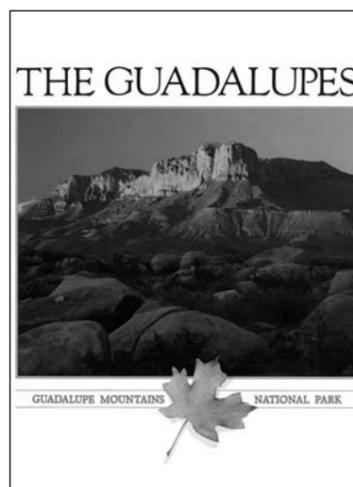
Membership (1 year)	\$25.00
Jim White's Own Story	\$6.95
Spirit of Exploration DVD	\$19.95
The Guadalupes	\$4.00
Stories from Stones	\$7.95

Purchases may be made by credit card or check. Include your address and daytime phone number. If ordering by credit card include the card number, the date of expiration, and the signature of the cardholder. The following cards are accepted: American Express, Discover, MasterCard, and Visa. Make checks payable to CCGMA.

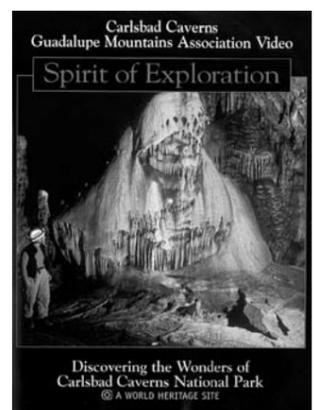
Shipping and handling charges for book orders are as follows:
 \$4.00 for purchases up to \$15.00
 \$5.00 for purchases \$15.01-30.00
 \$6.00 for purchases \$30.01-50.00



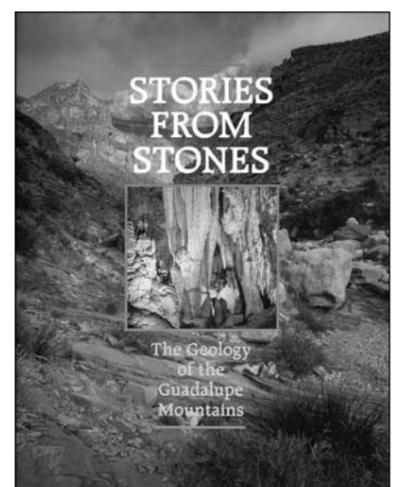
In this book, Jim White tells of his initial discovery and early adventures in Carlsbad Cavern. Numerous historic black and white photos, 32 pages, 6x9.5 inches. \$6.95



This picture book provides a general overview of Guadalupe Mountains National Park history, biodiversity, and geology. Full color photography throughout, 32 pages, 8.5 x 11 in. \$4.00



This DVD allows viewers to see and enjoy the beauty of the main caverns, batflight and rarely visited portions of the park including newly discovered Lechuguilla Cave. 54 minutes \$19.95



This introduction to Guadalupe Mountains' geology has explanatory diagrams and photos. Includes sections on cave and speleothem formation. Color photography, 40 pages, 8.5 x 11 inches. \$7.95

Nearby Attractions

LIVING DESERT ZOO & GARDENS STATE PARK

575-887-5516
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 daily except December 25.
Wheelchair accessible.

Summer Hours

(Memorial Day to Labor Day)

8:00 a.m. to 8:00 p.m.

Last tour entry—6:30 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.	

BRANTLEY LAKE STATE PARK

575-457-2384
Located 12 miles north of Carlsbad on U.S. Highway 285, the campground has 51 RV sites with water and RV electric hookups (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.

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.



NPS Photo

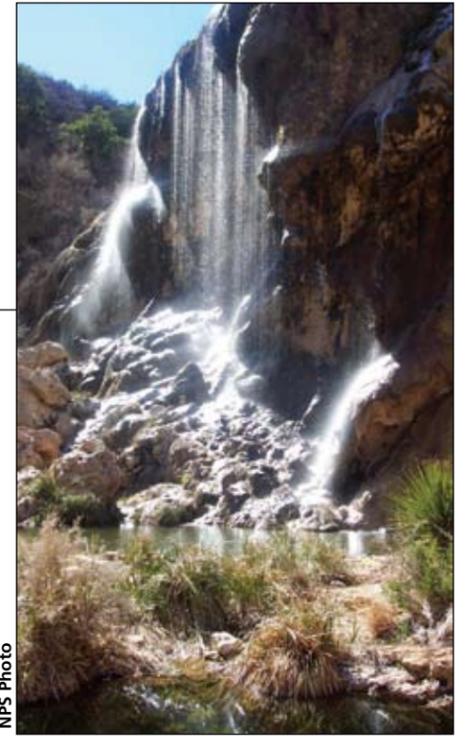
LINCOLN NATIONAL FOREST

575-885-4181
The forest encompasses 1,103,441 acres for hiking, caving, camping, picnicking, horse-back riding, hunting and sightseeing. Maps are available at the Guadalupe Ranger District Office located in the Federal Building, 114 S. Halagueno, Room 159, in Carlsbad.

Sitting Bull Falls (in Lincoln National Forest)

Wheelchair accessible.
Day use only—no camping.
Entrance fee—\$5.00 per vehicle or free with interagency Annual Pass.

Seven miles southwest of State Highway 137 on Forest Route 276, this 130 foot falls is one of the highest in New Mexico. Picnic area, trails and restroom.



NPS Photo

Five Points & Indian Vistas

Eleven miles south of State Highway 137 on Forest Route 540, an improved gravel road. A panoramic view of the desert from the top of the Guadalupe Mountains. Interpretive signs explain natural features.



NPS Photo

