



The Paisano

Big Bend National Park
Rio Grande Wild & Scenic River
Visitor Guide

Volume 35, number 1 2015



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Welcome to Big Bend National Park!

Welcome to Big Bend National Park and the Rio Grande Wild and Scenic River! Over 800,000 acres await your exploration and enjoyment.

From an elevation of less than 1,800 feet along the Rio Grande to nearly 8,000 feet in the Chisos Mountains, Big Bend includes massive canyons, vast desert expanses, forested mountains, and an ever-changing river. Here you can explore one of the last remaining wild corners of the United States.

In fact, early explorers found the Big Bend Region to be so remote, so wild, that they called this area El Desplado—the

uninhabited land. At first glance, the desert appears to be desolate and barren. One might feel alone in the wilderness of Big Bend, but even here you are surrounded by life.

From the forests of the Chisos down to the floor of the desert, over 1,200 types of plants thrive in the park and support ecosystems full of pollinators, herbivores, and other wildlife.

Take a drive along one of Big Bend's roads, or hike a scenic trail, and discover just how much diversity and life there is in the desert!



Superintendent's Message

Welcome to Big Bend, a magnificent corner of this country that we have the privilege to preserve and share. Keeping this balance of preservation and recreation has been a mission of the National Park Service for nearly a century. In 2016, the NPS celebrates its centennial, and we are excited about the great opportunities that surround this momentous anniversary.

As the Park Service launches its Find Your Park campaign, Big Bend is actively increasing its presence in social media and reworking the park's website, as we seek to connect with and create the next generation of National Park Service visitors, supporters, and advocates. Also, we're trying to increase our stewardship of the landscape by conserving water to curb dropping aquifer levels and ensure we can meet the needs of our increasing visitors. Please join us as together we make and celebrate history.

Cindy Ott-Jones
Superintendent Cindy Ott-Jones



Prickly Pear Blossoms



National Park Service
U.S. Department of the Interior

Big Bend National Park
Rio Grande Wild & Scenic River

The National Park Service was established on August 25, 1916, " ... to conserve the scenery and the natural and historic objects and the wildlife... and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Authorized by Congress in 1935, and established in June 1944, Big Bend National Park preserves the most representative example of the Chihuahuan Desert ecosystem in the United States.

Park Mailing Address
Big Bend National ParkPO Box 129
Big Bend National Park, TX 79834

Phone
432-477-2251

Park Websites
www.nps.gov/bibe/
www.nps.gov/rigr/

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The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

EXPERIENCE YOUR AMERICA™

J. JURADO

A Drop in the Desert

Park Ranger Maria Lavender

Thirst-quenching, life-saving, and where wildlife congregates. Found in morning dew, the river’s current or tiny drops from the sky. Whatever you call it, wherever you can find it, water is one of the most important necessities for life, perhaps even more so in arid ecosystems. Even desert-adapted javelina and prickly pear cactus need some water. Sharing this limited supply are the park’s residents and visitors. What should we do to ensure Big Bend’s wildlife and humans can continue to coexist while sharing this life-sustaining resource?

Needless to say, the Chihuahuan Desert is a place of scant rainfall. Average annual precipitation for the park in the last 50 years is a mere 13.7 inches. Only about 1% of the precipitation that falls on the Big Bend’s scorched landscape seeps into the ground, becoming the primary recharge for a network of underground water sources.

Thankfully, the park uses drastically less water than was used in the 1990’s, due to water-saving faucets and appliances, desert-friendly landscaping, and increased

education. These efforts have made a tremendous impact on the lifespan of our dwindling aquifer, but it has recently become apparent that even these conservation measures will not be enough for the long term. While park officials examine new ways to conserve water and explore the use of other wells, water conservation will continue to be a major topic of concern. This is especially true in the Chisos Mountains, an area long known to contain no reliable water sources, requiring all of the water to be pumped from the lower desert’s Oak Spring, below the Window.

Only with preemptive action can the park ensure sufficient water for drinking and park operation, while being prepared for emergencies requiring significant water such as a wildland or structural fire. In response, the superintendant has enacted a Water Shortage Response Plan that affects the operations of the National Park Service, park concessionaires, park residents, and visitors. For this reason, you may notice conservation signs at water spigots, water restrictions at dump stations, and the use of paper and plastic place settings at the Chisos Mountains Lodge restaurant. Visitors are limited to 5 gallons of water per day, and are encouraged to conserve further.

Water consciousness has always been important in this desert landscape. Even the area’s Native Americans and early settlers experienced periods of drought and had to find ways to stretch every drop. As we see an ever-increasing population of park visitors, it is our duty to continue this legacy of water conservation so that Big Bend National Park will always be a place of adventure and enjoyment.

M. SCHULER

Desert Cottontail

Support Your Park!

Become a member and create a lasting relationship with Big Bend National Park.

Do more with your dues!
Purchase a dual annual membership in both Big Bend Natural History Association (BBNHA) and Friends of Big Bend National Park (FBBNP) for only \$100.

Member Benefits
Membership benefits include a 15% discount in BBNHA bookstores; a 10% discount on most seminars; a subscription to the *Big Bend Paisano*; a current Big Bend calendar; discounts at many other association bookstores in other national park sites; and the opportunity to support scientific, educational, and research programs in Big Bend.

Annual Dues

- Individual \$50
- Associate \$100
- Corporate \$200
- Joint Membership \$100

Life Membership

- Individual/Family \$500
- Corporate \$1000
- Benefactor \$2500

Join online at:
www.bigbendbookstore.org

For more information:
432-477-2236

Park Partners

Big Bend Natural History Association

The Big Bend Natural History Association (BBNHA) was established in 1956 as a private, non-profit organization. The Association’s goal is to educate the public and increase understanding and appreciation of the Big Bend area and what it represents in terms of our historical and natural heritage. BBNHA champions the mission of the National Park Service in interpreting the scenic, scientific, and historic values of Big Bend, and encourages research related to those values.

The Association conducts seminars, and publishes, prints, or otherwise provides books, maps, and interpretive materials on the Big Bend region. Proceeds fund exhibits, films, interpretive programs, seminars, museum activities, and research.

www.bigbendbookstore.org

Friends of Big Bend

Founded in 1996, the Friends of Big Bend National Park is a private, non-profit organization with a mission to support, promote, and raise funds for Big Bend National Park in partnership with the National Park Service and other supporters who value the unique qualities of this national resource on the Rio Grande.

The Friends of Big Bend National Park has funded a range of critical projects, including wildlife research programs, the purchase of air and water quality monitoring equipment, and the construction and renovation of the park infrastructure.

Get In On the \$30-Per-Plate Fund-Raiser
Big Bend custom license plates are available for your car, truck, or motorcycle from the state of Texas and most of the proceeds go to preservation and protection of Big Bend National Park.

PO Box 200
Big Bend National Park, Texas 79834
432-477-2242
www.bigbendfriends.org

Volunteers in the Park

Approximately 260 volunteers contribute 50,000 hours of work every year in Big Bend National Park! Whether staffing visitor centers and campgrounds or patrolling backcountry trails, volunteers protect valuable resources and help visitors learn about, and more safely enjoy, Big Bend National Park.

While you might not notice volunteer contributions at first, look around and you'll be surprised how many volunteers you see. It is primarily volunteers who provide visitor information at campgrounds, and at four of the five visitor centers in the park. They keep the campsites, backcountry roads, and trails in pristine condition, assist with maintenance projects, and are considered the eyes and ears of the park. Please thank them for their services if you have the opportunity. For more information, contact the volunteer coordinator at 432-477-1106.

www.nps.gov/volunteer

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J. JURADO

The Fluid Border

In addition to defining the curve that forms the Big Bend, the Rio Grande also serves as the international boundary between the United States and Mexico. Throughout much of its history, the border along the Rio Grande has been fluid, allowing people of both countries to come and go as needed. However, the border is an artificial boundary imposed on the natural environment, and as such is subject to political and social pressures that continue to evolve. Increased border restrictions have led to a number of important changes that affect the international boundary in Big Bend.

Border Safety

- Know where you are at all times, and use common sense. Cell phone service may be limited in areas of the park.
- Keep valuables, including spare change, out of sight and lock your vehicle.
- Avoid travel on well-used but unofficial “social trails.”
- Do not pick up hitchhikers.
- People in distress may ask for food, water, or other assistance. Report the location of the individuals to park staff or Border Patrol as soon as possible. Lack of water is a life-threatening emergency in the desert.

- Report suspicious behavior to park staff or the Border Patrol. Do not contact suspicious persons.
- Ask at the visitor center about areas where you may have concerns about traveling.

Border Merchants

Near the border, you may encounter small "souvenir stands" and Mexican Nationals may attempt to sell you their crafts. Social trails created to place items and refuse left behind contribute to erosion problems and contamination of the watershed. Removal of natural resources from the park or Mexican protected areas causes resource damage. Individuals who place items are subject to arrest for illegal entry and commerce. They will be held until deported through Presidio, 100 miles from Big Bend National Park.

Items purchased illegally will be considered contraband and seized by officers when encountered. Port of Entry staff can answer questions about items that can be *legally* purchased and imported through the Port. By purchasing souvenirs legally you support the citizens of Boquillas, make the river corridor safer for all visitors, and help protect the resources of this ecosystem.

Border Crossing

The Boquillas Crossing Port of Entry is the gateway for visitors who wish to visit Mexico. Proper documentation is required to enter Mexico and re-enter the United States. Information about documentation and Boquillas is available from the staff at the Port of Entry or, visit the U.S. Customs website at: http://getyouhome.gov/html/eng_map.html



M. YARBROUGH

A Member of the Boquillas Taxi Fleet

Visiting Boquillas

- Everyone needs a passport; Mexico requires it for entry, and you must show your passport on return to the U.S.
- Citizens of countries other than the U.S., Mexico, Canada, and Bermuda need additional documentation (Check with Port of Entry staff).
- The Port of Entry is closed two days per week. Hours and days of operation are limited and subject to change. Check at park visitor centers for the current Port of Entry operations schedule.
- There are fees in Mexico for the ferry and transportation into the village.
- There are specific regulations regarding what you may take with you, and what you may bring back.
- All persons are subject to search both in- and outbound from the Port of Entry.

Protecting Yourself and the Park

Big Bend may be wild and unfamiliar country, yet it need not be dangerous. Whether hiking the high country, floating the Rio Grande, observing wildlife, or driving the scenic roads, let safety be your constant companion. By giving forethought to your actions you can have a safe, exciting, and rewarding experience in Big Bend National Park. Spend a moment reviewing these common safety considerations and resource protection guidelines.

Collecting

It is the mission of the National Park Service to preserve all natural and cultural resources unimpaired for future generations. Taking crystals or arrowheads, or collecting plants or animals robs everyone of this heritage—once something is stolen, it cannot be replaced.

Please, do not destroy, deface, injure, dig, collect, or otherwise disturb park resources including plants or animals (dead or alive), fossils, rocks, or artifacts. It is a violation to possess park resources. Please, take only pictures, and leave only footprints.

Driving

Drive within the speed limit (maximum of 45mph in most areas), and watch for wildlife grazing along the roadsides, especially at night. Park roads have limited shoulders and some are steep and winding and require extra caution. Remember, too, you share the road with bicyclists and pedestrians. Pull off the road to take pictures—do not stop or pause in roadways. Please, slow down...and enjoy!

Drones/Unmanned Aircraft

Launching, landing, or operating an unmanned aircraft is prohibited in Big Bend National Park.

Heat

The dry desert heat quickly uses up the body's water reserves. Carry and drink water—at least 1 gallon per person per day. As you exercise, you lose salt and water (over a quart and a half per hour during arduous exercise). You need both to survive in this extreme environment. Reduce alcohol and caffeine intake—the diuretic effects can result in accelerated loss of body water.

Protect your body—sensitive skin burns easily. Find shade, wear sunscreen, sunglasses, and a brimmed hat. Wear long-sleeves, trousers, and proper shoes.

Hiking

Trails vary from easy and well maintained to strenuous primitive routes. Plan hikes within your ability. Avoid ridges during thunderstorms, and canyons or creek beds when flash flooding is possible. Carry a flashlight and first aid kit, and let someone know where you are going and when you expect to return. If you get hurt or lost, stay in one place to conserve water and energy.

Please keep your children close; don't let them run ahead on trails.

Water Conservation

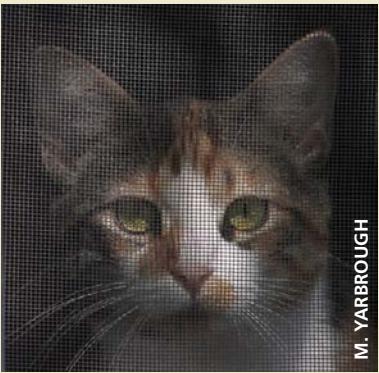
- Visitors are limited to 5 gallons of water per day, and are encouraged to conserve further; please consider bringing some of your water from home.
- Be water-wise when using the restroom; don't let faucets run unnecessarily.
- Wash only what clothing items you need.
- Fill water jugs and bottles at Rio Grande Village whenever it is convenient.
- Consider topping off RV water tanks at your next destination.
- Take brief showers.
- Please report noticeable faucet or water leaks.
- Use backcountry water sources sparingly; leave backcountry springs for wildlife.

Wildlife

Observe Big Bend's wildlife from a distance. Wildlife is protected in the park; it is illegal to harass or harm wildlife. Never feed wild animals. Feeding wild animals damages their health, alters natural behaviors, and exposes them to predators and other dangers. Protect wildlife and your food by storing food and trash securely.

Venomous snakes, scorpions, spiders, and centipedes are active during warm months. Pay attention: check shoes and bedding before use, and use a flashlight at night.

Pets in the Park



M. YARBROUGH

Having a pet with you may limit some of your activities and explorations in the park. Abiding by these pet regulations will ensure a safer, more enjoyable visit for yourselves, other park visitors, your pet, and the park's wildlife.

- Pets are not allowed on trails, off roads, or on the river. Your pet can only go where your car can go.
- Pets need to be on a leash no longer than six feet in length (or in a cage) at all times.
- You may not leave your pet unattended in vehicles if it creates a danger to the animal, or if the animal becomes a public nuisance.
- If you plan to hike, someone must stay behind with the pet, or you will need to make arrangements with a kennel service. There is no kennel service in the park.
- Pet etiquette and park regulations require that you always clean up after your pet and dispose of waste in trash receptacles.

A Natural Immersion



C. BALLOU

The Outside Effect

Park Ranger Mary Collins

Millions of people visit national parks every year. They learn about our nation’s history, enjoy grand scenic views and the unique wildlife that inhabits each area. Hiking, paddling, and camping are some of the activities they seek to participate in.

In a day and age when our work is centered around a computer screen in an office which doesn't involve much physical movement, parks can be a haven, and an oasis of silence where you can escape not only the external distractions, but also turn off the internal “noise.” A study conducted at Harvard Medical School shows that when people spend time outside, they are generally happier, concentrate better, and are naturally more active. Other research shows that participating in outdoor activities promotes cardiovascular fitness, reduces the risk of developing a chronic illness, helps you maintain a healthy weight, and even reduces anxiety and depression.

Big Bend National Park offers a variety of ways to explore the outdoors while exercising the body and mind. Going for a hike in the Chisos Mountains or paddling the Rio Grande will help build muscle, improve stamina, and contribute to overall physical health. Exploring the historic districts or attending a ranger-led program will stimulate your intellectual side. Spending time outside can relax your mind and body, improve your mood and even boost self-esteem. The quiet solitude found in Big Bend offers time to reflect and unwind.

Spending time outside also promotes a direct relationship with our natural world. Building a rapport with nature not only benefits our well-being, but also the continued prosperity of the environment. When we spend time outside, we become more aware of our surroundings and how we should treat nature in order to preserve it for future use. Psychologist Rachel Kaplan said, “Nature matters to people. Big trees and small trees, glistening water, chirping birds, budding bushes, colorful flowers. These are important

ingredients in a good life.” Protecting and preserving nature isn’t just putting trash in trash cans and keeping human food from wild animals. These things are important, but they are just the beginning. Knowing what a park has to offer and what makes it unique stimulates reasons to protect it. After educating ourselves about the irreplaceable qualities of a park, we can help protect it by sharing that information. Teaching others about what makes a place special and how we keep it that way is fundamental to preserving it for future generations.

After your visit to Big Bend is over and you head home, take time to contemplate the activities you participated in. How can you incorporate those activities into your everyday life? Maybe there is a city, state or even a national park nearby where you can spend time outside enjoying nature and building that relationship. Many parks offer volunteer opportunities that can be extremely rewarding. Something as simple as picking up litter while on a walk helps keep the environment clean and healthy for

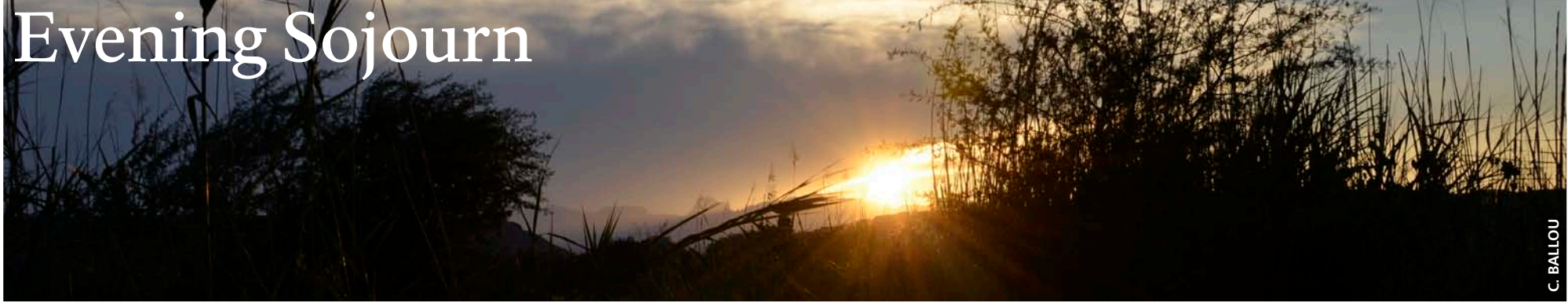
everyone. And once you have established that unique relationship, take time to teach others about your special place and how they, too, can protect it.



C. BALLOU

Boardwalk on the Rio Grande Village Nature Trail

Evening Sojourn



C. BALLOU

The Cusp of Darkness

Park Ranger Gail Abend

The night skies at Big Bend National Park are exquisite. Clear, dry, and dark conditions make Big Bend a favored destination for night sky viewing. But, the time just prior to nightfall—twilight—is also a special time.

The word twilight has entered the modern lexicon in unique ways. If you search for the word on the internet, you may find a reference to a book or movies about vampires. Another reference takes you to an eerie television show that ran from 1959 to 1964. A land of both shadow and substance. . .you are about to cross over into the “Twilight Zone.” The introduction read by Rod Sterling, accompanied by the now iconic music, was meant to evoke a particular emotion. That emotion can be experienced as twilight surrounds you.

The dim light after sunset or before sunrise is a beautiful and contemplative time of day. Unlike daylight with its “in your face” landscape, twilight offers softened, more subdued surroundings; an ambiance of stillness and quiet. Twilight is shadowy without casting a shadow. It is both a time of day and a quality of light. It is a time when objects are silhouetted against the bright sky. It is favored by photographers who call it “sweet light,” and by painters who refer to it as “the blue hour.” The word is often used metaphorically to indicate lessening strength as in “the twilight of his life.”

Twilight begins as the sun sets and lasts roughly an hour and a half—until the sky is finally dark enough to view the thousands of stars visible above Big Bend National Park. Twilight is broken into three divisions. Civil twilight begins right after sunset and lasts 30 minutes. The sky is bright enough to continue outdoor activities without artificial light, and the sky’s canvas is painted in red

scattered light. Following civil twilight is 30 minutes of nautical twilight when the horizon is still visible, the first stars are visible, and sailors are able to navigate at sea. Finally, we enter astronomical twilight, a 30 minute period before true night. Bright constellations and dimmer stars are visible.

During this time the sharp edges of mountains and canyons soften. Due to the activation of the rod-shaped photo receptors in your retina, the green plants such as sotol seem to “pop out,” and become vivid, while colors in the red part of the spectrum seem to disappear. The substance of the landscape softens into shadows. This is a wonderful time to think about the day, perhaps enjoy a brief moment of meditation or contemplation until only blackness surrounds you and Big Bend’s starry night takes the stage.

A wonderful place to enjoy twilight in all its manifestations is the Rio Grande Village

Nature Trail. To the east, the Sierra del Carmen range turns pink and purple with the setting sun, while the water in the beaver pond reflects silhouettes—shadowy figures that disappear into the night.



C. BALLOU

Beaver Pond at Sunset



Timeless Views

Park Ranger Bryan Frohbieter

No trip to Big Bend National Park would be complete without a visit to the Chisos Basin, with its cool temperatures, spectacular views, and picture-perfect sunsets. But few visitors are aware of how long humans have been standing here taking in the scenery; that beneath the pavement near the Basin Visitor Center is one of the best-known archeological sites in the park, a chance discovery that revealed human occupation stretching back nine thousand years.

Before construction of new buildings, roads, or trails, the National Park Service conducts site surveys to determine if natural or cultural resources will be affected. When the Chisos Basin Visitor Center was built in 1988, the archeological survey found previous disturbance dating from the 1930’s CCC camp and later park developments, and otherwise, only scattered lithic debitage, rock chips and flakes associated with working stone for tools—insufficient to designate the area as a significant archaeological site, but enough evidence to require monitoring

during later construction projects. Unfortunately, many Basin structures where built on a deposit of bentonitic clay, which tends to swell many times its dry volume when wet, often resulting in cracked foundations and walls, as well as doors and windows that seize. The ranger station rests upon a grade beam supported by concrete piers sunk almost twenty feet into the ground, and is unaffected by the groundswells. The surrounding concrete walkways and patio, however, were being heaved upward by the expansive clay, and it was during the installation of a water diversion drain in front of the building in 1992 that workers encountered several stone-paved hearths and more substantial collections of debitage, prompting park archeologist Tom Alex to halt construction and investigate.

Working swiftly to avoid delaying the construction schedule, excavations by the archeologist and his team of park staff and volunteers identified eight different hearths, as well as a “living surface” containing a slab metate (a flat stone surface used for grinding food) and fragmentary projectile points. Radiocarbon analysis of charcoal recovered

from the hearths revealed occupations spanning between 6900 BCE and 1830 CE. These dates establish that Native American groups had been visiting the Chisos Basin throughout the park’s prehistory, with the earliest recorded occupation falling within the Late Paleoindian period, a time when the regional climate was undergoing a long-term change from cooler, wetter conditions to the hot, arid environment that now exists. It is possible that the earliest people to enjoy a sunset through the Window saw a dramatically different landscape than the one we see today, with alpine forests of firs, cypress, and pine growing on the slopes of the Chisos Mountains, and receding woodlands of pinyon and juniper on the surrounding lowlands.

Though the excavations were limited in scope, the site contributed greatly to our understanding of the prehistory of Big Bend, and appears to have considerable research potential should future excavations occur. The discovery of a well-stratified archeological site below the Basin developed area also points to the likelihood that other such deposits may be found elsewhere in Chisos Mountains.

Visit the Chisos Basin and discover for yourself why the alluring charm of the Chisos Mountains has been drawing human visitors for thousands of years.



Archeological Dig



No Crumbs Are The Best Crumbs

Park Ranger Jennifer Parsons

At a popular restaurant, I witnessed two ducks run through the parking lot after patrons with carry-out containers. While we may enjoy throwing bread crumbs to a few hungry-looking sparrows, it’s less enjoyable to be assailed by flocks of pigeons, geese, or ducks who are accustomed to handouts.

In 2013, officials in Boulder, Colorado discovered a pile of ten burritos left along a popular cycling and jogging path. Other items included salads, fruit, and bread, all left out for Boulder’s coyote population. This cornucopia exacerbated the situation in Boulder where aggressive confrontations between coyotes and humans were on the increase. When it comes to feeding wildlife, the consequences can range from the mildly annoying to the downright dangerous.

First, wild animals who are accustomed to seeing humans as a source of food will lose their fear of people. While birds and squirrels may simply make nuisances of themselves, larger animals are much more dangerous. The popular saying, “a fed bear is a dead bear,” rings true. Occasionally, bears that see humans as an easy source of food eventually have to be put down when they pose a danger to park guests.

Second, young animals that are raised depending on human food may not acquire the hunting or foraging skills they need to survive when they finally leave their parents. They graduate from being small and adorable to being large, potentially dangerous, and lacking in natural survival skills.

Additionally, people food (including items like orange peels and nut hulls) does not serve a wild animal’s dietary needs. Animals need a balanced diet the same way we do, but their nutritional needs are often very different. They are opportunistic eaters and will go for the easiest and most readily

available food source. It’s easier for us to order a pizza than it is to take the time to make a well-balanced meal and it’s easier for a bear to tear open an unattended backpack that smells of bologna sandwiches and chocolate chip cookies than to forage among the plants for scant berries and other fruits.

Finally, a steady supply of human food will attract more animals than would ordinarily be found in a particular area. This facilitates the spread of disease in a local population and has the potential to kill a large number of animals. It may also attract predators to developed areas. A suburban area that is overrun by deer may soon experience an unwelcome increase in mountain lion sightings.

While enjoying our national parks is a great benefit for visitors from both our country and others, this benefit comes with some responsibilities. Stewardship of wildlife by making sure all edible products are secured and not available for the resident critters is one of the easiest acts visitors can perform.

This simple act can also be taken home and applied to our neighborhoods, which will benefit other wildlife far removed from Big Bend and our other preserved lands.



Warning Sign

What to See and Do

Chisos Basin

A drive to the Chisos Basin is an excellent way to experience the transition between arid desert and cooler mountain habitats. As this scenic, winding road rises over two thousand feet above the desert floor, it offers vistas of the mountain peaks and the erosion-formed basin area.

Within the Chisos Basin area is a visitor center, campground, lodge, restaurant, gift shop, camp store, and miles of hiking trails.

With limited time, walk the Window View Trail for easy access to mountain vistas, and a classic sunset view. If time permits, consider hiking (or backpacking) into the High Chisos to witness the towering forests of Boot Canyon or the unparalleled vistas of the South Rim.

Note: the road into the Basin is not suitable for RVs longer than 24' or trailers longer than 20'.

Rio Grande Village

The drive to Rio Grande Village traverses ancient limestone and has marvelous vistas of the magnificent Sierra del Carmens. Along the way is the oasis at Dugout Wells and a spur road leads to the popular Hot Springs.

Continue the drive to Boquillas Canyon, where a short hike offers excellent views of the Rio Grande as it enters the canyon.

Rio Grande Village has a visitor center, campground, RV hook-ups, camp store, gas station, and picnic area.

Take a stroll (or a short drive) from the store to Daniels Ranch; this is a great area for birding. Picnic tables are near the historic ruins.

The Rio Grande Village Nature Trail crosses a wildlife viewing boardwalk, then gradually climbs the hillside, offering panoramic views of the river, Sierra del Carmens, and Crown Mountain. This is an excellent sunset vista.

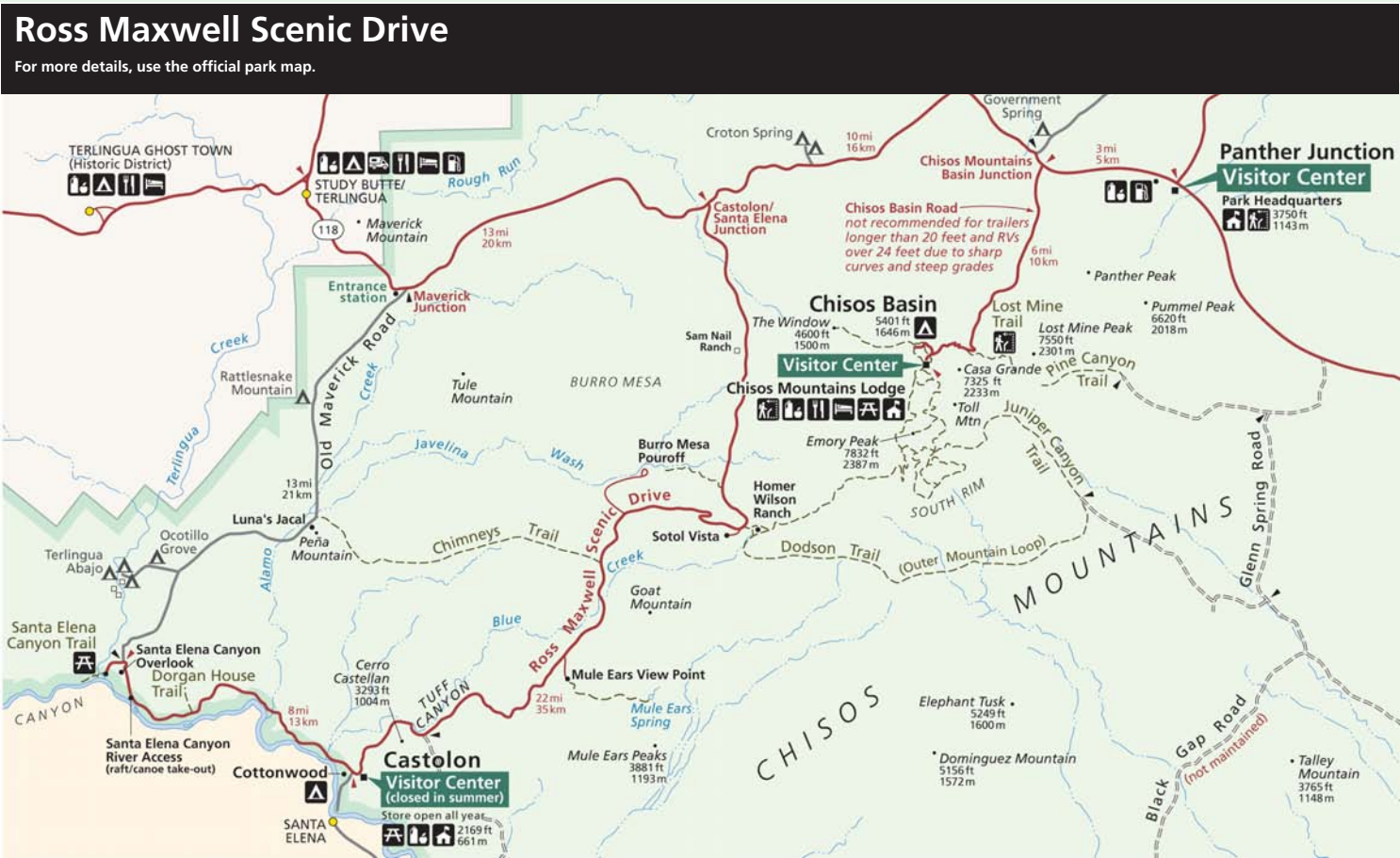
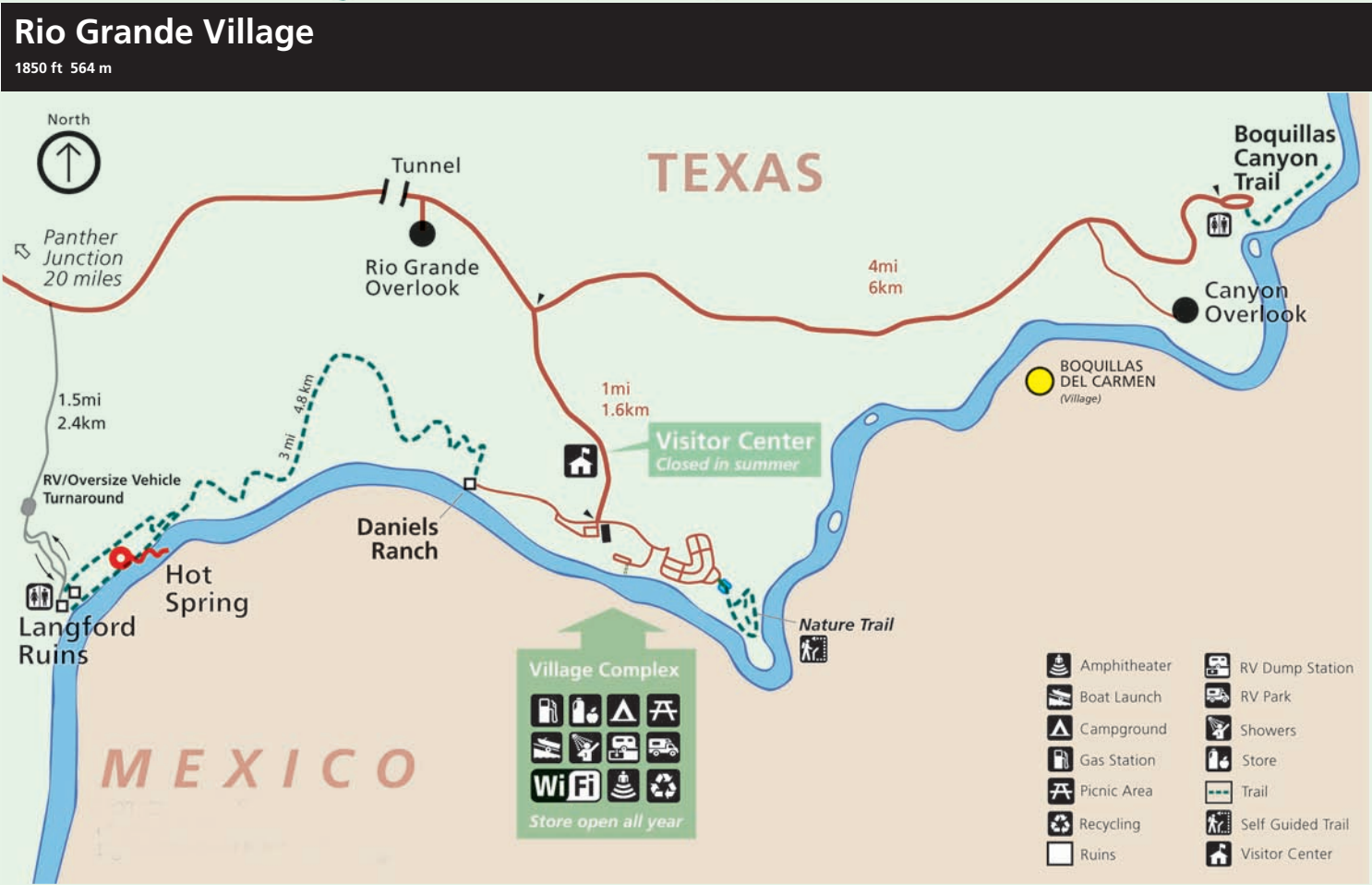
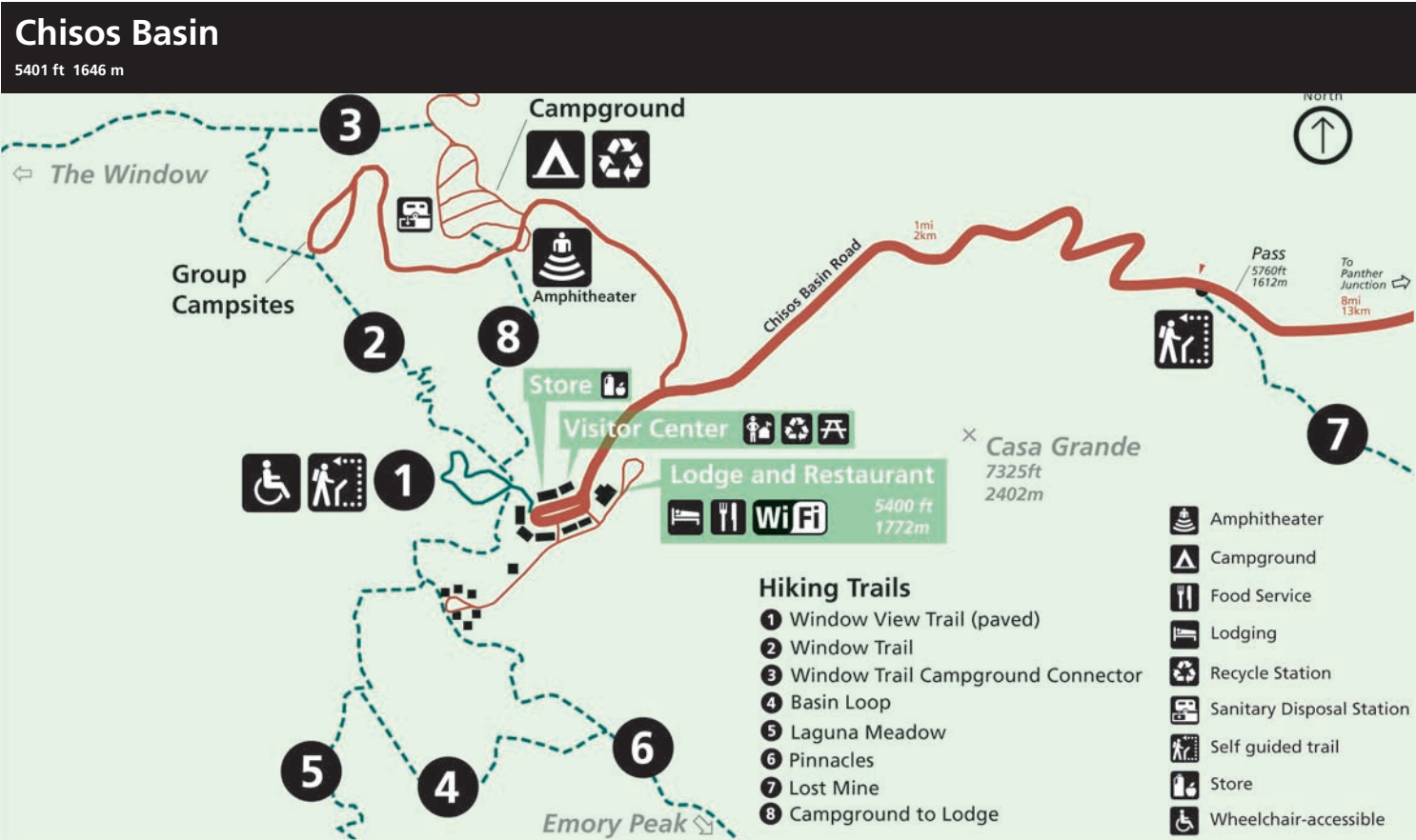
Ross Maxwell Scenic Drive

A trip along the Ross Maxwell Scenic Drive highlights the geologic splendor Big Bend is famous for, and offers many scenic overlooks and exhibits along the way. Sotol Vista, Mule Ears Overlook, and Tuff Canyon are all worthwhile stops.

History is highlighted at Sam Nail Ranch, Homer Wilson (Blue Creek) Ranch, and the Castolon Historic Compound. Castolon has a visitor center, camp store, and nearby is the Cottonwood Campground.

Continue the drive to the magnificent Santa Elena Canyon, where limestone cliffs rise 1,500’ above the Rio Grande. A short trail leads into the canyon.

Return by the same route, or take the gravel Old Maverick Road to the western entrance of the park. This road is usually passable for most vehicles, but may be impassable after heavy rains. Check at a visitor center for current conditions.



Popular Day Hikes

The Chisos Mountains <i>Smoking is prohibited on all trails in the Chisos Mountains.</i>					
Trail	Trailhead Location	Round Trip (mi/km)	Avg Time	Elevation (ft/m)	Description
Basin Loop	Chisos Basin Trailhead (near the Basin Store)	1.8/2.6	1 hour	350/107	Moderate Connects the Laguna Meadow and Pinnacles Trails. Nice views of the Basin area.
Emory Peak	Chisos Basin Trailhead (near the Basin Store)	10.5/17	7 hours	2400/789	Strenuous Trail leads to the highest peak in the park, with excellent views. The end of the trail involves some moderate rock climbing.
Lost Mine 	Basin Road, mile 5 (at the pass)	4.8/7.7	3 hours	1100/335	Moderate Excellent mountain and desert views. For a shorter hike, 1 mile up is a great view to the southeast.
South Rim	Chisos Basin Trailhead (near the Basin Store)	12/19.4 15/24	8 hours 10 hours	2000/656 2000/656	Strenuous Trail leads to the 2000' cliff with incredible views of the desert below. Hike either the southwest rim, or add the northeast and southeast rim trails when open.
Window 	Chisos Basin Trailhead or Basin Campground	5.6/9.0 4.4/7.0	4 hours 3 hours	980/299 500/152	Moderate Descends to the top of the Window pour-off. Great scenery and wildlife viewing. For a shorter hike, start from the Basin Campground (near campsite 51)
Window View 	Chisos Basin Trailhead (near the Basin Store)	0.3/0.5	1/4 hour	0/0	Easy Level, paved, accessible. Great mountain views. Best place in the Basin to catch a sunset through the Window.



C. BALLOU

Window View Trail Sunset

Eastside — Panther Junction and Rio Grande Village					
Trail	Trailhead Location	Round Trip (mi/km)	Avg Time	Elevation (ft/m)	Description
Grapevine Hills Balanced Rock	6.4 miles down the Grapevine Hills Road	2.2/3.5	1 hour	240/73	Easy Follows a sandy wash through a boulder field. A short but steep climb near the end takes you to a large balanced rock. No shade.
Chihuahuan Desert Nature Trail	Dugout Wells	0.5/0.8	1/2 hour	10/3	Easy Loop trail with interpretive signs on desert ecology. Look for javelina tracks and resident birds.
Hot Springs 	End of Hot Springs Road (unpaved narrow road)	0.75/1.2	1/2 hour	0/0	Easy Walk past historic buildings to the riverside hot spring. Enjoy a soak in 105°F water. <i>Hot Spring is subject to flooding during rising river levels.</i>
Boquillas Canyon	End of Boquillas Canyon Road	1.4/2.3	1 hour	40/12	Easy Begins with a short climb, then descends via a sandy path to the river. Ends near a huge sand dune “slide.”
Daniels Ranch to Hot Springs Trail	Daniels Ranch parking area, west of Rio Grande Village	6/10	3 hours	100/31	Moderate Trail from Daniels Ranch to the Hot Springs. Cliff drop-offs prevent access to the river along most of the route. No shade.
Rio Grande Village Nature Trail 	Rio Grande Village, across from campsite 18	0.75/1.2	1 hour	130/40	Easy First 300' leads to a wildlife viewing platform on a pond. Trail then climbs the hillside with views of the river and mountains. Great for birding and sunsets.



J. JURADO

Hot Springs

Westside — Ross Maxwell Scenic Drive					
Trail	Trailhead Location	Round Trip (mi/km)	Avg Time	Elevation (ft/m)	Description
Sam Nail Ranch	Ross Maxwell Scenic Drive, mile 3	0.5/0.8	1/2 hour	10/3	Easy Well-maintained trail leads through the old ranch site. The combination of water and shade makes this an excellent birding location.
Lower Burro Mesa Pour-off	Burro Mesa Spur Road	1.0/1.6	1/2 hour	60/18	Easy Trail enters a dry wash and ends at the bottom of the dramatic Burro Mesa pour-off. A great walk for viewing geological features.
Chimneys	Ross Maxwell Scenic Drive, mile 13	4.8/7.7	2 hours	400/122	Moderate Flat and scenic desert trail to rock formations of an eroded dike. Look for Native American rock art and shelters. No shade.
Mule Ears Spring	Ross Maxwell Scenic Drive, mile 15	3.8/6.1	3 hours	20/6	Moderate Beautiful desert hike to a small spring. Spectacular geology with mountain and desert views.
Tuff Canyon	Ross Maxwell Scenic Drive, mile 17	0.75/1.2	1/2 hour	100/31	Moderate Two trails from the parking lot both provide outstanding balcony overlooks; one of the trails descends to the floor of the canyon.
Santa Elena Canyon	Ross Maxwell Scenic Drive, 8 miles west of Castolon	1.6/2.6	1 hour	80/26	Easy Sandy path crosses Terlingua Creek. Trail switchbacks up to overlook the river before gradually dropping to the river bank. Trail has some steep steps and can be very hot midday.



J. JURADO

View from Chimneys Arch



Birds and Bird Watching

Fishing on the Wing

Park Ranger Jennette Jurado

Spend a morning at the Rio Grande Village Nature Trail and you're likely to be surrounded by fishermen. Not the kind with a rod, reel, and coolers, but instead ones with feathers and beaks. A variety of different types of birds come to this beaver pond and the banks of the Rio Grande to fish these waters, and these able fishermen use a surprising variety of methods to do so.

Kingfishers, in fact, are named for their fishing ability. Both Belted and Green Kingfishers frequent Big Bend, posing prominently on trees or other suitable vantage points close to water. From there they spy fish and dive headlong into the water to catch them. Once underwater, their eyes are closed tight by a third eyelid, so the bird is essentially blindfolded as it catches its prey. Upon return to its perch, the kingfisher repeatedly strikes the fish against the branch to kill it, and will swallow it whole, head first.

Osprey use a similar method: spying a fish from the air and plunging into the water to catch it. In fact, Osprey are the only raptor

in North America known to do so. After a successful catch, Osprey will position the fish, aligning it head first so they are more aerodynamic on the flight back to the nest.

American Coot, Least Grebe, and Mergansers swim underwater to find and catch fish. Serrations on their beaks allow them grasp the fish, despite the slippery scales. Additionally, feet positioned further back on their bodies assist in their ability to swim and maneuver underwater, hunting by sight and seeking out slower fish.

American Bitterns stand among the reeds, stretching their long necks and pointing bills upward to blend in with the vegetation. Their feathers, a mix of brown, black, and white stripes, provide excellent camouflage, which helps these birds avoid detection while waiting for fish to come close enough to catch.

Great Blue Herons fish while wading in shallow waters. They stand absolutely still, patiently waiting for a fish to swim close, then, rapidly strike, catching or impaling the fish with their sharp bills. Alternately, they may probe the muddy shallows with their feet: slowly extending one foot through the

water, using it to rake the bottom and stir up the water. This disturbs the fish, scaring them out of hiding and into the open where they are more easily caught.

One fisherman takes its technique even further: it builds a lure. Green Heron are known to fray the edges of a short stick, then place it in the water. If no fish come to investigate, it will fray the branch another time and try again. If this lure successfully draws in fish for the bird to catch, it is likely to be brought to the next fishing site too. Green Herons have also been known to employ another technique: by spreading their wings on a sunny day and standing still, they create a small piece of shade. Fish sense the cooler water, and swim towards what appears to be a safe hiding spot. Instead of a cool sanctuary, they find a clever hunter.

From tool building to aerial dives, patient stalking to swimming the depths of the pond, birds have a variety of fascinating techniques employed to help them catch their next meal. Come by the pond, sit on a bench and stay for awhile and watch these skilled fishers at work.

Birding Hot Spots

Panther Junction to Rio Grande Village

- Dugout Wells—shady cottonwood trees and a windmill at this desert oasis.
- Rio Grande Village Nature Trail—a boardwalk over the pond is an excellent area for water fowl.
- Daniels Ranch Picnic Area—the cottonwood trees provide excellent shade to both resident and migrant species.

Ross Maxwell Scenic Drive

- Sam Nail Ranch—windmills and large trees attract birds to this historic ruin.
- Blue Creek Trail—a half mile from the Homer Wilson Ranch are the Red Rocks, an area known for hummingbirds.
- Cottonwood Campground—large trees here provide a haven for birds.

Chisos Mountains

- Basin area—many mountain birds can be found around the campground and basin developed areas.
- Boot Canyon—the nesting area of the Colima Warbler and other species.
- South Rim—this 2000' cliff is known for falcons and swifts.

Night Skies

The Fear of Darkness

Park Ranger Dustin Schalue

Many people fear darkness. Darkness is the unknown, and it is easy to fear that which we do not know. However, when we fear the unknown we deny ourselves new experiences and adventures such as star gazing, night hikes, wildlife viewing, or just listening to the sounds of the night.

Several people have a fear of creatures that live in the dark. Maybe you do too. Think about the eerie howls of a pack of coyotes, a bat flying overhead in the night sky, or the eyes of that mountain lion watching you from the darkness. Some of our fears are based on fact: nocturnal animals are adapted to navigating and hunting silently through the dark. Our first instinct might be to run away or kill them; however, with knowledge, some of these fears are eased.

Do you know how many visitors have been killed by coyotes, bats, and mountain lions all together in Big Bend National Park? The answer is none! Of course we should always have a healthy respect for all wildlife, give them space, and remain aware of our surroundings.

In response to fear of the dark, we try to make our environment safer with large bright lights. But does it really make us safer, or do we just think it makes us safer? Think, how much can you see at night while looking towards a security flood light or the headlights of a truck? How much can you see under starlight or moonlight once your eyes have adjusted? Our fear of the dark is actually making us less safe at night by only brightly lighting some areas and creating dark shadows or blind spots in others.

Our fear of the night is directly related to our light pollution. Lights are often seen as a sign of progress, modernization, or wealth, but it also demonstrates a wasteful use of energy and shows off our fear of the night

in the form of light. We try to make our environment more familiar by adding light so the night reminds us of the day. The truth is that the night is different from the day and it should remain that way. It's us who needs to adjust to the night and not the other way around.

What are we losing when we can no longer see the night sky? What has the wildlife lost? Can cities and dark skies coexist? These are questions that need solutions, not just simple answers. Light pollution may seem like an impossible problem to fix; however, with knowledge, experience, and science we can overcome any fear that we have of the dark and reconnect with our natural environment.

Remove the fear of darkness, and an entire new world is opened up: the starlight of our Milky Way Galaxy, the light of our moon, the meteors that burn up in our thin atmosphere after traveling thousands of years, and the creatures of the night that live in our own backyards. So let there be dark!

2015 Celestial Events

- January 3–4—Quadtrantid Meteor Shower
- February—Nasa Spacecraft Dawn Will Encounter Dwarf Planet Ceres
- April 4—Total Lunar Eclipse
- April 22–23—Lyrids Meteor Shower
- May 5–6—Eta Aquarids Meteor Shower
- July 28–29—Delta Aquarids Meteor Shower
- August 12–13—Persieds Meteor Shower
- September 28—Total Lunar Eclipse
- October 8–9—Draconids Meteor Shower
- October 21–22—Orionids Meteor Shower
- November 5–6—Taurids Meteor Shower
- November 17–18—Leonids Meteor Shower
- December 13–14—Geminids Meteor Shower
- December 22–23—Ursids Meteor Shower

Keeping Wildlife Wild



M. GONZALES

Black Bears

The return of black bears to Big Bend is a success story for both bears and the park. Native to the Chisos Mountains, they disappeared from this area by the 1940s. Nearly fifty years later, they began returning from Mexico. Today, wildlife biologists estimate a black bear population of around 15–20 black bears.

A black bear's normal diet consists largely of nuts, fruits, sotol and yucca hearts, but

also includes small mammals, reptiles, and carrion. Bears normally avoid humans, but can become aggressive if they learn to take food from human sources.

The Chisos Basin Campground, High Chisos backpacking sites, and some primitive roadside campsites have bear proof storage lockers for caching edibles. Hard-sided vehicles are also suitable for storing edible items. Dumpsters throughout the park are bear proof as well. A free brochure about black bears is available at all visitor centers.



R. WONITE

Mountain Lions

Solitary and secretive, the mountain lion is Big Bend's top predator, and is vital in maintaining the park's biological diversity. Mountain lions live throughout the park from mountain to desert, and biologists estimate a stable population of about two dozen lions.

Everywhere in Big Bend, you are in the territory of at least one lion. Within their territories, lions help balance herbivores and vegetation. Research shows these large

predators help keep both deer and javelina within the limits of their food resources.

Each year visitors report around 130 lion sightings in Big Bend National Park. Over half are seen along roadways, but encounters also occur along trails. Your best plan of action is to be aware of your surroundings and avoid hiking alone or at dusk and dawn. Also, watch your children closely; never let them run ahead of you. A free brochure about mountain lions is available on the park website.



R. WONITE

Javelinas

For many visitors, seeing a javelina (pronounced hav-uh-LEE-nuh) is a new experience. Also known as collared peccaries, these animals are only found in the U.S. in Texas, New Mexico, and Arizona.

They are covered with black, bristly hairs and weigh between 40–60 lbs. They usually travel in groups called bands that consist of 10–25 individuals. Peccaries have a highly developed sense of smell, but poor vision.

Physically, they resemble pigs, but are not closely related. A javelina's diet includes prickly pear cactus, grasses, mesquite beans, piñon nuts, fruits, berries, and seeds.

Every year reports document campsites raided by javelinas. Although not normally aggressive, they can be when food is involved. Protect yourselves and the javelina by storing all food inside a vehicle or in the food storage lockers provided in the campgrounds. Do not leave coolers or food boxes unattended at any time.



J. JURADO

Coyotes

Nothing in Big Bend speaks of wilderness more than the song of a coyote. Their various vocalizations from yips to howls let you know you are in the presence of an iconic figure. Their narrow-set, yellow eyes and long snout may seem intimidating, but in general, coyotes do not bother human beings.

Coyotes range over the entire United States. These highly adapted members of the

canine family are omnivores, dining on small mammals, reptiles, and insects. Coyotes will also eat berries and other vegetation when meat is unavailable. Carrion is an important food source in winter.

Coyotes are typically solitary, but will hunt in small groups when individuals converge in areas where food is plentiful. They will work cooperatively, either chasing an animal in relays to tire it, or waiting in ambush. However, unlike wolves, they do not form lasting packs.



M. YARBROUGH

Rattlesnakes

Four species of rattlesnake live in Big Bend National Park—the Western Diamondback, Black-tailed, Mojave, and Rock rattlesnakes.

This often-feared reptile is beneficial to the environment, eating mice, rats, and other small animals—many of which are pests or spread disease.

Perhaps surprising, rattlesnakes are not a top predator, sometimes becoming the meal

of roadrunners, skunks, coyotes, and even other snakes, such as the western coachwhip.

The buzz of a rattlesnake is an unmistakable sound that will stop you in your tracks. And this is a good thing, as rattlesnakes use this sound as a warning when they perceive a threat; continue toward them, and you risk provoking a self-defensive bite. A few bites have occurred in Big Bend. If bitten, contact a ranger promptly, as permanent damage can occur within 12 hours of a bite.



J. JURADO

Wild Animal Encounters

For many people, the chance to see a bear or mountain lion in the natural environment is an amazing opportunity. However, one must always remember that we are entering their home, their territory. As such, we need to respect wildlife, and know what to do if we encounter a wild predator:

- Do not run, but back away to get out of range of the perceived threat.

- If you feel threatened, try to look large, wave your arms, throw rocks or sticks.

- If attacked, fight back.

- Watch children closely and never let them run ahead or lag behind.

- Report bear or mountain lion sightings or encounters to a park ranger as soon as possible.

To help preserve healthy environments for both visitors and predators, please remember:

- Never leave food or trash unattended, as bears and other wildlife readily habituate.

- Never feed wildlife, as no park animal is tame, and feeding leads to aggressive future behavior.

- Keep a healthy distance between you and park animals (at least 50 yards).

Please Help

At the Lodge

- Leave nothing outside your room, on the balcony, or on the porch.

In Developed Campgrounds

- Store food, beverages, toiletries, pet food, and dishes in the bear-proof storage locker provided at your site.
- Keep your campsite clean. Take trash and food scraps to a dumpster.
- Dump liquids in rest room utility sinks, not on the ground.
- Ice chests and coolers are not bear-proof; store them in your vehicle.

In the Backcountry

- Never leave packs or food unattended. Carry everything with you or store in a bear-proof locker.
- Avoid carrying odorous food and toiletries.
- Carry out all trash, including orange peels, cigarette butts, and left-over food and cooking grease.

Cyclists

- Use food storage lockers when provided.



Chisos Basin

The Chisos Basin Campground is surrounded by tall, rocky cliffs and conveniently located near some of the park's most spectacular and popular trails.

Elevation: 5,401 ft.

Open: Year-round

Details: 60 campsites (no hook-ups). \$14 per night (\$7 per night with applicable pass). Flush toilets, running water, grills, picnic tables, and dump station. Trailers over 20' and RV's over 24' are not recommended due to narrow, winding road to the Basin and small campsites in this campground.

Reservable Campsites: 26 sites are reservable from November 15–April 15. Contact www.recreation.gov, or call 1-877-444-6777.

Group Camping: 7 group campsites are available by advance reservation only. To reserve a group campsite, contact www.recreation.gov or call 1-877-444-6777.

Cottonwood

Cottonwood Campground is a quiet, shady desert oasis located between the Castolon Historic District and the scenic Santa Elena Canyon.

Elevation: 2,169 ft.

Open: Year-round

Details: 24 campsites (no hook-ups). \$14 per night (\$7 per night with applicable pass). Pit toilets, running water, grills, picnic tables, no dump station, no generators allowed. A small picnic area is available across from campsite #23.

Reservable Campsites: There are no reservable campsites in the Cottonwood Campground. All individual campsites are on a first come, first-served basis.

Group Camping: One group campsite is available by advance reservation only. Group campsite is walk-in tent camping only. To reserve the group campsite, contact www.recreation.gov or call 1-877-444-6777.

Rio Grande Village

Set in a large grove of cottonwoods, the campground is adjacent to the Rio Grande. The RGV camp store and showers are within walking distance.

Elevation: 1,850 ft.

Open: Year-round

Details: 100 campsites (no hook-ups). \$14 per night (\$7 per night with applicable pass). Flush toilets, running water, picnic tables, grills, and some overhead shelters. Dump station nearby.

Reservable Campsites: 43 sites are reservable November 15–April 15. Contact www.recreation.gov or call 1-877-444-6777.

Group Camping: 4 group campsites are available by advance reservation only. Group campsites are walk-in tent camping only. Vehicle parking is restricted to an adjacent parking area. To reserve a group campsite, contact www.recreation.gov or call 1-877-444-6777.

Rio Grande Village RV

Open, paved lot with grassy, tree-lined edges. Adjacent to the camp store. This campground, operated by Forever Resorts, LLC, has the only full hook-ups in the park.

Elevation: 1,850 ft.

Open: Year-round

Details: 25 campsites. Concession-operated RV park with full hook-ups—water, electrical, and 3-inch sewer connection. \$33, double occupancy, with a \$3 additional per person charge. Periodically, a few sites may not be available for a 40' or longer RVs due to the size of the parking lot and orientation of the spaces.

Reservable Campsites: 20 sites are available by reservation, 5 are held for first come, first-served campers. Register at the Rio Grande Village store/service station, or call 1-877-386-4383, or 432-477-2293.

Developed Campgrounds at a Glance						
	Elevation (ft/meters)	Sites	Nightly Fee	Facilities	Registration	Comments
Chisos Basin	5,401/1,646	60	\$14.00*	Flush toilets, dump station	Self-pay station	Surrounded by rocky cliffs; many hiking trails nearby.
Cottonwood	2,169/661	24	\$14.00*	Pit toilets, no generator use allowed	Self-pay station	In a cottonwood grove along the river. Grassy sites.
Rio Grande Village	1,850/564	100	\$14.00*	Flush toilets, dump station	Self-pay station	Largest campground; shady sites. Laundry and showers nearby.
Rio Grande Village RV	1,850/564	25	\$33.00 and up	Full hook-ups	RGV Camp Store	Concession-operated; register at the RGV store.
			* \$7.00 with an eligible Federal Recreation Pass			Observe posted campground quiet hours.

Dirt Road Adventures

Dagger Flat Auto Trail

This seven-mile road (14 miles round-trip) winds eastward to a small valley where there is a forest of giant dagger yuccas.

A self-guiding brochure is available, and provides a useful key to the plants and geology along this road.

Typically open to all vehicles, and excellent for bicycling. However, road may require high clearance as sandy areas or muddy conditions may seasonally exist. Check with a ranger for current road conditions.

Allow two hours for the drive. The speed limit on this narrow, winding road is 25 mph.



View Along Dagger Flat Auto Trail

Old Ore Road

This backcountry road follows the historic route used in the early 1900s to transport ore from Mexican mines to the railroad station at Marathon.

This road has excellent vistas of the Chisos Mountains and Tornillo Creek. It passes through the foothills of the Deadhorse Mountains, including the cliffs of Alto Relex.

Ernst Tinaja, five miles from the southern end of the road, is a popular hiking destination.

Allow at least 3 hours to drive this 26 mile-long road. A high clearance vehicle and good tires are necessary.



Limestone Layers at Ernst Tinaja

River Road

The River Road traverses the southern portion of Big Bend, providing a great opportunity to see the remote backcountry of this park.

Midway are the ruins of Mariscal Mine. This former mercury mine is a marvel to explore, as numerous structures are still standing.

Allow a full day (5–7 hours) to explore this 51 mile-long road. Backcountry campsites along the drive (permit required for camping) allow for extended exploration.

This road is for high clearance vehicles only, and may become impassable following rain.



Historic Buildings at Mariscal Mine

Backcountry Roads	
Road Name	Road Condition
Dagger Flat	Suggested high clearance past Old Ore Road Junction
Glenn Springs	Narrow road; no RVs, trailers, or wide vehicles
North Rosillos	Deep ruts and sand
Juniper Canyon	High clearance vehicles only; rough, rocky, and slow
Old Maverick	Wash boarded sections; impassable after rains
Old Ore	High clearance vehicles only, 4WD recommended
Pine Canyon	High clearance vehicles only; rough, rocky, and slow
River Road East	High clearance vehicles only
River Road West	High clearance vehicles only, 4WD recommended
Black Gap	4WD required; infrequently maintained

Backcountry



R. WONITE



M. HENCH

Primitive Roadside Campsites

For those who wish to camp in the backcountry without having to backpack, Big Bend offers a number of primitive campsites along roads, both in the desert and along the Rio Grande. A permit is required.

All roadside sites are along unpaved roads. While some centrally-located sites are accessible to most vehicles, a high clearance and/or 4-wheel drive vehicle is necessary to reach those along the primitive dirt roads.

Sites offer excellent views, privacy, an opportunity for solitude, and a cleared gravel

location to park your vehicle and set up a tent.

There are no amenities at any backcountry campsite; please plan to bring everything you need, including water, shade, chairs, and a trowel to bury human waste.

Please remember, campfires (all wood fires or ground fires) are strictly prohibited. Use cook stoves with caution.

Generators are not allowed in backcountry areas, and pets must be kept on a leash within the boundaries of the camp site.

Backcountry Planning

Backcountry Use Permit
A backcountry use permit is required for all backcountry camping, river use, and horse use.

- Permit must be obtained in person at a park visitor center during normal business hours.
- A permit may be obtained up to 24 hours in advance of the trip.
- Permit may be written for up to 14 consecutive nights in the backcountry.
- The permit fee is \$10 (\$5 with applicable pass) for overnight-use, free for day-use.

Backcountry Water
Every gallon removed from backcountry water sources is one less for the wildlife which depends on them.

- Each hiker should carry and drink a minimum of one gallon of water per person per day. Spigots for drinking water are available at all visitor centers.

- Springs and tinajas (rock depressions where water collects) are rare and unreliable—don't risk your life by depending on desert springs. Water should be filtered if used. Caching water is recommended for extended hiking trips in the desert.

Leave No Trace
Following the seven basic leave no trace principles helps protect our fragile desert environment:

- Plan ahead and prepare—a well-planned hike is more likely to be a safe hike, and without the need to rely on precious desert water.
- Travel and camp on durable surfaces—avoid walking on small plants or biological crusts.
- Dispose of waste properly—bury solid human waste at least six inches deep and 0.25 mile from springs. Pack out all waste paper and trash.
- Leave what you find—natural and culture resources are protected within National Parks. Collecting or disturbing features is prohibited.
- Minimize fire impacts—fires are only allowed on overnight river trips. A fire pan is required. Keep all heat sources away from combustible vegetation.
- Respect wildlife—all animals are wild, even if they appear to be tame. Never feed wildlife or leave scented items unattended.
- Be considerate of other visitors—keep noise levels to a minimum, as sounds can carry for long distances across the desert.



C. BALLOU

Backpacking

Big Bend National Park has over 200 miles of trails in the Chisos Mountains and desert terrain, with options for backpacking within these beautiful habitats.

Chisos Mountains
There are 41 campsites along Chisos Mountains trails, ranging from one to eight miles from the trailhead. These sites are designated to help reduce impact and damage to this delicate environment.

Sites include a cleared area for a tent as well as a bear-proof storage box, which must be used to store all scented items. A permit

for a specific site must be obtained prior to camping.

Zone Camping
Open zone camping permits are available for backpackers who wish to camp outside of the Chisos Mountains. The park is divided into a number of zones ranging from areas along popular trails to extremely isolated areas.

Camps must be set up at least 0.5 mile from roads, out of sight of roads, and at least 100 yards away from trails, historic structures, archaeological sites, dry creek beds, springs, or cliff edge.



J. JUJADO

River Trips

The Rio Grande follows the southern boundary of Big Bend National Park for 118 miles. In this distance it has carved three major canyons—Santa Elena, Mariscal, and Boquillas.

Seeing the park's canyons from the middle of the Rio Grande is both fascinating and gratifying. There are many possibilities, from half-day floats to extended seven-day excursions.

Canoes, kayaks, and rafts are allowed in river canyons. You may bring your own equipment, or you can hire a guide service.

Local outfitters (see page 12 for phone numbers) provide guide service, equipment rental, and up-to-date river information and conditions.

The deepest channel of the Rio Grande is the international border between the United States and Mexico. Passports are not currently required for river trips, but stepping onto the Mexican bank of the river, then returning to the U.S., constitutes an illegal border crossing. U.S. Border Patrol allows for exceptions to be made under emergency situations only, i.e.; scouting, portaging, or lining.



C. BALLOU

Horseback Riding

Visitors are welcome to bring and use horses in the park. A stock-use permit is required (free for day-use), and copies of vaccination documents must be with you.

While horses are not allowed on paved roads or road shoulders, all gravel roads are open to horses. Cross-country travel is permitted in the park, except in the Chisos Mountains, where horse use is limited to the Laguna Meadow, Southwest Rim, and Blue Creek trails. Horses are not permitted in picnic areas or on interpretive trails.

Grazing within the park is not permitted; you must bring your own feed. Stock may be watered in the Rio Grande and at springs not used for domestic water supply. However, be prepared to haul water for you and your stock, as desert springs are unreliable. All horse manure and feed remnants must be removed from the park.

Horses are allowed at several of the park's primitive roadside campsites. Hannold Draw campsite, located 4.8 miles north of Panther Junction, has a corral large enough for 8 horses. If you plan to camp with horses in the park, you may reserve this campsite up to 10 weeks in advance. For reservations, call 432-477-1158.

Services Inside the Park		
Emergency Call 911		
National Park Service		
General Information	432-477-2251	
Big Bend Natural History Association		
Booksales & Seminars	432-477-2236	
Visitor Centers		
Panther Junction (Hdqtrs)	432-477-1158	
Chisos Basin	432-477-2264	
Castolon	432-477-2666	
Persimmon Gap	432-477-2393	
Rio Grande Village	432-477-2271	
U.S. Post Office		
Panther Junction	432-477-2238	
Lodging/Restaurant		
Chisos Mountains Lodge	432-477-2291	
Reservations	877-386-4383	
Gas Stations		
Panther Junction	432-477-2294	
Rio Grande Village	432-477-2293	
Camper Stores		
Rio Grande Village	432-477-2293	
Chisos Basin	432-477-2291	
Castolon	432-477-2222	
Services Outside the Park		
<i>This listing of local services is a courtesy to our visitors and implies no endorsement by the National Park Service or Big Bend National Park.</i>		
Lodging		
<i>Lajitas</i>		
Lajitas Resort	877-525-4827	
<i>Marathon</i>		
Gage Hotel	432-386-4205	
Marathon Motel	432-386-4241	
Eve’s Garden	432-386-4165	
<i>Study Butte/Terlingua area</i>		
Big Bend Casitas	800-839-7238	
Big Bend Resorts	800-848-2363	
Easter Egg Valley Motel	432-371-2254	
El Dorado Motel	432-371-2111	
Longhorn Ranch Hotel	432-371-2541	
Ten Bits Ranch	866-371-3110	
Terlingua House	325-473-4400	
Camping		
Big Bend Resorts	800-848-2363	
Big Bend Ranch State Park	432-424-3327	
Big Bend Travel Park	432-371-2250	
B.J.’s RV Park	432-371-2259	
Heath Canyon Ranch	432-376-2235	
Longhorn Ranch	432-371-2541	
Stillwell’s Trailer Camp	432-376-2244	
Study Butte RV Park	432-371-2468	
Convenience Stores/Gasoline		
Big Bend Resorts	800-848-2363	
Cottonwood General Store	432-371-3315	
Stillwell Store & Station	432-376-2244	
Medical Services		
Terlingua Fire and EMS	911	
Big Bend Medical Center	432-837-3447	
Banks		
Quicksilver Bank/ATM	432-371-2211	
Local Outfitters		
Angell Expeditions	432-299-3713	
Big Bend Overland Tours	800-848-2363	
Big Bend River Tours	800-545-4240	
Desert Sports	888-989-6900	
Far Flung Outdoor Center	800-839-7238	
Rio Aviation	432-557-9477	
Horseback Riding		
Big Bend Stables	800-887-4331	
Lajitas Livery	432-424-3238	

Information and Services

Accessibility

All visitor centers are accessible, as are the Chisos Mountain Lodge restaurant and some motel rooms and campsites. The Window View Trail is paved and fairly level.

ATMs

The Chisos Mountains Basin Store, Rio Grande Village Store, and Panther Junction Service Station have ATMs. The nearest banking facility is located in Study Butte, 26 miles west of park headquarters.

Camp Stores

Forever Resorts, LLC, operates stores at Castolon, Chisos Basin, and Rio Grande Village. Each has groceries, camping supplies, and souvenirs.

Camping Limits

Visitors can stay in the park up to 14 consecutive nights, whether in a front or backcountry site, with a limit of 28 total nights in the park in a calendar year. Campers can occupy a specific site up to 14 total nights in a year. Between February 1 and April 15, visitors are limited to 14 total nights in the park.

Entrance Fees

- Single private non-commercial vehicle \$20—valid for 7 days
- Single person entry on foot, bicycle, motorcycle, commercial vehicle, etc. \$10 per person—valid for 7 days
- Big Bend Annual Pass \$40—valid for one year from month of purchase
- Interagency Annual Pass \$80—valid for one year from month of purchase

All other valid passes will be accepted until expired including: Senior Pass, Access Pass, Golden Age Passport, and Golden Access Passport. For commercial rates, please consult our website: www.nps.gov/bibe. Additional permits may be required.

Fires

Ground fires and wood fires are strictly prohibited throughout the park. Only gas stoves and charcoal contained in a grill may be used. Use caution with any heat source.

Food Storage

Do not store food or scented items in tents, and never leave coolers, cook stoves, dishes, trash, or food/water unattended.

Gas Stations

Gasoline and diesel are available at Panther Junction and Rio Grande Village Service Stations. Panther Junction has propane exchange. Rio Grande Village offers propane refilling.

Junior Ranger

Through activities, games, and puzzles, kids can have fun learning about the park and earn a badge or patch, bookmark, and certificate. A booklet is available at visitor centers.



Kennels

- Alpine Veterinary Clinic 432-837-3888
- Alpine Small Animal Clinic 432-837-5416

Lodging

The Chisos Mountain Lodge, located in the Chisos Basin, includes 72 rooms, gift shop, dining room and camp store. For more information call 432-477-2291 or 877-386-4383.

Phones

Public pay phones are located outside the Chisos Mountains Lodge and Rio Grande Village Store.

Post Office

A full-service post office is located at the Panther Junction Headquarters, open M–F, 8am–11:30am and 1pm–3:00pm. A mail drop is also available at the Chisos Basin Store.

Ranger Programs

Join a ranger for a guided hike or evening presentation. These free programs are offered most days of the year. Schedules are posted at visitor centers and campgrounds.

Recycling

Recycling cans are provided in campgrounds and near stores and visitor centers. Every bit of material recycled means one less piece buried in the park landfill. Please recycle!

Showers and Laundry

Pay showers and laundry facilities are available at the Rio Grande Village Store, and have 24-hour access. Out-of-park facilities are available in Study Butte.

Swimming

Big Bend is a desert park. Wading in the Rio Grande is not recommended. Soaking in the 105° Hot Springs is an option. Do not enter or contaminate backcountry springs.

Other swimming opportunities include Balmorea State Park, the word's largest spring-fed pool (a three-hour drive north).

Visitor Centers

Panther Junction, Chisos Basin, and Persimmon Gap Visitor Centers are open year-round. Rio Grande Village and Castolon Visitor Centers are open November–April.

Wifi/Internet

Free wireless internet is available at the Chisos Mountains Lodge and Rio Grande Village Store/RV hook-ups. There are no public computer terminals.

Weather and Climate

The old adage "if you don't like the weather, just wait a minute," often holds true for Big Bend National Park. While Big Bend generally has blue skies and warm days, the weather can change quickly and dramatically.

Throughout the Year

Relative humidity is generally low. Spring and fall are usually warm and pleasant. Summers are hot, although temperatures vary significantly between the desert floor and the Chisos Mountains. May and June are the hottest months. The rainy season extends from mid-June to October with locally heavy thunderstorms and some flash flooding. However, the water recedes rapidly and the rainy season can be a delightful time to visit the desert. Winters are generally mild, although periods of cold weather (including light snow) are possible; winter visitors must prepare for a variety of conditions.

Elevation Differences

Elevation differences in the park mean temperatures can vary considerably between mountain, desert, and river. Air temperature changes about five degrees for every 1,000 feet of elevation gain or loss; temperatures in the high Chisos Mountains can be 20+ degrees cooler than temperatures along the Rio Grande.

Dress for the Weather

A wide-brimmed hat, comfortable clothing, and sturdy walking shoes or boots are necessary for anyone planning to hike. Sunscreen is a must. Hikers must always carry plenty of water. One gallon per person per day is recommended. Bring clothing for both warm and cool weather, as well as rain gear, when visiting Big Bend any time of the year.



Frosted Sotols in the Chisos Mountains

Panther Junction Averages (mountains temps 5-10° lower, low desert temps 5-10° warmer)												
	January	February	March	April	May	June	July	August	September	October	November	December
Max Temp (°F)	60.9	66.2	77.4	80.7	88.0	94.2	92.9	91.1	86.4	78.8	68.5	62.2
Min Temp (°F)	35.0	37.8	45.3	52.3	59.3	65.5	68.3	66.4	61.9	52.7	42.3	36.4
Precip (inches)	.46	.34	.31	.70	1.50	1.93	2.09	2.35	2.12	2.27	.70	.57