

# The Paisano

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

Volume 32, number 1 2012



Tree Cholla Cactus Blossom

B. TRESTER

6 What to See & Do

10 Campgrounds

11 Backcountry

Find out how to make the most of your time in the park. Includes detailed maps of the Chisos Basin and Rio Grande Village.

Interested in camping in the park? Learn more about the three developed campgrounds as well as RV hook-ups.

Learn more about opportunities to enjoy Big Bend's wilderness including: primitive camping, backpacking, river trips, and horseback riding.

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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 1,500 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**

Many people envision barren sand with a cactus or two when they think of “desert.” But the Chihuahuan Desert in Big Bend National Park contains an astonishing amount of life—and has for millions of years. This park has the longest and most complete fossil record of any park in the National Park System. Park staff and the Friends of Big Bend National Park are currently developing the Fossil Discovery Trail to interpret this remarkable resource to park visitors.

The incredible variety of life is not limited to the ancient past. Because of its unique location along the Rio Grande and the broad range of elevations, soils, and vegetation, Big Bend has an unbelievable variety of plant and animal life. During your visit I hope you will take the time to experience this diversity, from the banks of the river through the desert to the heights of the Chisos mountains.

*William E. Wellman*

Superintendent William E. Wellman



Volcanic deposits near Castolon

B. TRESTER



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**  
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PO Box 129  
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432-477-2251

**Park Websites**  
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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™



## Dark Matters

Park Ranger Bob Smith

When someone arrives in the Big Bend and stays more than just a day, they tend to notice something that is becoming rarer as time passes and civilization expands. It usually isn’t the obvious lack of the street after street, building after building infrastructure

of a city. But it could be. It probably isn’t the almost perfect silence that allows people to hear themselves think. Maybe it is. Most likely what they notice is that after the sun goes down, it’s dark. Really dark. As in darker than anywhere else in the lower 48 states. And maybe that scares them. Why? Because in most cities in the U.S. and elsewhere artificial light has made a truly dark night something they never see. Light

makes people feel safe, but it has negative implications that affect both people and most other living things.

When the natural cycle of night and day is extended, as with artificial light, organisms have a difficult time coping with the changes. Prey has more chance of being preyed upon, visual cues for reproduction and migration are altered, and sleep patterns change. All of these can be harmful to their existence.

So what does this have to do with the Big Bend? In February of 2012, Big Bend National Park was awarded the Gold Tier Level Dark Sky Park certification by the International Dark Sky Association. Researchers from the National Park Service have found that the night skies in Big Bend are the darkest in the lower 48 states. The park attained this status by partnering with Musco Sports Lighting, LLC, to change all lighting in the park to low output LED’s and reduce the light signature from the infrastructure. This has the effect of giving back the dark to the living things we are charged to protect. It also gives visitors a place to get away from the extended day that city lights create. So everyone and everything here benefit from these changes. Why is this so important? Because dark matters. . .



Superintendent Wellman accepts prestigious International Dark Sky Gold Tier Award

## 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](http://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](http://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](http://www.bigbendfriends.org)

### Volunteers in the Park

Approximately 260 volunteers contribute 50,000 hours of work every year in Big Bend National Park! Whether manning 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 432-477-1196.



[www.nps.gov/volunteer](http://www.nps.gov/volunteer)





C. BALLOU

## 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 Crossing

As a result of a 2002 U.S. Customs and Border Protection decision, crossing the border, except at a legal port of entry, is strictly prohibited. The closest legal ports of entry include those at Del Rio and Presidio, Texas. The U.S. Attorney’s Office will prosecute any criminal violations regarding illegal crossings. If you re-enter the United States at any point within Big Bend National Park, before a port of entry is established, you may be liable for a fine of not more than \$5,000 or imprisonment for up to one year, or both.

## Border Merchants

Mexican Nationals may approach you from across the river to sell souvenir items such as walking sticks, bracelets, and crafts. If you agree to look at or purchase their items and the Mexicans cross the river, they may be arrested for being in the U.S. illegally. They will be held until deported back to Mexico through Presidio (100 miles away). Mexican merchants will be arrested for illegal commercial operations which may result in a fine and/or additional incarceration while awaiting adjudication prior to deportation.

Items purchased will be considered contraband and seized by officers when encountered. Rocks, minerals, and archeological items cannot be purchased, imported, or possessed in a national park.

In addition, illegal trade impacts the resources of the park in a number of negative ways, including the creation of social trails that crush plants along the river and cause erosion of riverbanks, and an increase in garbage and contaminants along the Rio Grande watershed. Supporting this illegal activity contributes to the continued damage of the natural resources along the Rio

Grande, and jeopardizes the possibility of reopening the crossings in the future.

Sotol walking sticks and other handcrafted items made in Boquillas, Mexico, can only be purchased legally at sales outlets inside and outside of the park.



Mexican crafts

### Border Safety

- Know where you are at all times, follow good safety procedures, and use common sense. Remember, cell phone service is limited in many areas of the park.
- Keep valuables, including spare change, out of sight and lock your vehicle.
- Avoid travel on well-used but unofficial “trails”.
- Do not pick up hitchhikers.
- People in distress may ask for food, water, or other assistance. Please 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 any suspicious behavior to park staff or the Border Patrol. Please do not contact suspicious persons.
- Ask at the visitor center or contact a ranger or a Border Patrol agent about areas where you may have concerns about traveling.

# Protecting Yourself and the Park

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

## Driving

Most serious injuries and deaths in the park result from car accidents. Drive within the speed limit (maximum of 45 in most areas), and watch for javelina, deer, and rabbits grazing along road shoulders, especially at night. Some park roads are steep and winding and require extra caution. Remember, too, that you share the road with bicyclists and pedestrians. Pull off the road to take pictures—do not stop or pause in roadways.

## 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 of caffeine and alcohol can result in accelerated loss of body water.

Protect your body—our sensitive skin burns easily; find shade, wear sunscreen, sunglasses, a brimmed hat, and cover your skin with long-sleeves, trousers, and proper shoes. Avoid hiking in the lower elevations during the heat of the day.

## 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. Remind them that desert vegetation is sharp, and make sure to carry a first aid kit with tweezers for removing cactus spines.

## Wildlife

Observe Big Bend’s wildlife from a distance. Do not follow or approach them. 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 rations 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

Predators can and do kill pets here. Heat is also an issue. National parks are refuges for plants and animals. Dogs leave behind the scent of a predator, stressing wildlife. Big Bend has restrictions on pets for both the protection of your animal and the park.

- Do—**
- Keep pets on a leash (6’ maximum)
  - Walk pets on dirt or paved roadways, or in campgrounds
- Do not—**
- Take pets on trails or on the river
  - Leave animals unattended



NPS PHOTO

### 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 (you may resemble prey).
- Watch children closely and never let them run ahead or lag behind.
- Try to look large. Wave your arms.
- Throw rocks or sticks if threatened.
- If attacked, fight back.
- 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).



# Life in Unexpected Places



## Life at the Hoodoos

Seasonal Park Ranger Katy Lofton

At first glance, the Chihuahuan Desert of the Big Bend appears to be a desolate wilderness, devoid of life save the lonely creosote and cacti withering under the unceasing sun. However, a deeper exploration of the surroundings, even a few steps off the road, transports you to a whole new world where signs of life abound with every glance.

The sculptured and eroded rock pillars of the Tornillo Creek hoodoos are one such place. At first it seems as if nothing could survive here, but as one ventures across the dusty plains, evidence of life appears. Footprints of residents of all shapes and sizes

cross the arid landscape—tiny imprints of the desert cottontail that bounded under the brush or the large heart-shaped prints of mule deer on a long journey between water sources. A thin, sinuous trail leading to a small hole suggests a western coachwhip snake slithered by, perhaps following a kangaroo rat into its underground home.

Further along, the terrain becomes rockier but the unmistakable signs of life are still present. Along the edge of one of the largest rock columns, the erosive force of water created a shelter, a respite from the desert heat.

Scrambling up the slope, it is obvious that this desolate rock, despite no water sources nearby, has been the home of one of the most elusive creatures found in the park today—a mountain lion. At the edge of the shady opening, lion scat amongst scattered piles of bones and feathers is evidence of its success in finding prey in the desert.

Suddenly, a shadow passes overhead and a loud, piercing caw! caw! breaks the dull hush of the desert breeze. A pair of ravens flutters in to roost on a small, nearly invisible ledge near the top of the rock pillar. A large collection of sticks juts out from beneath

the shadow of the ledge—the ravens have made a home here as well. Clearly, nature does not consider this to be an uninhabitable wasteland.

The journey back to the road discloses more surprises. A tiny, yellow wildflower along the windswept ridge and more tracks—this time, javelinas. Following their trail brings me to a large patch of unearthed ground — the javelinas worked together and dug out

the tender roots that survived the long, dry summer. Further along, another unexpected find surfaces—a rarely seen horned lizard.

After reaching the roadway, and surveying the scene again, I see little but creosote scattered through the vast desert landscape. However, with time and a little courage to venture off the beaten path, a world of life is waiting to be explored and discovered—even in the most desolate areas.



Desert Cottontail



Hoodoos along the road to Persimmon Gap

## A Ranger's Joy

Park Ranger Natasha Moore

One late afternoon, I sat with the front door of the Chisos Basin Visitor Center propped open while contemplating the Paisano’s theme of “life in unexpected places.” I was jotting down ideas on one of my favorite subjects, the settlement of this area before it became a national park, when movement caught my eye. A canyon towhee (also affectionately known as “the parking lot bird”) boldly hopped on the door mat just inside the visitor center.

The bird made what appeared to be well-practiced rounds, inspecting the carpet for insects, and it struck me that I was witnessing life in an unexpected place—inside the Chisos Basin Visitor Center!

One of the greatest joys of working as a park ranger is the opportunity to see wildlife. But

what a surprise to find a critter joining me in the workplace! Even here, inside the visitor center, we find life.

My first brush with “unexpected life” in the visitor center came in the form of one of the largest vinegaroons I have encountered.



After opening one morning, I went around the counter to unlock the door only to find a huge black bug—about 5 inches in length—crawling across the floor. Vinegaroons are also called whip scorpions because of their resemblance to true scorpions, but they

have a tail like a whip which, when used in defense, hurls drops of acetic acid, a form of vinegar. Vinagaroons are most active during the late summer months.

The very next week, I was shuffling through papers when, to my great surprise, out wobbles a tiny nude and blind baby mouse. For the next couple of weeks, each time it was my turn to work at the visitor center, I wondered what unexpected wildlife would show up next. Hopefully not a snake hunting for mice!

While the smallest of creatures occasionally extend what is naturally their ecosystem into the visitor center, larger animals can also be seen just outside. In this area, with a lot of human activity, you might not expect to see wildlife, but large animals are known to walk down the roads or through the campground.

In fact, I spent my first year in the Chisos Basin eagerly watching for a mountain lion,

as they had been seen crossing the parking lot area or hanging out on rocks beside the Window View Trail. When a report would come in, I would immediately dash to the window or out the door, only to have just missed it. Finally my opportunity came, and I saw my first wild mountain lion cross the road just down from the visitor center!

There is no telling when you may have the treat of seeing unexpected wildlife while visiting the Chisos Basin. Sierra del Carmen white-tailed deer, javelina, various bird species, and even occasionally, a black bear, frequent the parking area as part of their normal activity.

Whether inside or outside the Chisos Basin Visitor Center, it is this unexpected chance to enjoy a wide variety of life that makes my job unique, and brings magic not only to what I do, but also represents in part, the magic of this beautiful park.



Black Bear feeding in the pines



Black bear track on the trail



Javelina watching visitors



Newborn fawn along the Chisos Basin roadway





## Geology in a Nutshell

NPS Staff

Expansive vistas of varied landscape are immediately apparent when entering Big Bend—banded limestone, white ash, eroding sediments, and towering mountains add to the complexity of this park. Clearly there have been many geologic processes and forces at work over a vast expanse of time, leading to the formations we see today.

It stands to reason that Big Bend has been described as both a geologist’s paradise and a geologist’s nightmare. Although complex, the geologic history of Big Bend can be simplified into different eras of deposition and building.

From 500 to 300 million years ago (mya), the Big Bend area was part of a deep-ocean trough that extended from present-day Arkansas to West Texas. Accumulating sediments became beds of sandstone and shale. About 300 mya, pressure from

continental movement forced these beds upward forming the Appalachian and Ouachita Mountains, the western roots of which are near Persimmon Gap.

Around 135 mya, during the Cretaceous Period, a warm shallow sea covered the Big Bend—part of the Western Interior Seaway that divided North America. Tiny calcium-rich organisms were abundant, eventually settling to the ocean floor and becoming the bands of limestone we see today.

One hundred mya the sea began to retreat to its present location, and dinosaur-filled forests dominated this region. Near the end of the Cretaceous Period, a massive west-to-east compression of North America built the Rocky Mountains, the second mountain building period in the Big Bend area. Mariscal Mountain is the southernmost extension of the Rocky Mountains in the United States.

The end of the Cretaceous Period, 65 mya, marks the most famous extinction on our planet. By the end of the Cretaceous, the

dinosaurs had disappeared, but flowering plants, mollusks, amphibians, lizards, snakes, insects, and mammals all survived the extinction event known as the Cretaceous/ Paleogene (or Tertiary) boundary. The following Paleogene era is called the Age of Mammals, as these furry animals flourished during this time. The only strata marking this extinction on public land in North America is here in Big Bend.

As early mammals, including horses, rhinoceroses, camels, and various rodents roamed the Big Bend area, the age of volcanism began. From 43 to 32 mya, volcanic eruptions formed the Chisos Mountains, Sierra Quemada, Castolon area ash deposits, and the numerous dikes, sills, and laccoliths found around the park. Later, around 26 mya, massive fracture zones created faults that sunk the central part of the park, exposing the cliff faces of the Sierra del Carmens and Mesa de Anguila.

Big Bend’s geologic history continues today. The past 10 million years have been dominated by erosion and sculpting. The

Rio Grande, formed nearly 2 million years ago, continues to carve the vast canyons as the landscape of Big Bend continues to be subject to the sculpting forces of the elements. Imagine what just a few more million years of change could bring!



Ammonite fossil



## The Influence of Hispanic Culture

Park Archaeologist Tom Alex

Its location along the international border with Mexico places Big Bend where the history and culture of both countries are intertwined. Prior to 1848, this land was part of Mexico until the Treaty of Guadalupe Hidalgo transferred land north of the Rio Grande to the U.S. The influence of Hispanic culture is profound but rests in the more obscure pages of history. As research on these people continues, new light sheds a better understanding of the importance of the Hispanic contribution to park history.

Spanish explorations in the New World during the 16th and 17th centuries passed near the Big Bend, but until the mid 19th century the land remained dominated by American Indians. During the 18th century, the Spanish government established military fortresses (presidios) to bring order to Nueva Vizcaya (New Spain). For a short time (1775-1784), Spanish soldiers staffed presidios at San Carlos and San Vicente on the south side of the Rio Grande. The Spanish soon abandoned these forts because of inefficiency at deterring Indian invaders, financial burdens on the government, and

the extreme difficulty of resupply and communications with such remote frontier locations.

By the early 1800s, Spanish occupation of this territory consisted of small settlements called rancherias centered on ranching and farming. San Carlos, San Antonio, Altarez, Piedritas, and Salada south of the Rio Grande are among the earliest Spanish settlements. Most settlements were located at reliable springs or along permanent streams. In many Spanish settlements like San Carlos, Europeans intermarried with native people, creating a rich intercultural mingling of Old World and New World knowledge and traditions. This combined ancient knowledge equipped people with unique practical wisdom, enabling their survival in an otherwise hostile environment. This wisdom forms a significant part of the heritage of today’s Hispanic people.

The Rio Grande and its larger tributaries attracted farmers since prehistoric times. During the 1880s, Hispanic families established communities at La Coyota and Terlingua Abajo, inside what is now the national park. These small farms and goat ranches were sufficient to supply the needs of their immediate group, yet productive enough to provide a surplus of food crops

and livestock that could be traded for the other necessities.

During the 1890s, discoveries of rich deposits of lead, zinc, and silver in the Sierra del Carmen in Coahuila, Mexico, and cinnabar at Mariscal and the Terlingua area led to the growth of Boquillas, Mariscal, Study Butte, and Terlingua. Opportunities for work in the mines spurred more settlement on both sides of the river. People seeking escape from the turmoil of the Mexican Revolution and a better life for their families were drawn to this area. Terlingua Abajo and La Coyota supplied garden crops for workers of Terlingua and wood for the mine furnaces.

At Boquillas, Texas, Don Juan and Doña Maria (Chata) Sada, well known Big Bend residents, maintained a modest business, providing food and beverages for anyone who visited the village. Chata’s hospitality was renowned throughout the area and the couple were highly respected in the Big Bend. At Glenn Springs, McKinney Springs, and Sierra Chino, Mexicans labored in the production of candelilla wax.

The influence of Hispanic culture is visible at numerous historic sites in Big Bend where the Mexicans who originally occupied the land built homes of rock and adobe. As

Anglo-Americans entered and settled the area, they enlisted Mexicans to build their homes. The Hispanic skills at stone and adobe masonry still stand at many home sites scattered throughout the park.

During the New Deal era of the 1930s, the Civilian Conservation Corps worked to establish the first infrastructure in preparation for establishment of Big Bend National Park. The majority of workers in the C.C.C. crews were Hispanic. Heirs to a culture that emphasizes the importance of family, hard work, and the spirit of survival, they continue to exemplify the values that are their cultural legacy.



View of Boquillas, Mexico



# 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, camper 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: this road 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, 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 Chisos Mountains. This is an excellent sunset vista.

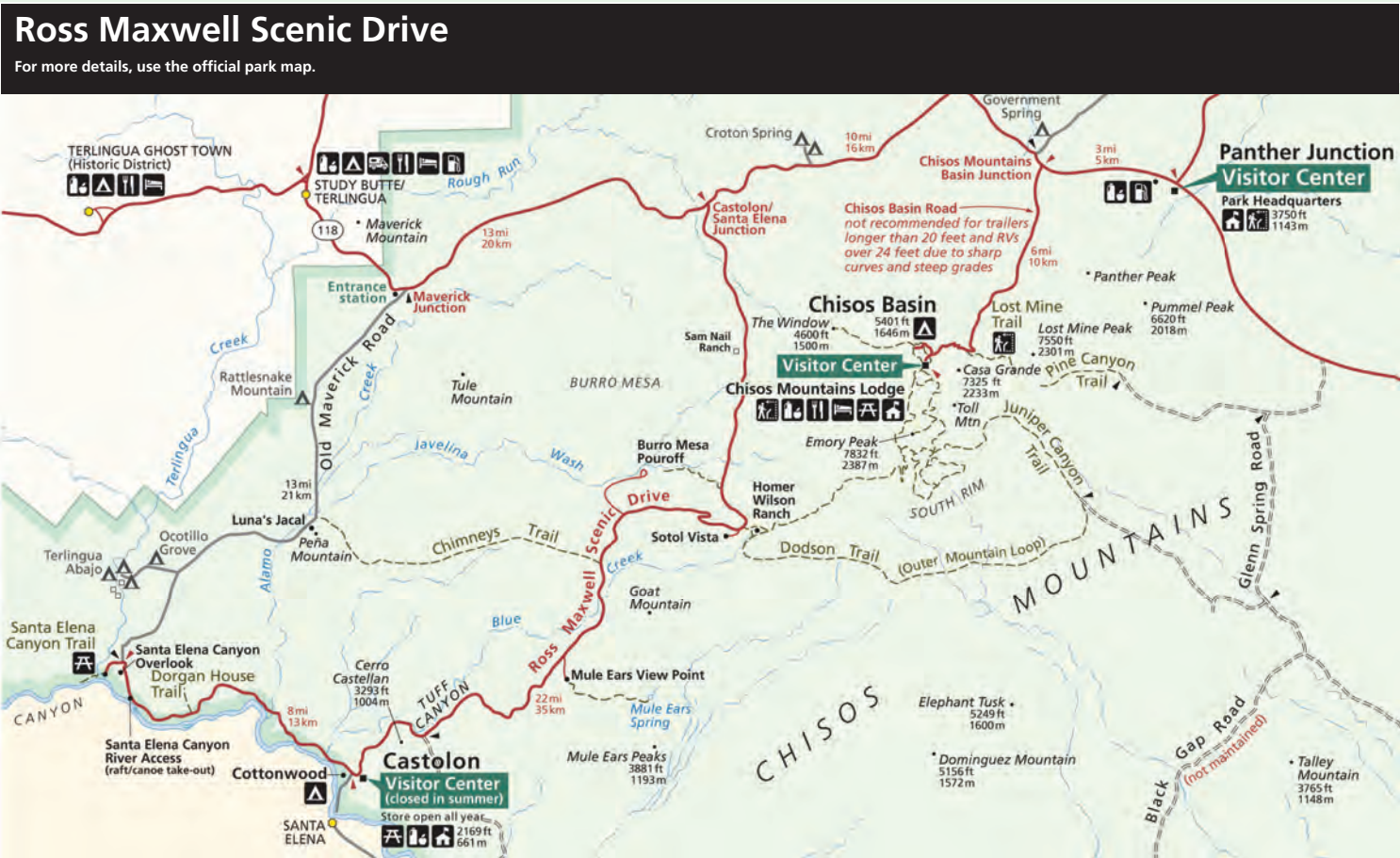
## Ross Maxwell Scenic Drive

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)	1.9/2.6	1 hour	350/107	<b>Moderate</b> 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	<b>Strenuous</b> 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	<b>Moderate</b> 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	<b>Strenuous</b> 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	<b>Moderate</b> 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	<b>Easy</b> Level, paved, accessible. Great mountain views. Best place in the Basin to catch a sunset through the Window.



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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	Grapevine Hills Road, 3.5 miles west of Panther Junction	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. *Spring is subject to flooding during rising river levels.*
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.”
Daniel’s 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 in the canyon.



J. JURADO

View from Chimneys arch





# Birds and Bird Watching

## Bare-Naked Birding

Park Volunteer Jan Allen

There are no regulations against it, and it’s all the rage across the nation. Age doesn’t matter, young and old can do it, and it can be quite a liberating experience! You could try it at Padre Island National Seashore, where cacti and thorns won’t stick you, but you can do it here too—why not try "Bare-Naked Birding" in Big Bend National Park this spring and summer?!

The American Birding Association has recently advocated going bare-naked during your next bird watching outing—that is, leave all your gear at home, the binoculars and spotting scopes, telephoto lenses, iPods and apps, and concentrate on using your eyes and ears. For a beginning birder who might not have all the latest equipment, it’s a great way to start birding. And for a bird watcher who already has some knowledge, it is a challenging way to advance and develop your existing skills.

Take for example one of Big Bend’s most iconic birds, the greater roadrunner. At 23 inches long, with a distinctive stance,

long tail, and showy personality, birders young and old, experienced or not, know at a glance, as they drive slowly down the road towards Daniels' Ranch, that it’s a roadrunner! Or how about early in the morning when you walk stealthily out onto the Rio Grande Village Nature Trail boardwalk over the beaver pond, and startle up a croaking, gangly large blue bird? What’s a great blue heron doing in the desert?!

Bird watchers learn to identify birds based on their shape and size, their behavior, the way they move and fly, their field marks and colors, and the sounds they make. Birders with years of experience often speak of general impressions they get from only a glimpse of a bird. Their brains synthesize all the details they’ve learned over the years and out pops an ID. It’s satisfying, it’s hopefully accurate, and it’s something you can practice. When not restricted by binoculars blocking the view, our unaided eye can take in a wealth of information, and see motion of birds easily. Young kids especially, who often have trouble using binoculars, will be good at bare-naked birding.

Black vultures and turkey vultures circle high over Big Bend beginning in February and

March. Forget about using your binoculars to look at plumage differences, and ask “are the wings in a V-shape and is it teetering and tottering side to side (turkey vulture)?” Or are the wings held flat with an occasional fast and frantic flapping (black vulture)?” When you can note these differences, you don’t even need to train your binoculars on these fascinating birds anymore; you can just admire their flying abilities. With experience, seeing an undulating flight pattern, followed by a distinctive ‘kihwr-kihwr’ call, will signal “golden-fronted woodpecker.” You need only hear the cascade of loud, magical whistles of the canyon wren, to know you are not alone between the walls of Santa Elena Canyon.

The latest birding app and a great pair of binoculars will help you to nail down that rare Colima warbler identification on the Pinnacles Trail, but you don’t need them to have fun bare-naked birding in Big Bend National Park! By the way, in addition to the possibility of it being quite painful, there *are* regulations against birding without your clothes on in Big Bend!

## 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

## Naked-eye Astronomy

Seasonal Park Ranger Gail Abend

Avert your eyes! Bare-naked birding may be a current rage, but naked-eye astronomy is nothing new. People have been checking out the heavens with curious, unaided eyes since the dawn of time, or at least since they viewed their first moonrise. Using averted vision, that is, looking out the corner of your eye, can assist in seeing dim stars. The photo-receptor cells in your eyes, known as rods, are concentrated in the periphery of your eye; therefore, you can see dimmer objects better if you don’t look at them straight on. Same goes if you come across one of those bare-naked birders.

Though identifying planets, stars, and constellations can be rewarding, night sky viewing offers food for the imagination and the spirit. On one of those incredibly clear nights in Big Bend National Park, step outside your tent, camper, or lodge room and

look up. You will be treated to thousands of stars. Because of the dry air and lack of light pollution you can see stars that would not be perceptible in even a small town, never mind a large city. On a recent visit to the park by a school group from Houston, I remarked how spectacular the Milky Way looked. The kids wanted to know where to look. Most had never seen that milky band of stars that crosses the sky. Here we can see our Milky Way from horizon to horizon. You don’t need equipment. Just look up. It’s inspiring.

Members of our solar system also adorn the sky. The brilliant diamond in the sky is the planet Venus. It shines either as the morning or the evening “star” and therefore is visible most of the year. Our planetary neighbor, Mars, glows red-orange due to the sun’s light reflecting off its dusty red surface.

The first graphic novels were written in the night sky. The star patterns, known as constellations, tell stories of superheroes, warriors, magic, and more. When you look into the sky and try to find the Greek hero Perseus or his winged horse Pegasus,

you might marvel at the Greek’s vivid imagination. Most constellations seem to defy logic, and you do need a good imagination to make them out. Nevertheless, it’s fun to navigate your way through the starry sky.

If you learn just a few constellations you can also find your way on the ground. Find the Big Dipper and you can find the North Star (Polaris) in the northern sky. All the planets and the moon first rise in the east and follow an imaginary line called the ecliptic or apparent path of the sun across the night sky to set in the west. The mighty warrior Orion and his companions the Big Dog (Canis Major) and Little Dog (Canis Minor) are seen rising in the southeast close to the ecliptic on a winter night. The Big Dog is found by the brilliant, bluish-white star, Sirius, which is the brightest star in the night sky.

All these wonders and more await you on a clear night. Look up with your naked eyes and lose yourself among the stars.

## 2012 Celestial Events

- May 5—Largest full moon of 2012. Reaches perigee (closest point to earth) at 11pm Central Daylight Time at a distance of 221,801 miles.
- May 20—Annular eclipse of the sun.
- June 4—Partial eclipse of the moon.
- July 14–15—Crescent moon, Venus, Jupiter, and the red giant star Aldebaran in the constellation Taurus have a meet-up in the dawn sky.
- August 12—Perseid meteor shower; crescent moon should not interfere with the 90 sightings per hour.
- August 31—Full moon tonight is the second moon in August and referred to as a “blue” moon.
- December 13–14—Geminid meteor shower; new moon will not obscure the 120 sightings per minute.
- December 24–25—Jupiter hovers above the waxing, gibbous moon.



# Keeping Wildlife Wild



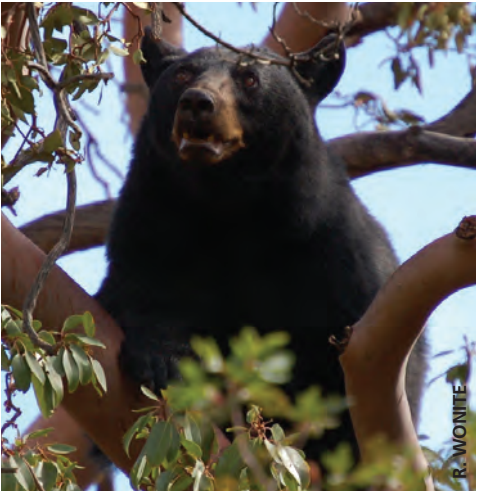
## Black Bears

The return of black bears to Big Bend National Park is a success story for both bears and for 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 around 15–20 black bears live in the park.

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.

Big Bend has made it easy to keep edible items away from bears. 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.



## 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 at park visitor centers.



## 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. Flatten tents when you are away from your campsite.



## 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.



## 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.



## 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 bearproof 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.
- Avoid carrying odorous food and toiletries.
- Leave excess food and beverages in your trunk or food storage box.
- Carry out all trash, including orange peels, cigarette butts, and left-over food.

### Cyclists

- Use food storage lockers when provided.

## Slow Down!

No, it's not to stop and smell the roses, but to save Big Bend's wildlife!

It's heartbreaking to see the number of animals killed each week on the park's roads. Snakes, songbirds, small and large mammals are hit on the road by cars, trucks, trailers, and RVs travelling at high speeds in a hurry to get somewhere.

While the park speed of 45 mph is still too high for some animals to react fast enough to avoid vehicles, excessive speeds will kill even the roadrunner, (the avian symbol of our park), as he zips across the road.

If you drive within the speed limit (or slower) you will have a much better opportunity to notice javelinas foraging on the side of the road, avoid a rosy-pink coachwhip slithering across the road in search of rodents, or see a lovely Del Carmen white-tailed deer bounding across the desert.

So please, slow down.... and enjoy!!





# Campgrounds



## 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 passes). 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 at this campground.

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

**Group Camping:** 7 group campsites are available by advance reservation. To reserve a group campsite, contact 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:** 31 campsites (no hook-ups). \$14 per night (\$7 per night with applicable passes). Pit toilets, picnic tables, grills, and water are available. No dump station, no generators allowed. A small picnic area is available across from campsite #23.

**Group Camping:** Cottonwood Campground has one group camp site available by advance reservation only. Maximum occupancy is 25 persons, minimum occupancy is 9 persons. Group campground is walk-in tent camping only. Vehicle parking is restricted to an adjacent parking area. To reserve the group campsite, contact 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-site campground (no hook-ups). \$14 per night (\$7 per night with applicable passes). 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 recreation.gov or call 1-877-444-6777.

**Group Camping:** 4 group sites are available only by advance reservation. Group campground is walk-in tent camping only. Vehicle parking is restricted to an adjacent parking area. To reserve the group campsite, contact 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, Inc., has the only full hook-ups in the park.

**Elevation:** 1,850 ft.

**Open:** Year-round

**Details:** 25-site, concession-operated RV park (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. are available.

**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	31	\$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			

# 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, this road is an easy drive, or excellent for bicycling. However, sandy areas or muddy conditions may seasonally exist. Check with a ranger.

Allow two hours to complete the drive. The speed limit on this narrow, winding road is 25 miles per hour.



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 55 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	Description
Dagger Flat	Bumpy but OK for cars; very sandy near the end
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, & slow
River Road East	High-clearance vehicles only
River Road West	High-clearance vehicles only, 4WD recommended
Black Gap	4WD required; infrequently maintained



# Backcountry



## Backcountry 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.

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

### Permits Required

A permit is required for all backcountry camping, river use, and horse use, and must be obtained in person at any park visitor center during normal operating hours. A permit can be obtained up to 24 hours in advance of the trip. The permit fee is \$10 for overnight-use, free for day-use.

Permits may be written for up to 14 consecutive nights in the backcountry. Park staff can assist you with trip planning based on your needs and current trail conditions.

### Backcountry Water

The dry desert air quickly uses up the body's water reserves. Each hiker should carry and drink a minimum of one gallon of water for each day they are in the backcountry. Spigots for drinking water are available at all visitor centers. Big Bend is a desert environment; springs and tinajas (depressions in rock where water collects) are rare and often unreliable. Water should be filtered. Every gallon removed from backcountry water sources is one less for the wildlife which depend on them. Please carry enough water to supply your own needs—don't risk your life by depending on desert springs. 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.



## 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 42 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 bearproof 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 1/2 miles 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.



## River Running

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. Three local companies (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.



## 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		
<b>Emergency Call 911</b>		
<b>National Park Service</b>		
General Information	432-477-2251	
<b>Big Bend Natural History Association</b>		
Booksales & Seminars	432-477-2236	
<b>Visitor Centers</b>		
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	
<b>U.S. Post Office</b>		
Panther Junction	432-477-2238	
<b>Lodging/Restaurant</b>		
Chisos Mountains Lodge	432-477-2291	
Reservations	877-386-4383	
<b>Gasoline Service</b>		
Panther Junction (diesel)	432-477-2294	
Rio Grande Village	432-477-2293	
<b>Camper Stores</b>		
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>		
<b>Lodging</b>		
<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 Motor Inn	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	
<b>Camping</b>		
Big Bend Motor Inn	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	
<b>Convenience Stores/Gasoline</b>		
Big Bend Motor Inn	800-848-2363	
Cottonwood General Store	432-371-3315	
Study Butte Store	432-371-2231	
Stillwell Store & Station	432-376-2244	
Terlingua Store	432-371-2487	
<b>Medical Services</b>		
Terlingua Fire and EMS	911	
Big Bend Medical Center	432-837-3447	
<b>Banks</b>		
Quicksilver Bank/ATM	432-371-2211	
<b>Local Outfitters</b>		
Big Bend River Tours	800-545-4240	
Desert Sports	888-989-6900	
Far Flung Outdoor Center	800-839-7238	
<b>Horseback Riding</b>		
Big Bend Stables	800-887-4331	
Lajitas Livery	432-424-3238	
Terlingua/Study Butte (30 miles west) and Marathon (70 miles north) offer basic services, including gasoline, restaurants, lodging, and campgrounds. Alpine, 100 miles northwest of the park, offers the greatest number of services.		

# 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 Mountain Lodge and Rio Grande Village Store both have ATMs. The nearest banking facility is located in Study Butte, 26 miles west of park headquarters.

## Camp Stores

Forever Resorts, LCC, operates stores at Castolon, Chisos Basin, Rio Grande Village, and in the Panther Junction service station. Each offer 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](http://www.nps.gov/bibe). Additional permits may be required.

# 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.

## 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

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

## Gas Stations

Gasoline is available at the Panther Junction and Rio Grande Village stations. Diesel is only available at Panther Junction. Rio Grande Village station also offers propane.

## 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 \$2 booklet is sold 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, a gift shop, and dining room. For more information call 432-477-2291 or 877-386-4383.

## Phones

Limited cell phone coverage is available in the park. Public pay phones are located at visitor centers, campgrounds, and stores.

## Post Office

A full-service post office is located at the Panther Junction Headquarters, open M–F, 8am–1pm and 3pm–4pm. 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

Public 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.



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
<b>Max Temp</b> (°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
<b>Min Temp</b> (°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
<b>Precip</b> (inches)	.46	.34	.31	.70	1.50	1.93	2.09	2.35	2.12	2.27	.70	.57