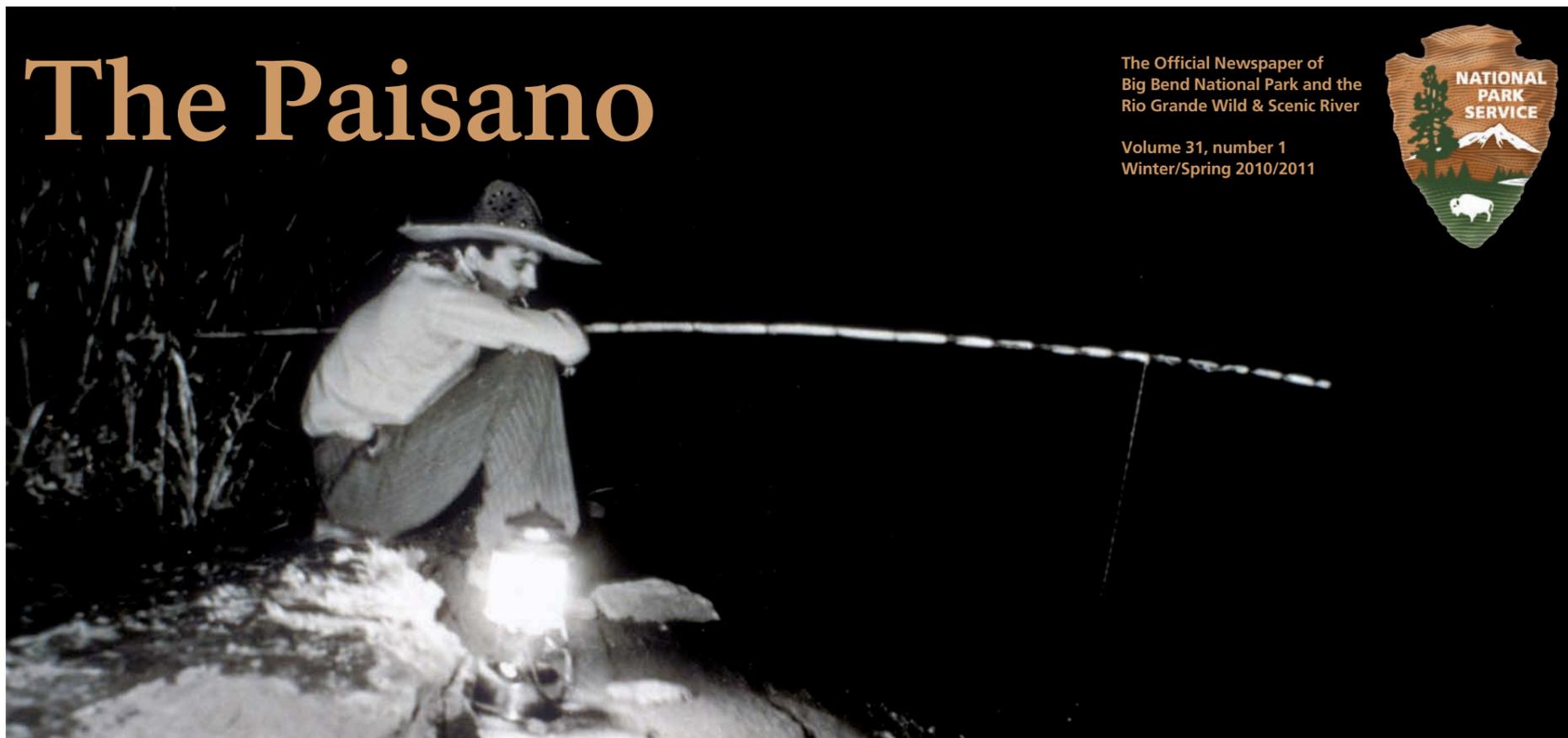


The Paisano

The Official Newspaper of
Big Bend National Park and the
Rio Grande Wild & Scenic River

Volume 31, number 1
Winter/Spring 2010/2011



Early morning fishing in the Rio Grande - 1930s

8 What to See & Do

Find out how to make the most of your time in the park. Recommendations and suggested trip itineraries for one day, three day, or week long visits can be found here.

9 Day Hikes

Find descriptions of many of the most popular easy and moderate hiking trails here. Detailed descriptions of each trail include length, average time required, difficulty, and location.

16 Park Maps

Don't know where you are? The park map can help. Detail maps of the Chisos Basin and Rio Grande Village are also found here. A list of useful phone numbers for services both in and outside the park is also included.

Emergencies

Call 911 or (432) 477-2251
24-hours a day or contact a Park Ranger

Any Time You Need A Friend

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 2,000 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.

A Big Bend experience is not solely the result of the efforts of the National Park Service. Many individuals and organizations partner with the park to provide park visitors a quality experience. They all work hard and play a role in the park operation.

The park recognizes in this issue of the Paisano a few of our partners, but even so, this issue can't recognize them all. From larger organizations like Big Bend Natural History Association, Friends of Big Bend, and Forever Resorts, to the scientists who research the park, and individual volunteers who give of their personal time, the millions of visitors who have come to the park since the 1940s have all had their experience shaped by our partners. Partners care about Big Bend, share a vision, and work together to support the mission of the National Park Service and Big Bend National Park.

This issue of the Paisano is dedicated to our partners and explores a few of the ways they have contributed to your visit today.



Superintendent's Message

As Big Bend's superintendent, I want to recognize the work of all of our park partners and commend them for their service. They have done so much that a list of all their contributions is more than can be chronicled in the Paisano. A national park, particularly one the size and complexity of Big Bend, takes the work of many people to be successfully managed. During your time here, perhaps take a moment or two to consider how partners have influenced your visit. Some partners raise funds for park efforts, others volunteer their time, yet others provide services that we all need in this remote corner of Texas. These people all have something in common; they share a dedication to Big Bend's mission. Perhaps you are considering becoming a park partner yourself. I look forward to continuing to work with all of Big Bend's partners into the future and developing new relationships as the world around us evolves. The 21st century presents many challenges and we, along with our partners, will find solutions. Big Bend National Park would not be the same if it were not for our many partners.

William E. Wellman
Superintendent William E. Wellman

To:

EXPERIENCE YOUR AMERICA™

What is a Paisano?

Paisano is a Spanish word meaning countryman or peasant that is used throughout the American southwest as a nickname for the greater roadrunner.

Big Bend on the Internet

Plan your next trip, or learn more about the fantastic resources of the Big Bend by visiting the *official* National Park websites. These are your best source of information for weather conditions, river levels, research, park news, trip planning, and more.

Big Bend National Park:
<http://www.nps.gov/bibe/>
Rio Grande Wild & Scenic River: <http://www.nps.gov/rigr/>



Got Water? Got Salt?

Carry and drink water—at least 1 gallon per person per day. Eat salty snacks and regular meals. As you exercise, you lose salt and water (over a quart and a half in an hour during arduous exercise). You need both to survive in this extreme environment.

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From:
Big Bend National Park
PO Box 129
Big Bend National Park, TX
79834





National Park Service
U.S. Department of the Interior
Big Bend National Park
Rio Grande Wild & Scenic River

The Big Bend Paisano is published by the National Park Service for the orientation and education of visitors to Big Bend National Park and the Rio Grande Wild & Scenic River.

National Park Service

Editor: Jeff Axel, Park Ranger
Chief Naturalist, David Elkowitz
Superintendent, William E. Wellman

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. As conservation educators, the park's Division of Interpretation and Visitor Services provides guided walks, talks, evening slide programs, workshops, and other educational activities as well as written materials such as this newspaper.

Big Bend Natural History Association

Executive Director, Mike Boren

The Big Bend Natural History Association,



established in 1956 as a private, non-profit organization, champions the mission of the National Park Service in facilitating popular interpretation of

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.

Photograph Credits

When possible *The Paisano* proudly uses photographs of the park taken by visitors and submitted to the website visitor photo gallery. These photographs bear the photographer's name; all uncredited images are NPS photographs.

On matters relating to this publication:

National Park Service
Editor, The Big Bend Paisano
PO Box 129
Big Bend National Park, TX 79834
bibe_info@nps.gov

Park Mailing Address

Big Bend National Park
PO Box 129
Big Bend National Park, TX 79834

Phone

(432) 477-2251

Official Park Websites

www.nps.gov/bibe/
www.nps.gov/rigr/

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

EXPERIENCE YOUR AMERICA™

Big Bend and the Border



At once a stone's throw and a world away, a visit to Boquillas, Mexico, was once part of the Big Bend experience.

Viewing the sunset against the Sierra del Carmen mountains is a signature Big Bend experience, underlined by the irony that the mountains aren't a part of the National Park; in fact, they aren't even located in the United States. 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 often 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. A visit to Big Bend is a wonderful experience to learn about the park's history and to experience a wide variety of natural history and recreation options. The park's border with Mexico is part of our shared landscape and a chance to experience and learn about our neighbors. A few simple steps can help keep the park safe for everyone who is here.

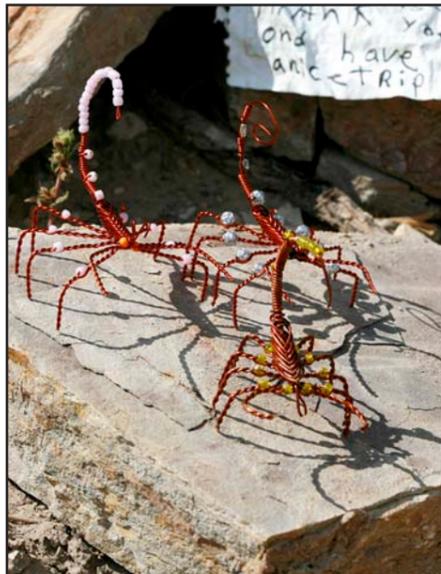
Crossings Remain Closed

As a result of a 2002 US Customs and Border Protection decision, there are still NO authorized crossings in Big Bend National Park. *Crossing at Boquillas, Santa Elena, or other locations along the Rio Grande is prohibited.* The closest legal ports of entry are Del Rio and Presidio, Texas. Perhaps a legal port of entry will be established in the park in the years to come. Meanwhile, the U.S. Attorney's Office has indicated that it will prosecute any criminal violations regarding any illegal crossings. If you re-enter the United States at any point within Big Bend National Park, you may be liable for a fine of not more than \$5,000 or imprisonment for up to one year, or both.

When Visiting A Border Park

Big Bend National Park shares the border with Mexico for 118 miles. This is a remote region. *Visitors should be aware that drug smuggling routes pass through the park.* If you see any activity which looks illegal, suspicious, or out of place, please do not intervene. Note your location. Call 911 or report it to a ranger as quickly as possible.

Each year hundreds of people travel north through the park seeking to enter the United States. It is possible you could encounter an individual or small group trying to walk through the park with little or no water. Please *do not stop*, but instead, note your location and immediately call 911 or contact a ranger as soon as possible. Lack of water is a life-threatening emergency in the desert.



Hand-crafted items made in Boquillas, Mexico can only be purchased legally at the Chisos Mountain Lodge, camper stores and the bookstore in the Panther Junction visitor center, not from sellers along the river.

Border Merchants

Mexican Nationals may approach you from across the river to sell souvenir items (walking sticks, bracelets, crafts, etc.). 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, archeological items, etc. cannot be purchased, imported, or possessed in the 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 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 now be purchased legally at a number of sales outlets inside and outside of the park.

Fees: Your Dollars at Work

Why Do Parks Charge A Fee?

Much of the funding for Big Bend and other national parks comes from American taxpayers. However, protecting this land and ensuring that you have a safe, enjoyable and educational experience costs more than this tax base provides. Therefore, the U.S. Congress determined that people who use federal lands should pay fees to help offset the difference.

Where Does Your Money Go?

Twenty percent of the money collected from entrance and campground fees is redistributed to units of the National Park System that do not charge fees to assist in their upkeep and to upgrade those areas. Eighty percent of the money collected here stays in Big Bend National Park.

How Is Your Money Used?

Your entrance and campground fees help Big Bend National Park complete important projects that directly benefit you and other park visitors.

Recent Projects at Big Bend Made Possible By Your Fees:

- Major expansion of the Panther Junction visitor center
- Castolon historic district exhibits
- Emory Peak Trail rehabilitation project to reduce erosion

Current Projects:

- North Rosillos/Harte Ranch wayside exhibit
- Backcountry campsite construction

Entrance Fees at Big Bend National Park

Single Private Noncommercial Vehicle

\$20 (valid for 7 days)

Single person entry on foot, bike, 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 (This pass will be valid for one year from month of purchase for entrance fees to federal public land fee areas)

All currently valid passes will be accepted until expired, including the Golden Eagle Pass, Golden Age Passport, and Golden Access Passport.

Park Partners



International Park Commission - Early 1930's

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 their 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 of 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.

For those who prefer to shop in person, or during your visit, BBNHA operates sales outlets at Amistad National Recreation Area in Del Rio, Texas, and in Big Bend National Park Visitor Centers at the Chisos Basin, Panther Junction, Persimmon Gap, Castolon, and Rio Grande Village.

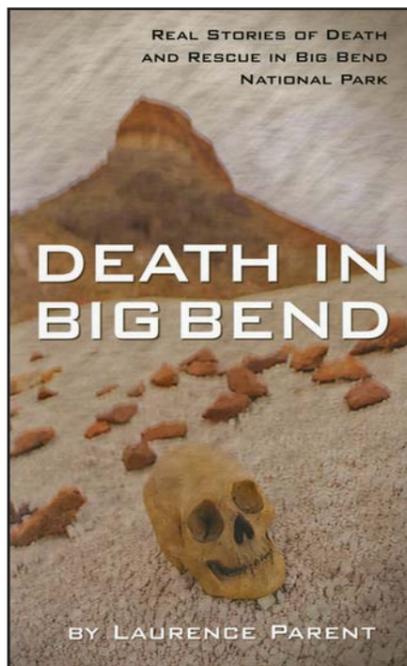
When preparing for a future visit, or remembering a previous trip, BBNHA offers both phone and internet sales. Phone orders can be placed during business hours seven days a week by calling 432 477-2236. Please browse through our online store at <http://www.bigbendbookstore.org/> You can enjoy safe, secure shopping in the comfort of your home. We offer many categories, authors, subjects, and titles.

Ongoing BBNHA projects include:

- Publish trail guides, brochures and the this newspaper
- Provide annual grants for research projects and administer grants and gifts received for the park
- Support the park's volunteer, Junior Ranger, and educational outreach programs



www.bigbendbookstore.org



The newest item available from BBNHA by author Laurence Parent has already become a fast seller.

Friends of Big Bend

Founded in 1996, the Friends of Big Bend National Park is a private not-for-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 equipment to monitor air and water quality, and the construction and renovation of Park infrastructure.

The Friends of Big Bend National Park host a yearly membership event and in-park tour, which is an excellent opportunity to get to know the board of directors governing the organization and perhaps even to get more involved with the group. Also, several fund-raising events occur in the major Texas cities throughout the year and are another opportunity to get involved and help with the mission of the Friends Group. The group's website is a great place to look for upcoming events and current happenings.



Get In On the \$30-Per-Plate Fund-raiser

Big Bend custom license plates are now available for your car, truck or motorcycle from the state of Texas and most of the cost will be used to help preserve and protect Big Bend National Park, one of the world's last great wildernesses. It may be the most fulfilling contribution you'll ever make.



Volunteers in the Park

Volunteers are a valuable and valued part of our operation and our community. Last year over 200 volunteers contributed approximately 45,000 hours of service to Big Bend National Park. Some service groups come for a few days, other volunteers stay for months. Some are students; others are retirees looking for adventure during their "golden years."

Most of these volunteers work in visitor centers and as campground hosts; however, volunteers also help in science and resource management, maintenance, and administration. Regardless of age or background, these folks share a desire to make a positive contribution to the preservation and management of Big Bend National Park.



Honor Roll

Join us in thanking the following individuals and organizations who have recently donated 100 or more hours in volunteer service to Big Bend:

Steve Ehrman
Tina Ehrman
Barney Ghim
Paula Jamps
Jan Barrons
Michelle Cason
Patricia Wheelless
Barbara Holliday
Christine Harris
Debbie Ambrose
Reine Wonite
Elaine and John Jonker
Ron and Jane Payne
Ted and Maryann Rowan
Bob and Ruthine Hennessy
Margaret and Phil Hodgens
Roy Ellis
Aletha and Kenny Ellis
Linda and Kenn Sutton
Mike and Nancy Coe
Pat and Marshall McCall
Carol and Don O'Brien
Mark Kirtley
Bob and Kay Foster
Linda Richardson
Jerry Turner
Elton and Esther Homan
Jim and Ginny Herrick
Richard McAvoy
Howard Guenther
Ann Roppo
Paul Bloom
Ed Navarro
Danny and Diana Edwards
Jenny Krouse
James Evens
Angie Dean
Ben Welldon
Mikayla Wilson
Elliot Luttrell-Williams
Catherine Tennial
Chris Cantrell
Elena Cervellione
Sam Beasley
Natalie Craig

Join us and 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 BBNHA and the Friends of Big Bend National Park 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 (W/ FBBNP) \$100

Life Membership

- Individual/Family \$500
 Corporate \$1000
 Benefactor \$2500
 Renewal
 New Member

Name _____
Address _____
City _____ State _____ Zip _____
Make checks payable to BBNHA or charge to:
____ Visa ____ Mastercard ____ Discover
Card Number _____ Exp. Date _____
Signature _____

Detach and mail to: Big Bend Natural History Association,
PO Box 196, Big Bend National Park, Texas 79834
Telephone: 432 477-2236

You can also join online at www.bigbendbookstore.org

News Briefs

Sublett Fire and Gila Smokejumpers

On the afternoon of May 21st at 5:00 PM lightning ignited a wildfire 1.5 miles west of Castolon and south of the road to Santa Elena Canyon. The fire ended up burning over 100 acres within the historic Sublett Farming District along the river. The fire was allowed to burn within defined boundaries, and cultural sites in those areas were carefully cleared so that no impact occurred. Benefits of this fire included removing vegetation, such as invasive and exotic species of saltcedar and giant river cane, from the former Sublett farmland. Due to the beneficial nature of the fire, it was watched carefully but allowed to burn until it finally burned out during a rainstorm in early June. The Sublett fire also permitted an historic training event. The very first smokejumpers to jump from a plane into a fire zone in the history of the state of Texas happened in the park during this fire. The smoke jumpers were dispatched from Silver City, New Mexico, on May 30, 2010. A total of five smokejumpers landed safely at approximately 9:15 AM on May 30th in the vicinity of the Sublett Fire. The five smoke jumpers jumped from a vintage DC-3 that was built in 1946 and maintained by the US Forest Service. The Gila Smokejumpers have worked from Silver City, New Mexico, since 1954 as part of a seasonal crew made up of jumpers from bases throughout the western United States. This jump also has the distinction of being the most southern fire jump ever made in the U.S. The park has entered a new era in fire management, using a natural and healthy force to help park environments such as the river riparian corridor to recover from overgrowth that has negatively impacted park resources. Rangers will also be burning exotic cane and saltcedar along the river to allow the river to flow more naturally and help reestablish animal habitat.



Big Bend National Park Assists with the Gulf Oil Spill Emergency

When it was clear that oil from the Deepwater Horizon's broken wellhead would hit national parks along the Gulf Coast, NPS Director Jon Jarvis sent out a call to all national park staff members to recruit those with expert skills who could assist. Two Big Bend employees, biologist Raymond Skiles and chief of interpretation David Elkowitz, asked if they could help. Big Bend superintendent Bill Wellman agreed, and sent Skiles and Elkowitz to Gulf Islands National Seashore, along the Florida and Mississippi coast. Gulf Islands is home to many sensitive animals that could be severely impacted by the spilled oil. People all across the country were concerned about the park and its wildlife and had many questions that needed answers. While much attention has been paid to the heroic efforts of those who toiled to clean oil from sea birds and other animals, one of the lesser known but critical functions in an emergency is that of a public information officer. The job of the PIO is to share accurate information, correct misinformation, and stop rumors. Skiles and Elkowitz arrived and put themselves through a crash course learning everything they could about the park and other nearby affected areas, got to know the various government entities such as the Fish and Wildlife Service and their various roles, where the oil was, and how it was impacting the region. They organized that information and made sure that it was shared with the public. They talked with work crews and concerned local citizens, answered phone calls, and gave interviews to members of the news media. When an emergency like the oil spill impacts the lives and livelihoods of so many, it is easy to overlook those who ensure that information is available. Most people can think of an emergency they have been involved with and how important it was to know accurate information about what was going on. Skiles and Elkowitz worked hard to share that information and help people understand the emergency. Along with many other PIOs, Big Bend staff members were able to help ensure that as many people as possible knew what was happening to a precious national park resource. They worked 10-14 hours each day, for 14 straight days, without a single day off until they were relieved by a fresh crew of PIOs.

New Picnic Area at the Fossil Bone Exhibit

Friends of Big Bend National Park raised \$38,000 to create a much-needed picnic area between Panther Junction and Persimmon Gap. The money came from the special Big Bend Texas state license plate available through the Texas Department of Motor Vehicles. The funding bought materials, paid for the slab pour, the ramada structure, and labor. Additional Friends funding was spent on further plans for the area. In the future, the site will have a new and improved fossil bone exhibit. The NPS will pay for a new restroom at the site as well, as there is no bathroom between Panther Junction and Persimmon Gap.



A great place for a picnic and a view toward the Chisos and a chance to explore the earth's past.

Patio Improvement at the Chisos Mountains Lodge

Forever Resorts, LLC, has made a major improvement to the outdoor dining experience at the Chisos Mountains Lodge. The scenic lodge was constructed in the 1960s, and in recent years the original concrete patio had cracked and shifted, creating a tripping hazard. A new patio has been poured, which also removed some stairs that presented an obstacle for mobility-impaired visitors. New low walls around the patio were covered by stonework in the style of the historic 1930s cabins built by the CCC. The improvements were funded by Forever Resorts, LLC.



A great place for dinner and one of the best views in Texas

Teacher - Ranger - Teacher:

Exceptional Partners for Unique Needs

Park Rangers Jane Dignan and Molly McCormick

Students at Delta Academy do not get to take field trips; they live a regimented lifestyle and have visiting hours. Delta Academy is a juvenile detention center school in El Paso and Jane Dignan is the science teacher there. In a recent interview, Jane noted, "My students' lives are in some form of turmoil and it is my job to create an atmosphere in which they become engaged in learning rather than dwelling on their own personal troubles. It can be a real challenge at times. I took a flight over Big Bend National Park with the park pilot and took a lot of pictures from the plane. These aerial photographs form the basis of my national park presentation and capture the student's attention, producing a calm, productive atmosphere. It helps them to see outside their circumstances – they get to visit Big Bend through me. That is very special."

While national parks offer access to the powerful ideas, values, and meanings associated with the cultural, natural, and historical heritage of the United States, and as such offer an unparalleled educational opportunity, not everyone can visit our parks. One popular NPS sponsored program which brings the national parks to the classroom is called Teacher Ranger Teachers (TRTs). School teachers are offered a chance to learn about the the National Park Service and national parks through firsthand experience working as national park rangers. TRTs then take this knowledge back to the community and classroom to share with their students and teacher colleagues.

For the past two summers, Big Bend TRTs Molly McCormick and Jane Dignan explored the resources, the people and events that shaped BBNP. They hiked, drove, or flew over and through the Chihuahuan Desert and Chisos Mountains; boated on the Rio Grande; and discovered the natural, historical and educational opportunities found at BBNP. They shared their experiences by presenting educational outreach programs in the park and surrounding local communities. They created and presented programs to young people for the Marathon Library Summer reading program, the San Vicente ISD summer enrichment program, and at the Museum of the Big Bend at Sul Ross State University. The ideals and knowledge they learned as rangers will then be presented throughout the school year and during National Park Week when they will don their NPS ranger uniforms to present programs at their school and community.

Molly and Jane note that their experiences as TRTs have greatly enriched their personal and professional lives. Molly agreed with Jane: "What we have gained through this experience will be multiplied in our classrooms ten times over. Our national parks can offer a life-changing experience and it is our job to share that with our students."



Big Bend's International Fire Fighting Team

Park Ranger Jennette Jurado

Fire! The park is burning. Careless cooking, burning toilet paper, or lightning could have started the blaze. The flames might be approaching the Chisos Mountains Lodge, a busy trail, or a campground. Fire-trained rangers have been called to the scene, but they won't be enough to work around the clock and contain a large-scale fire. Alpine, the closest city one hundred miles away, only has a small volunteer fire crew. The nearest national parks are hundreds of miles away. Who can the park call for reinforcements?

The call goes to an unlikely place: a village even more remote than we are. It is a place where dogs walk across dusty streets and power lines have yet to reach. The closest firefighters are not in our country, but in Mexico. Our neighboring communities of Boquillas, San Vicente, and Santa Elena, Mexico, are home to a crew of highly skilled men known as Los Diablos – those who can walk into the fires of hell and not be burned.

This unique international agreement began twenty years ago. The initial idea was to develop a local source of firefighters who would always be ready to help fight fire in this remote park. After navigating the governmental policies involved with bringing fire crews from other nations to the United States as it is done when other countries provide fire crews for fires in the US, this dream became a reality. In 1990, the first crew of Diablos trained side by side with park personnel and earned their red cards, a certification for being wildland firefighters. Once trained as firefighters, the Diablos can be a part of a twenty person crew. This crew includes one of Big Bend's bilingual firefighting staff who serves as the crew boss. Under him are three squad bosses (either another Big Bend fire fighter or a bilingual

Diablo), who in turn are responsible for leading a squad of four to five men. Squads from the Diablos crew are sent to work different parts of a fire: some use chainsaws to create a fire break, while others might work the actual fireline, together working in coordination to contain or manage a fire.

The Diablos are trained to help Big Bend with more than just fires. Through funding from the Rio Grande Institute, they have additionally helped the park by treating natural areas that are being taken over by



“The Diablo Program is an important example of cooperation over our border.”

–Jim Kitchen, Fire Management

invasive plants such as the tamarisk tree, and chainsawing, burning and spreading herbicide on both sides of the river.

Being a Diablo has also given many of these men opportunities and experiences they otherwise might not have known. Since 2001,

the Diablos have been able to work outside of Big Bend's boundaries, being sent to help on fires not just in other parts of Texas, but also in Arizona, New Mexico, Oklahoma, Colorado, Wyoming, Idaho, California, Oregon, Washington, and even helping in Louisiana during Hurricane Katrina. They have seen moose, mountains, and giant forests; experienced escalators, and flown in airplanes.

The Diablos program provides clear benefit for both sides of the river. Big Bend has a

earning fifteen to twenty dollars an hour for their hard and dangerous work, can make a considerable difference: enough to support a family and send their children to school in Muzquiz.

This year marks the twentieth anniversary of the Diablos crew. Of the original Diablos, seven remain active, willing, and able to work the long hours and pass the rigorous physical tests and training necessary to be a fire fighter. This long-term dedication is testament to how important the program is to these men, from finances to friendships built over the years. And we look forward to future fire assignments with the next generation of Diablos continuing this tradition as others have for decades.

Our current crew of 34 Diablos fire fighters is well respected in fire camps nationwide and is important for the safety and well being of Big Bend National Park. Through the Diablos program, Big Bend not only gets well trained, hard working, local fire fighters, but also is able to foster important international relationships with our neighbors to the south.



Diablos on a fire in the Pacific Northwest

crew of hard-working local men who can help in an emergency. The Diablos, in return, can earn more pay from one fire season than from a year of work in Mexico. In their remote villages, it is not uncommon to earn about a dollar a day at jobs like construction. Just one twenty day hitch working on a fire,

Volunteering - A Personal Partnership

Park Ranger Natasha Moore

Just this morning one of our regular volunteers left Big Bend heading for his permanent home after completing his yearly service here at the park. Watching my friend leave got me thinking about this different type of lifestyle and what it is like to be a volunteer here at Big Bend.

Our volunteers come from all over the country, and from all walks of life. Generally we ask for a commitment of three months. There is very little park housing available, so most of the volunteers live out of their RV's during that time period, which they all say can be pretty interesting! While staying in the park they do a variety of jobs such as working in visitor centers, serving as campground hosts, performing scientific monitoring, maintaining grounds and facilities, and patrolling the backcountry. After an intensive two-week park orientation training our volunteers begin their jobs with most of them working a four days on, three days off schedule.

We are very lucky to be a popular volunteer destination: applicants sometimes have a wait of up to 2 years before a position is available. I believe we have a very good program here Big Bend and I am always open and looking for opportunities to allow the program to continue to grow. I look at our current volunteers as a solid base on which

I hope to slowly build upon. Fortunately we have trained dependable volunteers who wish to return year after year; in fact we have several who have celebrated 15 years of service here at Big Bend! Talk about specialized knowledge and dedication!

I'm not sure what the volunteers find is their favorite thing about volunteering. I suspect that each of our 245 volunteers would probably say something different! With the incredible beauty of Big Bend, an extended stay in the park provides the opportunity to watch the clouds, marvel at the daily changes in light, observe the coming and going of wildlife, and experience the splendor of desert blooms. Most volunteers enjoy all the types of outdoor recreation that are close at hand in this scenic wonderland, but for some just relaxing in this scenic splendor while sitting out in front of their RV can be just as nice. Many express their enjoyment of meeting the interesting visitors from all over the world, and the knowledge they gain into the inner-workings of Big Bend.

If you have the time to invest, volunteering might be for you. The volunteer program provides an invaluable partnership for Big Bend National Park. In fiscal year 2009 volunteers provided approximately 45,000 hours of labor. This service allowed the park

to keep open the outlying visitor centers open during the busy season, allowed a campground host to be available helping campers, provided clean trails and visitor information on trail status, and put someone on the backcountry roads maintaining the backcountry campsites. All the volunteers provide invaluable services for the staff here at Big Bend. Without them we would not be able to get as much done for the park we also love. This is only a small part of the great work and service the volunteers do for Big Bend National Park. Not only is volunteering a fulfilling endeavor, but it can also become quite addictive. Many of the wonderful volunteers here at Big Bend

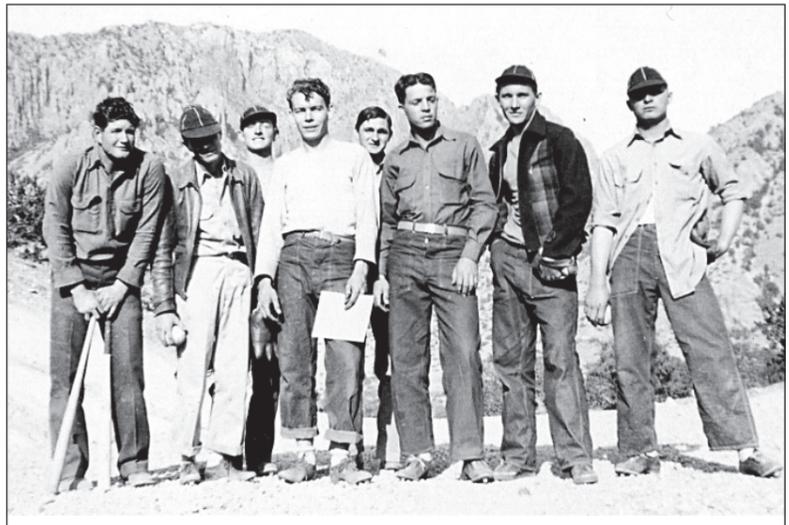
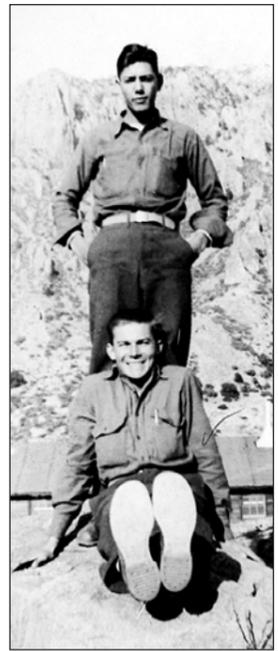
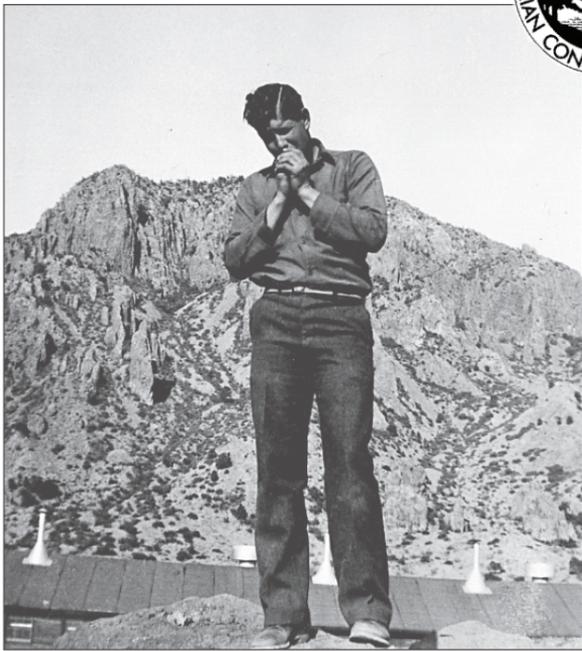
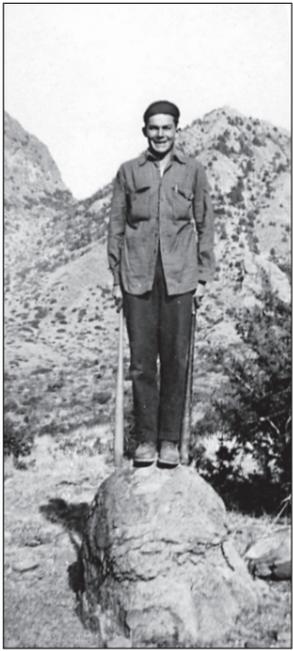
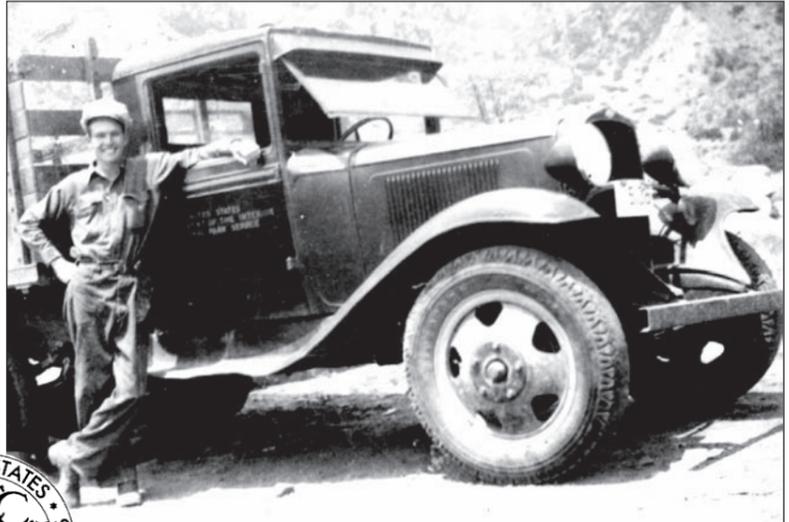
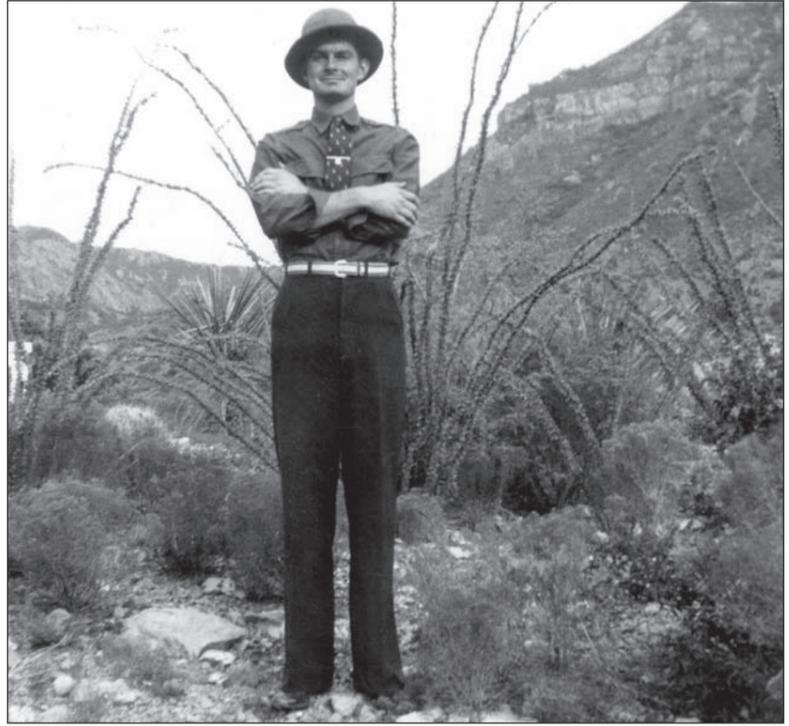
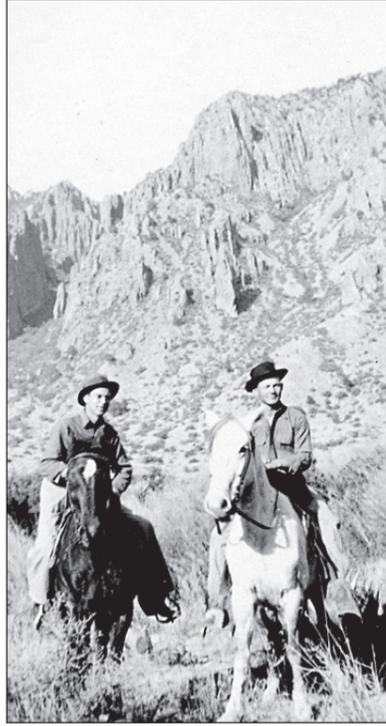
become full time travelers, living out of their RV's and volunteering at other great national parks, state parks, national forests, BLM lands and other exciting natural places. For me, as the volunteer coordinator at Big Bend, it is always bittersweet to see my volunteers head off on their next great adventure, but I know they will be back with us next year, like old friends returning home.

If you are interested in becoming a volunteer at Big Bend National Park, inquire at the visitor centers for a volunteer application or contact Natasha Moore at 432-477-1196 or Natasha_Moore@nps.gov.



The Civilian Conservation Corps Partnership

Faces of the young men who developed the Chisos Basin for you



Development of the Chisos Basin took place from the mid 1930s until 1941. Many of the men photographed here found themselves enlisted in the US Army at the advent of World War II, which ended the CCC period.

The Facts Behind the Factoids - Research in the Park

By Park Ranger Joselyn Fenstermacher

How many Big Bend factoids have you learned today? That there are 20-30 bears that call the park home? That 60 species of reptiles occur here? These and many other commonly asked questions would not have good answers if left only to our small Science and Resource Management (ScRM) staff. Working with many research cooperators allows all groups involved to leverage resources, enhance research and increase understanding of the park's natural and cultural resources.

When the National Park Service (NPS) was created, the driving force was to protect grand scenic vistas and places where vacationers could rejuvenate their souls. Over time, however, it became clear that there was more to these protected areas than the obvious beauty evident to any park visitor. Understanding what's 'under the hood' is critical to maintaining the integrity of these protected areas for future generations—the mission entrusted to the NPS when it was created by Congress in 1916. As the NPS explores science-based issues, bringing in outside expertise, funding, and people power is an important way for parks to accomplish their resource-preservation mandate.

Universities, non-profits, federal and state agencies—many different groups are involved with projects here in Big Bend. And the subjects aren't just charismatic species like bears and lions. Nearly 100 research permits are issued each year by the park's Science and Resource Management Division, covering a wide range of topics: plants, mammals, reptiles, insects, fossils, air quality, water quality/quantity, freshwater organisms, historic and prehistoric archaeological sites... the list goes on and on!

It is significant that most of these studies are proposed and conducted by independent researchers and not specifically recruited by park managers. Many scientists look to

public lands, and national parks in particular, as preferred locations for conducting their research. The relatively long conservation history of parks, in addition to the fact that public land is often much easier to access for scientific research than privately held properties, make places like Big Bend magnets for scientific work.

One excellent example of how partnerships can become win-win situations for many different groups is a long-term focus on the endangered Mexican long-nosed bat, *Leptonycteris nivalis*. Mexican long-nosed bats are not insectivores like Big Bend's 21 other bat species; they are nectar-feeders, using their pointy noses and long tongues to lick nectar from deep, tubular-shaped flowers. For most of the year *L. nivalis* live further south in Mexico, but in the spring females begin a long migration north, arriving here just as century-plant agaves begin to bloom. Their nectar and pollen are high-quality food sources, providing much-needed nutrients to the pregnant and lactating mothers. Eventually they settle into communal maternity caves where the young, only one per female per year, are raised. Once weaned, the juvenile bats and their mothers leave the maternity cave and continue the journey, following the century plant blooms through western Texas and New Mexico, eventually traveling back south deeper into Mexico where the flowers of tropical trees and columnar cacti await. The only known maternity colony in the United States is here in Big Bend National Park; the roost and yearly population numbers have been monitored annually since 1988 when the bat was listed as a federally endangered species.

Despite years of observation, not much is actually known about the foraging habits or migratory corridors of this species, nor about the total population size. Dr. Loren Ammerman and her colleagues from Angelo State University have long conducted the



Recently developed by NOAA, doppler radar units can now be deployed to the field for various applications.

annual monitoring and related ecological studies; new data from their work may overturn long-held assumptions related to the bats' dietary requirements and exactly how and where the young are born and raised. With basic biology still somewhat of a mystery, one sad fact seems to be that known populations of *L. nivalis* are declining.

Overharvesting of Mexican agave species for alcohol production and incidental mortality related to the frequent destruction of communally-roosting vampire bats are suggested as contributing factors to the shrinking numbers. But what happens between southeastern Mexico and western Texas? Are there other roost sites, other colonies where more bats might be found? Why even ask? Apart from the inherent value of biodiversity for its own sake, the bats are a critical pollinator of the agaves that grace our mountain hillsides and that underpin the economically important industry surrounding tequila/mescal/pulque production and exportation.

In order to fill in some of the gaps in knowledge, the non-profit organization Bat Conservation International (BCI) was recruited by BBNP to help conduct a multi-year study in both the U.S. and Mexico, with the goal of identifying other colonial roost sites in the region. BCI brought international work experience, a proven track record for good field work and logistical coordination, and their extensive knowledge of bat biology and regional natural history. Funding was secured from NPS sources, with BBNP directly contributing an invaluable network of local contacts, on-site knowledge of the study area, and aerial agave surveys, helping to narrow the search area for BCI ground-crews who are essentially looking for needles in a vast desert haystack. Partnerships are not limited to north of the border—Mexican private landowners, federally protected areas, and universities all have representatives working with Big Bend and BCI staff towards a successful field season.

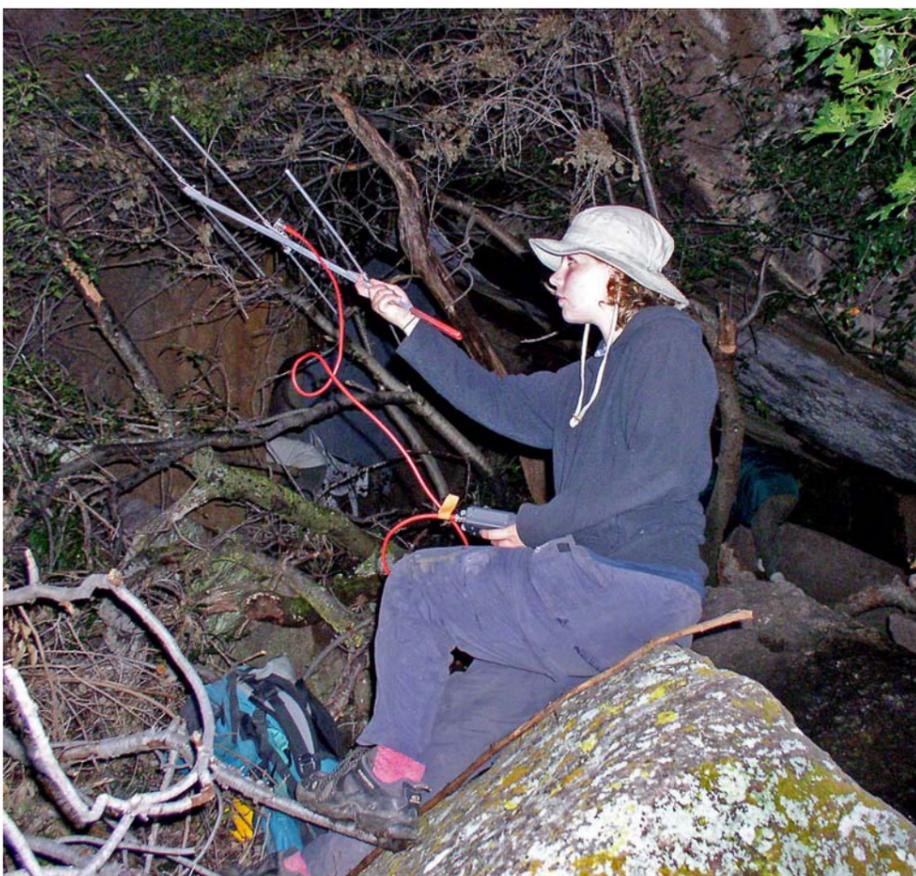
The partners involved, from BBNP to Angelo State and BCI, believe that these kinds of collaboration are invaluable. "We wouldn't have a hope of achieving our resource preservation requirements without partners," says BBNP Wildlife Biologist Skiles. BCI biologist Dr. Christa Weise feels that working with BBNP specifically, and on

public lands in general, are vital for the success of her organization's research and conservation agenda: "The ability to access populations and habitats at a landscape level, the local knowledge and baseline information that park staff provide, not to mention funding—these partnerships are critical, especially in Texas where there is little public land, and private property access is often difficult for scientists to obtain."

One bonus for the BCI group was that they were able to test out new technology during the Mexican long-nose project. NOAA recently developed vehicle-mounted radar stations that are primarily meant for mobile weather data collection. An interesting side-note is that the radar can also pick up swarms of biological activity, including insects and colonial bats as they emerge at dusk from their caves. After NOAA staff member Dr. Kenneth Howard contacted BCI about a bat emergence location recorded by one of their fixed-radar weather stations, Howard and Weise realized that the new mobile radar stations could be a valuable tool to search out new bat colonies. The Big Bend project was a perfect fit for a field test. Although no new bat colonies were discovered this season, valuable data was gained from tracking (and losing) individuals foraging across Big Bend's topographically complex landscape. Often research reveals more questions than answers, but it is important to know what should be asked rather than not know at all.

From a young age we all learn the benefits of "playing nice with others." Those lessons can develop into strategic ways to enrich life's possibilities. National Parks are no different than anything else in the web of life. Even though the land may be 'protected' it will only be a spot on a map if the larger picture isn't considered and the cookie-cutter parcel is left in a vacuum. A lot of work goes into learning the facts behind the factoids; the partnerships underlying that work enrich us all.

If you would like to see what research is going on in the park, consult a list of proposals desired for Big Bend, and browse scientific projects happening in national parks across the country at <http://www.nps.gov/bibe/parkmgmt/research.htm>



In one study, radio telemetry was used to track bats from their roost site in the Chisos Mountains to determine foraging territories and whether other roosts were used in the area. No new roosts were found, but bats were tracked flying all the way to Terlingua. Curiously, Terlingua is not the habitat of one of the bat's favorite food sources, the agave. The bats may have been visiting hummingbird feeders in town for sugarwater.

What to See and Do



You've driven many miles to get here, and have finally arrived at your destination: Big Bend National Park. But now what? Now that you're here, how do you spend your time? Where should you go? What should you explore? The park is big, and often visitors have a limited amount of time.

One Day

The visitor centers at Persimmon Gap, Panther Junction, and the Chisos Basin are excellent places to begin your visit. Park staff there can answer your questions, and exhibits provide additional orientation. If time allows, drive to the **Chisos Basin** to take in spectacular views of the **Chisos Mountains**. Walk the 0.3-mile self-guiding **Window View Trail** to get a feel for the mountain scenery and one of the best sunset views in the park.

A trip along the **Ross Maxwell Scenic Drive** will give you a taste of the Chihuahuan Desert and will lead you to the Rio Grande. This drive highlights the geologic splendor and complexity that the Big Bend is famous for. There are many scenic overlooks and exhibits along the way. Sotol Vista, Mule Ears Overlook, and Tuff Canyon are all worthwhile stops. The short walks to the Sam Nail Ranch, Homer Wilson (Blue Creek) Ranch, and a visit to the Castolon Historic District will give you a glimpse into Big Bend's past.

A highlight is the short walk into **Boquillas Canyon**—one of Big Bend's most scenic spots. Travel to the end of the Boquillas Road near Rio Grande Village to access the trailhead. The trail affords a good view of the small Mexican village of Boquillas, thought to be named for the small cave-like holes in the cliff that look like little mouths ('bocas' in Spanish). Perhaps you will see Singing Victor standing on a sandbar, known to regale rafters with song. Just remember that it is illegal to purchase items from Mexican nationals or cross the river.

Three Days

With three days to spend in the park, you can explore the major roads more thoroughly and still have time for hiking. In the Basin area, consider hiking the **Window Trail** (5 miles round trip) or the **Lost Mine Trail** (4.8 miles round trip); consult the *Hiker's Guide to Trails of Big Bend National Park*, for sale in park visitor centers, for trail descriptions.

In addition to the Basin and Ross Maxwell Scenic Drive (see suggestions for "one day") you can drive to **Rio Grande Village**, perhaps stopping at Dugout Wells along the way to walk the short Chihuahuan Desert Nature Trail. Many visitors are unaware that there is an enjoyable three mile trail from Daniel's Ranch to the Hot Springs. It follows the river. Alternately, the historic Hot Springs can be reached via an improved dirt road (not recommended for 'dooley' pickups or RVs)

The famous Balanced Rock can be found at the end of the Grapevine Hills Trail. A 15 minute drive down the Grapevine Hills dirt road will take you to the trailhead. While mostly easy, there is a steep section at the end where the balanced rock is located. A good time for pictures is the early morning or late afternoon.

One Week

With a week or more to spend in Big Bend, endless possibilities are open to you. You'll have plenty of time to explore the roads mentioned in the previous sections, and will also have time to drive some of the "**primitive**" dirt roads. For these, you'll need a high clearance or four-wheel drive vehicle. *Always check at visitor centers for current road conditions, and carry appropriate gear.*

The River Road, Glenn Springs Road, and Old Ore Road are some of the more popular primitive roads. A visit to Ernst Tinaja near the south end of the Old Ore Road is a Big Bend highlight. The Pine Canyon Trail, located at the end of the primitive Pine Canyon Road, is an excellent hike to experience firsthand the transition from desert to mountains.

If you don't have high clearance or four-wheel drive, improved dirt roads such as the Old Maverick Road, Dagger Flat, and Grapevine Hills will get you "off the beaten path." Hike the Chimneys Trail or Grapevine Hills Trail for a closer look at the desert environment.

If you'd like to explore the Chisos Mountains, trails to Boot Canyon, Emory Peak, and the South Rim offer good views of the park and take you into another world which seems far removed from the desert. There are plenty of opportunities for overnight backpacking along these trails. A backcountry use permit is required and can be obtained at park visitor centers.



Camping at Pine Canyon



Overlooking the desert



Bess Langford at the Hot Springs; 1930s. Fishing for catfish in the Rio Grande is still a fun pursuit.

Floating the Rio Grande

If you have the time and a spirit of adventure, you may want to consider a river trip. 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. Park Rangers can recommend a trip that meets your abilities and interests. Outfitters and equipment rental companies are listed on page 16. See "Backcountry Planning" on page 14 for additional information.

Backcountry roads

If you have a high-clearance or four wheel drive vehicle, Big Bend's backcountry roads call for further exploration. There are over 200 miles of dirt roads in the park. Improved dirt roads like the Dagger Flat and Grapevine Hills roads are usually in good condition and accessible to normal passenger vehicles, except following rainstorms. Unimproved dirt roads, such as the Old Maverick Road, Old Ore Road, or the River Road, generally require high-clearance vehicles and/or four wheel drive. *Always* check current road conditions at a visitor center before traveling any of the park's primitive roads. Standard backcountry road conditions are listed on page 14.

Enjoying Your Visit

No matter how limited your time in Big Bend, remember that you will enjoy the park more if you stop your car and explore on foot. That doesn't mean that you have to hike miles on steep grades; there are many short, easy walks and roadside exhibits where you can stretch your legs and enjoy the sights, smells and sounds of the Chihuahuan Desert.

Hiker's guides and road guides are available at visitor centers throughout the park, and they offer more detailed information about Big Bend's trails and roads. Attending **ranger-led walks** and **evening programs** are also good ways to learn more about Big Bend; check at the visitor centers and park bulletin boards for current activities.

Remember, you will NOT be able to see everything on this trip. You will probably enjoy the park more if you choose a few spots and explore them thoroughly to get a taste of what Big Bend has to offer. Then, come back again sometime to see the rest!



Take a Day Hike on Big Bend Trails

From the 7,832 foot (2,387 m) summit of Emory Peak, to the banks of the meandering Rio Grande, visitors will find over 200 miles of hiking trails in Big Bend National Park. Trails range from strenuous primitive routes through rugged desert backcountry to short handicapped-accessible pathways. Whatever your style of hiking, you can find it in abundance in Big Bend.

On this page are descriptions of some of the most popular easy and moderate hiking trails, divided by the geographic areas of the park. Most of these trails are perfect for shorter day hikes of up to several hours.

Trail	Trailhead Location	Round Trip (mi/km) (avg. time)	Elevation (ft/m)	Description
Eastside — Panther Junction and Rio Grande Village				
Grapevine Hills <i>Balanced Rock</i>	Grapevine Hills Road - 3.5 miles west of Panther Junction Usually passable to all vehicles.	2.2/3.5 1 hour	240/73	Easy Follows a sandy wash through boulder field. A short but steep climb at the end over beautiful eroded granite takes you to a large balanced rock.
Hot Springs 	End of Hot Springs Road. Unpaved and narrow road.	0.75/1.2 1/2 hour	0/0	Easy Walk past historic buildings to the riverside hot spring. Take a bathing suit and soak in 105°F water. <i>Spring is subject to flooding due to rising river levels.</i>
Daniel's Ranch to Hot Springs Trail	Daniel's Ranch parking area, west of Rio Grande Village	6/10 3 hours	100/31	Moderate Trail leads from Daniel's Ranch to the Hot Springs. Cliff dropoffs prevent access to the river along most of the route. No shade - oppressive on hot days.
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."

The Chisos Mountains

Basin Loop	Chisos Basin Trailhead (near the Basin Store)	1.6/2.6 1 hour	350/107	Moderate Connects the Laguna Meadow and Pinnacles Trails. Nice views of the Basin area.
Window View  	Chisos Basin Trailhead (near the Basin Store)	0.3/0.5 1/4 hour	0/0	Easy Level, paved, handicapped accessible. Great mountain views. The best place in the Basin to catch sunset through the Window.
Lost Mine 	Basin Road mile 5 at the pass	4.8/7.7 3 hours	1100/335	Moderate but steep Provides excellent mountain and desert views. For those who want a shorter hike, 1 mile down this trail is a great view to the southeast.
The Window	Chisos Basin Trailhead or Basin Campground	5.6/9.0 4 hours 4.4/7.0 3 hours	980/299 500/152	Moderate with steep return Descends to the top of the Window pouroff. Great scenery and wildlife viewing. For a shorter hike, start at the Basin campground.

Smoking is prohibited on all trails in the Chisos Mountains.

Westside — Ross Maxwell Scenic Drive

Santa Elena Canyon	Ross Maxwell Drive 8 miles west of Castolon	1.6/2.6 1 hour	80/26	Easy Crosses river sand and rocks, including wading Terlingua Creek. Switchbacks ascend and then the trail gradually drops back to the river in the canyon.
The Chimneys	Ross Maxwell Drive mile 13	4.8/7.7 2 hours	400/122	Moderate due to length Flat and scenic desert trail to rock formations. Look for rock art. No shade.
Mule Ears Spring	Ross Maxwell Drive mile 15	3.8/6.1 3 hours	20/6	Moderate A beautiful desert hike to a small spring. Spectacular geology and mountain/desert views.
Upper Burro Mesa Pouroff	Ross Maxwell Drive mile 6	3.6/5.75 2 hours	300/91	Moderate Walk in the wash downstream through two canyons to reach the upper lip of a waterfall that is wet only after rain. Do not take this trail when storms are likely due to a lack of escape routes.

 = Self-guiding trail

 = Accessible trail

Looking for more hikes and information?

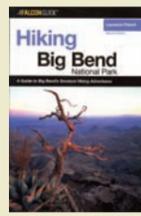
For information on longer, more challenging routes, or to plan an extended backpacking trip, stop by any park visitor center. A large selection of maps and trail guides are available and park rangers can assist you with trip preparations and backcountry permits. Visitor center bookstores carry a large selection of maps and guides. Below are a number of items that can assist in planning your Big Bend adventure.



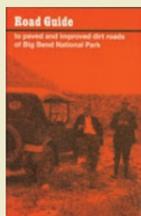
Hiker's Guide to Big Bend National Park
Updated in 2005. Covers all major trails in the park, from short self-guiding nature trails to strenuous backpacking routes. \$1.95



Road Guide
Guide to backcountry roads
Updated in 2004. Detailed mileage logs of Old Ore Road, Glenn Spring Road and River Road. Good descriptions of historic sites and scenery. \$1.95



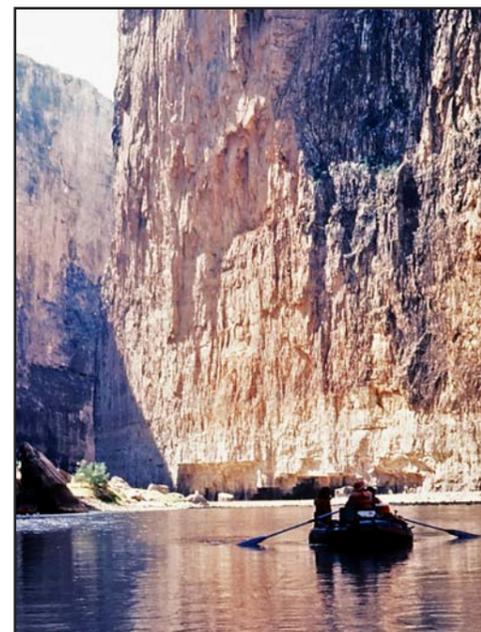
Hiking Big Bend
In collaboration with National Park rangers, Laurence Parent has compiled a comprehensive guide to 44 of the most popular hikes. Photos show terrain and views. Describes difficulty, elevation changes, and maps needed. Also includes three hikes in Big Bend Ranch State Park. \$14.95



Road Guide
Guide to paved and improved dirt roads
Describes points of interest visible from all paved and improved dirt roads in the park. \$1.95



Chisos Mountains Trails Map
A topographic map that includes all trails in the Chisos Mountains. Includes trail lengths and descriptions. 99¢



A canyon float trip reveals hidden parts of the park.

Once in a Lifetime

Santa Elena Canyon Float Trips

Distance: 19 river miles (30.4 km)

By Park Ranger Bob Smith

Before becoming a Park Ranger, I was a commercial boatman for three years with one of the local outfitters in Terlingua. I had been guiding whitewater rivers in Colorado and Utah for several years before ever putting oar to water here. I had heard about the magnificent canyons of Big Bend from other boatmen, but was not prepared for what I saw and felt once I arrived. In Colorado and Utah, whitewater rafting is fast, noisy, and filled with white knuckle excitement. There was little time for "looking," since the water moves much faster. The difference between those rivers and the Rio Grande is striking.

My first trip through Santa Elena was for training, but it actually changed my view of river travel. The first thing I noticed was the quiet. It was so quiet it was loud. It was also much slower, so one had time to take in the surrounding country. As a guide, I actually had time to talk with my guests, to weave stories of the natural and cultural history of the Big Bend. It was at that point I also realized that commercial outfitters are partners with the National Park Service in nurturing the appreciation of Big Bend.

As interpretive Park Rangers, we present naturalist programs multiple times a week, but time in the field can be rather limited. Law enforcement rangers are often visible in the front country but still cannot be everywhere at once. Resource managers are out in the field often, but have limited visitor contact. In this respect, the outfitters shine as park partners. They are out there everyday.

The guides are able to provide resource interpretation on river trips that last from several hours to more than a week, a luxury of time that park rangers are unable to match. Outfitters are also extra eyes and ears, spotting problems that can be reported and dealt with quickly, or even finding new discoveries of significant resources. Our current partners also assist park staff with search and rescue operations, medical events, and emergency medical training. The partnership we have with the local outfitters not only benefits the park itself, but also extends the available activities our visitors can choose to participate in while here and enhance their appreciation of Big Bend National Park.

One of the most exciting, most sublime, activities a visitor can do while here is a river trip. For the visitor it may be a once in a lifetime experience. Chances are, though, they will return. Outfitters provide a service to those visitors who either lack the equipment or the skills to explore a portion of the park they might not otherwise see. They give folks an opportunity to find their special place in the Big Bend. For me, on the river, it is always Santa Elena...

Birds and Birdwatching

Park Ranger Mark Flippo

In this issue of the Paisano we highlight the contribution of park partners – individuals and organizations who work with park staff to enhance services for the public, and to expand our knowledge of the complex resource base of the park. With regard to birding, partners you may think of include professional ornithologists from federal and state agencies, or perhaps graduate students representing a variety of universities who conduct focused studies on a particular species. You might also consider as well the professional birding guides working for commercial nature tour companies, who arrive with groups of very focused clients. Indeed all the above have made contributions to the knowledge base of Big Bend's birds. Perhaps our most important partner though, is you, the birder.

The park's list of 452 species has been built over the years from reports from those park visitors who come specifically to search for and enjoy the birds of Big Bend. Every year birders add something new to the list. Sometimes it involves a species new to the park. This is a rare event, most recently in August, 2007, when a fan-tailed warbler was discovered in Pine Canyon. Occasionally the contribution comes in the form of documenting species that previously were considered hypothetical in the park (species reported in the park but lacking documentation and confirmed elsewhere in Texas). Recent contributions include pectoral sandpiper (9/2009), anhinga (5/2010), and bobolink (4/2010).

Not every outing produces such finds, but your reports of rarities, sporadically occurring species, arrival times, courtship and nesting activity, are all significant. Birds are members of dynamic populations that ebb and flow with changing environmental conditions. Your detailed reports, however inconsequential they may seem, could actually be the first indication of a changing population trend. Thirty years ago, golden-fronted woodpeckers were rare vagrants. Now they are common year-round residents. Fifteen years ago Carolina wrens were rare winter visitors, but now can be found year-round along the riparian corridor of the river. On the flip-side, eighty years ago yellow warblers apparently once nested in the region, but now appear here only as migrants.

There is much still to be learned about birds, particularly now in a rapidly changing world. We count on you to share your discoveries, to share in the effort to expand knowledge and shape management policy. The more detailed the report, the better: written accounts of what was actually seen at the time of observation, how similar species were eliminated, conditions at the time of observation, photographs or drawings, all are important for documentation. You can submit your report at any park visitor center or, for review species (extremely rare species anywhere in Texas, four or fewer records per year), you may go to the Texas Bird Records Committee home page to access their report form (<http://www.texasbirds.org/tbrc/>).

You are in a great place at a great time to be a partner in birding. The spring migration is at hand. Beginning in late February, the pace quickens through March and April, peaking in the last two weeks of April and the first week of May. In this flood of birds are many neotropical migrants returning from wintering ranges in Latin America including Townsend's, hermit, and black-throated gray warblers.

Also arriving in spring will be neotropical species that nest in the park, including some Big Bend specialties. The much-sought Colima warbler typically isn't on territory in the high Chisos until the first weeks of April. In your search for Colima warblers, keep an eye out for other interesting birds, including blue-throated hummingbirds, cordilleran and dusky-capped flycatchers, painted redstarts, and black-chinned sparrows, all possible in the high Chisos mountains. Lucifer hummingbirds generally arrive in late March, and can be found feeding on early-blooming ocotillos in the foothills of the Chisos and lower surrounding desert. The first two to three miles of the Blue Creek Trail has been a reliable area to find this little hummer in early spring, as well as being a great place to find gray vireos and varied buntings.

If you are limited for time, head to the river (including Rio Grande Village and Cottontown Campground). Nearly 75% of all the listed species have been observed in riparian areas. Gray and common black-hawks are probable in cottonwood areas



The vermilion flycatcher provides a splash of red in a park landscape famous for its subtle color palette.

along the river during the spring. The diversity of flycatchers there is high, from the unmistakable and eye-stopping male vermilion flycatcher to noisy Cassin's, western and tropical kingbirds. Among the most colorful birds, male painted, lazuli and indigo buntings are most easily seen along the river, as is an impressive display of orioles, including orchard, Bullock's and hooded. Whether from a trail or a canoe, birding the river will be productive.

So go, binoculars and scopes in hand, and explore the river, the mountains, the secluded canyons, the isolated backcountry springs and seeps. The birds await you. We await your discoveries. Thanks partner!

Hello Darkness My Old Friend

Park Ranger Bob Smith



Emory Peak, April 15, 2007, near local midnight. This 360-degree photo shows the Milky Way skirting the entire horizon. The Zodiacal band and gegenschein glows are visible, which are reflections of sunlight from interstellar dust. The small bright spots on the horizon line are far-off cities such as El Paso, TX and Chihuahua City, MX, whose lights are only visible due to this time exposure photo. The park radio tower is on the right.

Borrowing a line from Simon and Garfunkel, dark night skies are now darker in Big Bend due to the installation of low power, less intense lighting in several areas of the park. From an aesthetic point of view, less invasive light intruding on the landscape means more stars! For the skywatcher this is a big plus.

Big Bend has one of the darkest night skies of any national park unit in the lower 48 states, something that we are extremely proud of and carefully guard. The reason for such dark skies is rather simple: not many people. The closest major metropolitan areas are Midland-Odessa and El Paso-Juarez, which are over 240 miles away. This natural darkness greatly enhances the ability of the casual sky observer to see many more stars with the naked eye. Both amateur and professional astronomers take advantage of this; the University of Texas McDonald observatory is located in the Davis Mountains not far from here, and many astronomy groups come to Big Bend for viewing trips as well.

For many visitors, the lack of artificial light and the abundant stars visible without a telescope is just right for them. The places where they are from most likely have considerable light pollution, reducing the number of visible stars by half or more. Big Bend night skies, undiminished by light pollution, offer a clean unobstructed view of the heavens. A simple pair of binoculars will allow more details to be seen without the expense of a telescope. For visitors that want to get off the beaten path, the many backcountry campsites along the paved and unimproved roads offer excellent isolated viewing platforms for night sky observation.

The internet offers a good planning guide for timing a visit to specific celestial events. One might want to plan a trip for a specific meteor shower, eclipse, or even a predicted comet. Planetary observation is also enhanced here due to the lack of ambient artificial light. Predictions and celestial calendars are abundant with a simple web search.

As time goes on and cities get larger, light pollution will continue to increase and dark night skies will become even more precious. Many national parks, including Big Bend, are reducing light pollution and offering education as to the value of dark night skies. It is a resource that not many thought about until recently. Many cities are also making inroads into reducing light pollution by installing guards to keep light from straying upwards and using less intensive light to reduce power consumption.

The value we place on dark night skies from an aesthetic point of view is becoming more evident by the way society is reacting to light pollution. Scientific research is also finding that artificial light has detrimental effects on the natural world as well. Steps taken to reduce light pollution can have a positive influence on everything from salamanders to birds to moths and bats. The efforts to reduce light pollution can't help but benefit the planet. Hopefully, the relatively unimpaired night skies of Big Bend will be there for all visitors to enjoy and appreciate for centuries to come.

CELESTIAL EVENTS AT BIG BEND

- Geminids Meteor Shower - December 6-19 with the peak on the 13-14; up to 60 meteors per hour and possibly 120 per hour in places like Big Bend
- Full Moon - December 21st
- Winter Solstice - December 22nd
- Total Lunar Eclipse - December 21st - visible after midnight in North America
- Quadrantids Meteor Shower - January 1-5 with the peak on the 3-4; up to 40 meteors per hour
- Full Moon - January 19th
- Full Moon - February 18th
- Full Moon - March 19th
- Vernal Equinox - March 20th
- Saturn at Opposition - April 3rd, Saturn will be at its closest to Earth for the year
- Jupiter disappears on April 6th. The planet is not visible from Earth for about a week on either side of the 6th since it's actually behind the sun during that time
- Full Moon - April 18th
- Lyrids Meteor Shower - April 16-25 with the peak on the 21-22 with about 20 meteors per hour
- Full Moon - May 17th

Keeping Wildlife Wild



Snacks for bears are not on the menu at the Lodge for a good reason - our food is bad for them.

M. GONZALES

There really are no problem animals—only problem people. Carelessness can kill. Don't be responsible for the death of a wild animal. Your actions affect both Big Bend's wildlife and future park visitors. With your help, wildlife and humans CAN live safely together in Big Bend National Park.

Mountain Lions

Solitary and secretive, the mountain lion is Big Bend's top predator, and is vital in maintaining the park's biological diversity. Everywhere you go in Big Bend, you are in the territory of at least one lion. From mountain to desert, biologists estimate that the park has a stable population of approximately two dozen lions. Within the delicate habitats of the Chihuahuan Desert, mountain lions help balance herbivores and vegetation. Research shows that these large predators help keep deer and javelina within the limits of their food resources. Without lions, the complex network of life in Big Bend would certainly be changed.

Each year, an average of 130 sightings of mountain lions are reported by the visiting public within Big Bend National Park. While over 60 percent of these sightings were along park roadways, encounters along trails have also occurred. Mountain lions live throughout the park, including the Chisos Mountains, where they sometimes use man-made trails. The best plan of action is for you to be aware of your surroundings. Watch children closely; never let them run ahead of you. Avoid hiking alone or at dusk and dawn.

A free brochure with more information about mountain lions is available at all visitor centers.



D. SWEETMAN

Javelinas

For many visitors to Big Bend National Park, seeing a javelina (pronounced *hav-uh-LEE-nuh*) is a new experience. These curious creatures, also known as collared peccaries, are only found in the United States in Texas, New Mexico, and Arizona. They are covered with black, bristly hairs and generally weigh between 40 and 60 pounds. They usually travel in groups called bands that consist of 10-25 individuals. Peccaries have a highly developed sense of smell, but very poor vision. Physically, javelinas resemble pigs, but in reality, they are not closely related to pigs at all and have been genetically distinct from them for millions of years.

A javelina's diet includes prickly pear cactus, grasses, mesquite beans, piñon pine nuts, fruits, berries, and seeds. Unfortunately however, many javelinas now include human food as part of their diet.

Every year we are seeing more and more campsites in the park raided by javelina. Although normally not aggressive, they can be when food is involved. Protect yourselves and the javelina by properly storing all your food inside a vehicle or in the food storage lockers provided in the campgrounds. Do not leave coolers or food boxes unattended on picnic tables or in a tent. Flatten tents when you are away from your campsite. It is important that javelinas and all park animals eat their natural food sources to stay healthy and safe. With your help, these unique animals can continue to thrive and thrill park visitors for years to come.



J. AXEL

Black Bears

The return of black bears to Big Bend National Park is a success story for both the bears and the park. Native to the Chisos Mountains, bears disappeared from this area by the 1940s. After an absence of nearly fifty years, bears began returning to the park from Mexico in the late 1980s. Today, wildlife biologists estimate that between 15-20 black bears may live in the park.

Black bears are omnivorous; their normal diet is comprised of large amounts of nuts, fruits, sotol and yucca hearts, and smaller quantities of small mammals, reptiles, and carrion. Bears normally avoid humans, but bears that learn to get food from human sources often become aggressive in their attempts to get more "people" food. Rangers may have to kill bears that lose their fear of people and endanger humans in their attempts to get our food.

Big Bend has made it easy to keep edible items away from bears. Campers at the Chisos Basin Campground, at High Chisos backpacking sites, and at some primitive roadside campsites will find bearproof storage lockers for storing all edibles. Hard-sided vehicles are also suitable for storing edible items. All dumpsters throughout the park are bearproof, as well.

A free brochure with more information about black bears is available at all visitor centers.



Do Not Feed the Animals. Not even once. It's bad for them, they can hurt you, and it's against the law. Don't touch, don't feed.

Please Help

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 restroom utility sinks, not on the ground.
- Ice chests and coolers are not bear-proof; store them in your vehicle.

Cyclists

- Use food storage lockers when provided.

At the Lodge

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

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.
- Ice chests and coolers are not bear-proof; store them in your vehicle.

If you encounter a bear or mountain lion:

- 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 at it.
- If attacked, fight back.
- Report any bear or mountain lion sightings or encounters to a park ranger as soon as possible.

Information and Services

Ranger Programs

Join a park ranger for a guided hike, evening slide show, talk, or workshop on Big Bend's natural and cultural history. These free programs are offered most days. Consult the Interpretive Activities Schedule posted on visitor center and campground bulletin boards for more information.

Camper Stores

Forever Resorts LLC operates camper stores ear-round at three locations in the park: Castolon, the Chisos Basin, and Rio Grande Village. Groceries, camping supplies and souvenirs are available in all locations. The gas station at Panther Junction also has a limited selection of groceries.

Banking

There are NO banking facilities in Big Bend National Park. ATMs are located in the park at the Chisos Mountains Lodge and the Rio Grande Village Store. The nearest bank is located in Study Butte, 26 miles west of park headquarters. Most stores accept major credit cards; however, some local services accept only cash. It is advisable to have small bills (\$1, \$5, \$10, \$20) since larger bills are often difficult to change.

Lodging

The Chisos Mountains Lodge, operated by Forever Resorts LLC., is located in the Chisos Basin at 5,400 feet elevation. The lodge offers 72 rooms, plus a gift shop and dining room. For reservations or more information, please call 432 477-2291 or visit their website at chisosmountainslodge.com

Gas Stations

Gasoline is available at two locations in the park operated by Forever Resorts LLC. The Panther Junction station offers gas and diesel. The gas station at Rio Grande Village offers unleaded fuel and propane.

Post Office

A full-service Post Office is located at the Panther Junction headquarters, across the porch from the visitor center entrance. A mail drop is also available in front of the Chisos Basin store. Open M-F daily 8am - 1pm and 3pm-4pm except federal holidays.

Wifi/Public Phones

Wireless internet is available at the Chisos Mountains Lodge and the Rio Grande Village Store. Public phones are located at visitor centers, campgrounds, camper stores, and the Chisos Mountains Lodge.

No Fires

Ground fires and wood fires are prohibited throughout the park. Use only gas stoves or charcoal within a BBQ grill. Pack out all evidence of use, including ash. In the backcountry, charcoal fires are only allowed at roadside campsites and are prohibited in the High Chisos or zone camping areas.

Showers and Laundry

Public showers and laundry facilities are located at the Rio Grande Village store.

Cell Phones

Limited cell phone coverage is available in the Big Bend area. *Do not* depend on your phone to work in the Chisos Basin or remote portions of the park.

Recycling

Please use the recycling cans provided in campgrounds, around stores, and near visitor centers. On average, the park recycles around 100,000 pounds of material each year. Every pound of material that can be recycled means one less pound buried in the park landfill. Please recycle!

Accessibility

All visitor centers are accessible. Wheelchair-accessible campsites and restrooms are located in the Chisos Basin and Rio Grande Village Campgrounds. The Chisos Mountains Lodge restaurant is accessible, as are some motel rooms. A Telecommunications Device for the Deaf is available at park headquarters. Employees with sign language abilities may be available. Some ranger-led programs are also accessible. The Window View Trail is paved and fairly level. A brochure on accessibility is available at all visitor centers.



J. JURADO

Camping

Tent Camping

The National Park Service operates campgrounds at Rio Grande Village, the Chisos Basin, and Castolon. The cost is \$14.00 per night for a site. Campsite fees can be paid in US currency, personal checks, or credit card. Camping is also available at primitive backcountry campsites in the Chisos Mountains and along backcountry roads. High-clearance or 4-wheel drive vehicles are necessary to reach most road sites. Backcountry permits are required and can be obtained in person at park visitor centers up to 24 hours in advance (see page 14).

Camping areas are often full during the Thanksgiving and Christmas holidays, as well as during spring break in March or April.

Trailers & RVs

All park campgrounds can accommodate trailers and RVs, but vehicle lengths have a great deal to do with safely reaching the campground and finding a suitable space.

The only hookups available in Big Bend National Park are at Rio Grande Village in the 25-site, Rio Grande Village RV Park operated by Forever Resorts LLC. Although there is no size restriction, your vehicle must be equipped with water and electrical hookups as well as a three-inch sewer connection. Register at the store. No advance reservations.

Near the RV park is the 100-site Rio Grande Village Campground operated by the National Park Service. Water, flush toilets, and a dump station are available. Set in a large grove of cottonwoods, the campground is adjacent to the Rio Grande. Many of the sites are pull-throughs. Generator use is limited: from 8:00 am to 8:00 pm daily. A no-generator use area is also designated.

The 60-site Chisos Basin Campground is rugged and hilly. The sites are small and most are not suited to recreational vehicles or trailers. The road to the Basin is steep and curvy, especially at Panther Pass—the road's highest point. The road into the campground is a 15 percent grade. Trailers longer than 20 feet and RVs longer than 24 feet are not recommended.

Cottonwood Campground, near Castolon, offers pit toilets and potable water, but no hookups or dump station. *Cottonwood is a NO-generator campground.*

Big Bend's unpaved roads are generally unsuitable for RVs and trailers. Overnight camping in any primitive site requires a backcountry permit, which can be obtained in person at park visitor centers up to 24 hours in advance (see page 14 for more information).

Group Camping

Groups of 9 or more are eligible to reserve a spot in one of the park's Group campsites at the Rio Grande Village, Chisos Basin, and Cottonwood Campgrounds. Group sites are reservable year round and reservations may be made 360 days in advance through recreation.gov.

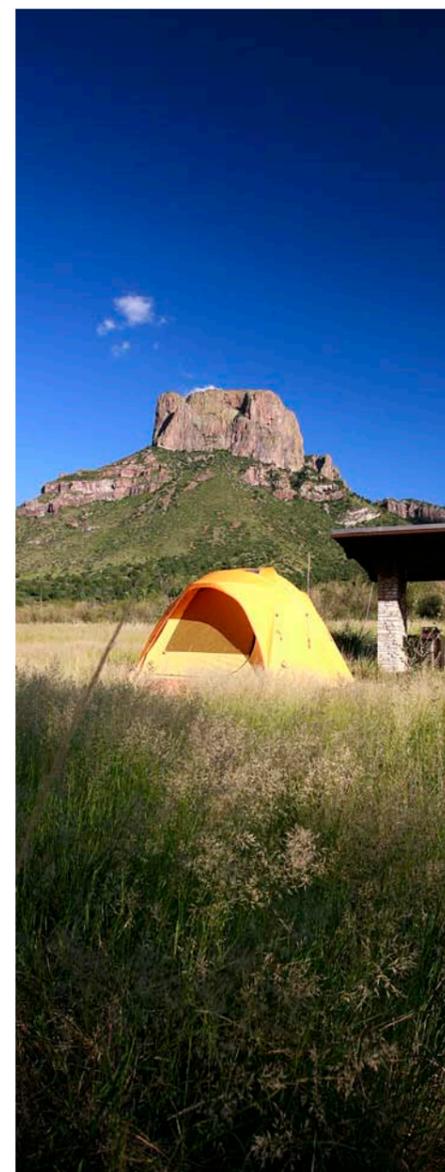
Camping Limits

It is understandable that visitors may want to stay here in Big Bend forever. But, the park must be shared, so the park has instituted the following limits. Visitors can stay in the park only 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.

Campsite Reservations

Forty-three (43) sites at Rio Grande Village campground and twenty-six (26) sites at the Chisos Basin campground are reservable from November 15 to April 15 each year. Visitors may make reservations for the period of November 15 through April 15 up to 180 days in advance. All remaining campsites in these two campgrounds and the entire Cottonwood campground remain on the first-come first-serve basis.

Campsite reservations may be made by calling 1-877-444-6777 or on-line at recreation.gov.



Campsite in the Chisos Basin below Casa Grande

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, <i>no generator use allowed</i>	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	\$27.00 and up	Full hookups	RGV Camper Store	Concession-operated; register at the RGV store.

* \$7.00 with an eligible Federal Recreation Pass



Pets in the Park

Pets in a Wilderness Park

Having a pet with you will limit your activities and explorations in the park. In addition, desert temperatures and predators are a serious threat to your pet's well being. Please keep in mind the following points when bringing a pet to the park:

- A National Park is a refuge for the animals and plants living within it. Even if your pet doesn't chase animals, dogs present the image and scent of a historical predator. The result is stress on native wildlife.
- Keep your pet on a leash no longer than six feet in length (or in a cage) at all times. Pets are not allowed on park trails, or anywhere off established roadways. Pets may not be left unattended in the park.
- Pet etiquette and park regulations require that you always clean up after your pet and dispose of waste in trash receptacles.
- Predators such as owls, coyotes, javelina, and mountain lions CAN and DO kill pets here. Even large dogs cannot defend themselves against such predators.

Remember, desert heat is *deadly*. Do NOT leave your pet alone in a vehicle. Pets are not allowed on trails, off roads, or on the river.



Pets must be on a leash at all times.



Pets are not allowed on trails or in backcountry areas.



Kennels

The following kennel and veterinary services operate in the greater Big Bend area:

Alpine Veterinary Clinic
Alpine, Texas
(432) 837-3888

Alpine Small Animal Clinic
Alpine, Texas
(432) 837-5416



Explore!

Big Bend's habitats range from the Chihuahuan Desert to the Rio Grande to the Chisos Mountains, and all are rich with plants, animals, and stories of human history, giving children plenty of opportunity to explore.

Kids visiting the park enjoy the exhibits and relief map of the park at the Panther Junction Visitor Center, the Fossil Bone Exhibit area, the Hot Springs, the sand dune in Boquillas Canyon, the mountain lion exhibit at the Chisos Basin Visitor Center, and the hands-on exhibits at the Castolon Visitor Center.

Get kids involved in ranger-led programs. These include guided hikes, slide programs, bird walks, and explorations of various park features. Check the schedule at any visitor center to make sure you take advantage of all the available programs. Stop by any visitor center for further suggestions.

Hike a Trail!

Many park trails are suitable for families. Consult the listing of Easy and Moderate Hikes on page 9. For children in strollers, consider the Window View Trail, a paved ¼-mile loop trail that begins at the Chisos Basin trailhead. Remember to watch children closely and never let them run ahead or lag behind.

Be Safe

Be sure to talk to your children about safe behavior before you begin hiking or exploring the park. Require children to walk with adults, rather than by themselves. Keep all your children with you and stand as a group. Desert vegetation can be sharp; have a first aid kit and tweezers handy. Please see pages 11 and 15 for additional safety information.

Become a Junior Ranger!

Learn desert secrets, identify the parts of a cactus, and discover what javelina eat! The Big Bend Junior Ranger program is designed for kids of all ages. Through activities, games, and puzzles, kids can have fun as they learn about the park. They can also earn a badge or patch, a bookmark, and a certificate.

The Junior Ranger Activity Book costs \$2.00 and is available at all park visitor centers.



Is there any place to swim in the park?

Big Bend is a desert park; water is a precious commodity here and often difficult to find. *Swimming in the Rio Grande is not recommended.* See page 15 for important water safety information. The end of the Boquillas Canyon Trail and the Santa Elena Canyon trailhead area may be suitable for wading at certain times of the year (always check river conditions first). You can soak in the 105°F Hot Springs (near Rio Grande Village). When the Rio Grande rises due to rain, the hot spring becomes submerged.

If you really want to swim, Balmorhea State Park (about a three-hour drive north of Big Bend) boasts the "world's largest spring-fed swimming pool." Contact Balmorhea State Park at 432 375-2370 for more information.

Leave No Trace in Big Bend

Plan ahead and prepare

Big Bend is a land of extremes. Plan on high desert temperatures in the summer with little to no shade; in the winter freezing temperatures are possible in the Chisos Mountains. Schedule your visit to avoid peak season. Visit in small groups. Split larger parties into groups of 4-6. Use a map and compass to eliminate the use of marking paint, rock cairns or flagging.

Travel and Camp on Durable Surfaces

Durable surfaces include established trails and campsites, rock, and gravel. Protect riparian areas by camping at least 100 yards from springs, creek beds, and tinajas. Good campsites are found, not made. While on the trail, walk in single file in the middle of the trail, even when wet or muddy. Keep campsites small. Focus on areas where vegetation is absent.

Dispose of Waste Properly

Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food, and litter. Deposit solid human waste in cat-holes dug 6 to 8 inches deep at least ¼ mile from water, camp, and trails. Cover and disguise the cat-hole when finished. *Pack out toilet paper and hygiene products.*

Leave What You Find

Preserve the past. Examine, but do not touch, cultural or historic structures and artifacts. Leave rocks, wildflowers and other natural objects as you find them. Avoid introducing or transporting non-native species. Do not build structures, furniture, or dig trenches.

Minimize Campfire Impacts

Campfires are not allowed in Big Bend National Park. In order to cook foods you may use a backpacking stove, portable fuel stove or the barbeque grills in your campsite.

Respect 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. Pets are not allowed in the backcountry or on trails. Pets should be on leash and under supervision at all times.

Be Considerate of Other Visitors

Respect other visitors and protect the quality of their experience. Be courteous. Yield to other users on the trail. Step to the downhill side of the trail when encountering pack stock. Take breaks and camp away from trails and other visitors. Let nature's sound prevail. Avoid loud voices and noises.



It's not just about today—do your part to maintain the resources of Big Bend exactly as you see them so that future visitors can do the same.

Backcountry Planning



Backcountry Regulations

Groundfires and woodfires are prohibited.

Use only gas stoves or charcoal within a BBQ grill. Pack out all evidence of use. Smoking is prohibited on all Chisos Mountains trails.

Pack out all trash

Help preserve the park's natural beauty by packing out all trash including cigarette butts and toilet paper.

No pets on trails or in the backcountry.

Pets may harm or be harmed by wildlife, and can attract predators.

Do not cut switchbacks on trails.

Although cross-country hiking is allowed, help prevent trail erosion by staying on marked trails.

Collecting any natural or historical feature or object is prohibited.

Leave park features intact for others to enjoy.

Contaminating natural water sources and their surroundings is prohibited. Camp at least 100 yards from any water source.

Desert water sources and springs are fragile and vital for the plants and animals that depend on them for survival. Soaps, oils, skin lotions, and food residues from bathing and washing can seriously impact water quality. Minimize your impact to areas surrounding springs, seeps, and other temporal water sources.

Camp within designated sites.

When camping in a designated site prevent resource damage by camping within the area outlined by rocks, logs, or brush.

Generator use is not permitted in backcountry campsites.

Natural quiet is a protected resource; help preserve a quiet wilderness experience.

In open zones, camp at least 1/2 mile and out of sight from any road and at least 100 yards from any trail, historical structure, archeological site, dry wash, or cliff edge.

Minimize your impact to the natural landscape.

Bury human waste at least 6 inches deep. Pack out toilet paper.

Human waste is unsightly and unsanitary. Carry a digging trowel. Locate latrines 1/4 mile from any water source and well away from camp.

Motorized vehicles and bicycles are permitted only on designated public roads.

Off-road vehicle travel causes visual and environmental damage.

Do not feed wildlife.

Feeding wildlife is illegal; it often results in having to destroy the animal. Keep food, ice chests and cookgear in a hard-sided vehicle or food storage locker where provided. Remember that when people leave open food containers and trash laying around the site that they are inadvertently feeding animals, so keep trash contained in vehicles or bear boxes.

Getting a Permit

A permit is required for all river use, horse use, and overnight backcountry camping, and can be obtained in person only, up to 24 hours in advance of the trip. Permits can be written for as many as fourteen (14) consecutive nights in the backcountry. Park staff can assist you with trip planning based on your needs and current trail conditions. Permits can be obtained at all visitor centers during normal operating hours.

Overnight Use Fee

A \$10-per permit fee is required for all overnight backcountry use permits, including multi-day river trips, and overnight backcountry camping. This fee is payable when the permit is issued, and all funds collected go to projects to improve or protect the backcountry experience, including hardening/improving river access points, backcountry campsite maintenance, and trail maintenance.

Plan Ahead

Detailed information on backcountry campsites in the Chisos Mountains and along the backcountry roads is available on the park's website at www.nps.gov/bibe. A wide variety of maps, books, hiking guides and river guides is available for purchase at park visitor centers. If you would like to order them in advance of your trip, call the Big Bend Natural History Association at 432 477-2236 or visit their online bookstore at www.bigbendbookstore.org.

Hiking & Backpacking

Big Bend National Park offers over 200 miles of hiking trails in the Chisos Mountains and desert terrain. A permit is required for all overnight trips in the backcountry. Decide how much distance you want to cover and how much time you have. Desert hiking can be unpleasant or deadly in hotter months.

In the Chisos Mountains, the Southeast Rim Trail and a portion of the Northeast Rim Trail from the Boot Canyon/Southeast Rim junction are closed during the peregrine falcon nesting season (February 1 - May 31).

Zone camping permits are available for those 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.

Backcountry Roads

For those who wish to camp in the backcountry without having to backpack, Big Bend offers over seventy primitive campsites along backcountry roads. While some sites are accessible to most vehicles, a high clearance and/or four wheel drive vehicle is necessary to reach others. Other than a nice view, isolation, and a flat gravel space, these sites offer no amenities and no shade. A backcountry permit is required to use these sites.

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.

Horses

Visitors are welcome to bring and use their horses in the park. A stock-use permit is required and may be obtained in person at any of the park's visitor centers up to 24 hours in advance of the trip. Every horse user should obtain a copy of the regulations regarding use of horses in the park.

While horses are not permitted 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. The Chisos Mountain and Burro Mesa trails are day-use only.

Floating the Rio Grande

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, which have rapids varying in difficulty from Class I to Class IV. Between the canyons, the river is generally slower-paced. The Rio Grande Wild and Scenic River extends downstream beyond the park boundary for an additional 127 miles.

If you plan to take a river trip in Big Bend National Park, you may bring your own equipment, or you can hire a guide service. Three local companies (see page 16 for telephone numbers) provide guide service in the park—you may reserve a trip by contacting them directly. If you plan to use your own equipment, you must obtain a permit at a park visitor center. Stop by the Panther Junction Visitor Center for your permit and for current river condition information prior to your trip.

Permits for the Lower Canyons of the Rio Grande Wild and Scenic River may be obtained at the Persimmon Gap Visitor Center. Permits for floating Santa Elena Canyon may be obtained at the Barton Warnock Center in Lajitas. However, we encourage all parties to get their permits at a park visitor center when possible, to obtain the most up-to-date river information and conditions.



The Black Gap Road is the only unmaintained road in the park open to vehicles. High clearance and 4 wheel drive is a necessity.

Standard Backcountry Road Conditions

	Road open to:	Notes
Croton Spring	All Vehicles	Slippery mud after any rain
Dagger Flat	All Vehicles	Bumpy but ok for cars; very sandy near end of rd.
Glenn Springs	High Clearance	Narrow road; no RVs, Trailers or wide vehicles
Grapevine Hills	All Vehicles	Usually passable for all vehicles to trailhead
Hot Springs	All Vehicles	Narrow road; no RVs, Trailers or wide vehicles
North Rosillos	High Clearance	Deep ruts and sand; little-traveled
Juniper Canyon	High Clearance	High-clearance vehicles only; rough, rocky, & slow
Old Maverick	High Clearance	Rough; often impassable after heavy rains
Old Ore	High Clearance	High-clearance vehicles only, 4X4 recommended
Paint Gap	All Vehicles	High-clearance past PG 3 campsite
Pine Canyon	High Clearance	High-clearance vehicles only; rough, rocky, & slow
River Road East	High Clearance	High-clearance vehicles only
River Road West	High Clearance	High-clearance vehicles only, 4X4 recommended
Black Gap	4X4/HC only	4x4 required! never maintained

Always inquire at a visitor center regarding updated road conditions before heading out, and be prepared for any contingency. Weather conditions (such as heavy, or any, rain) may cause road conditions to deteriorate. Remember: all vehicles must be street legal and stay on established roadways.

Safety is *Your* Responsibility

Big Bend is unfamiliar country to most visitors yet it need not be dangerous. Whether hiking the highcountry, rafting the Rio Grande, observing wildlife, or simply driving the scenic roads of this wilderness park, let safety be your constant companion. Spend a moment reviewing these common safety concerns so that you may have an enjoyable visit.

Big Bend is wild country. In fact, many people visit precisely because it is so remote and rugged. But remember, as you enjoy the splendor of this great wilderness area, to make safety a priority. By giving forethought to your actions you can have a safe, exciting, and rewarding experience in Big Bend National Park.

Driving

Of the few accidental deaths in Big Bend that occur some years, most result from car accidents. Drive within the speed limit, 45 mph maximum in the park, and watch for javelina, deer, and rabbits grazing along road shoulders, especially at night. Federal regulations require that ALL occupants of a vehicle wear seats belts while in a national park. Remember, too, that you share the road with bicyclists and pedestrians. Some park roads, such as the road into the Chisos Basin, are steep and winding and require extra caution. The Basin Road is not recommended for RVs over 24 feet or trailers over 20 feet. Finally, always select a designated driver before drinking alcoholic beverages.

Heat

Desert heat can kill you. Carry and drink at least one gallon per person, per day. Wear a hat, long pants, long-sleeved shirt, and sun screen when hiking. Springs are unreliable and often dry up for much of the year. Travel in the early morning or late evening hours rather than during the heat of the day.

Mountain Lions

Big Bend is mountain lion country, especially the Chisos Mountains. While lion attacks are rare, two have occurred in the last twenty years. Should you encounter an aggressive mountain lion, hold your ground, wave your arms, throw stones, and shout. Never run. Keep groups together and consider hiking elsewhere with young children if you come across a special mountain lion warning sign posted at a trailhead.

Hiking

Exploring this desert and mountain country on foot requires both mental and physical preparation. Trails vary from well maintained in the Chisos to primitive and barely visible in the desert. Plan hikes within your ability. Take along a map and compass and know how to use them. Flash floods may occur following thunderstorms so avoid narrow canyons or dry washes. Stay low and avoid ridges during thunderstorms. Carry a flashlight and a first aid kit. Let someone know where you're going and when you expect to return. If you get hurt or lost, stay in one place to conserve water and energy.

Fire

Fire danger is always an important safety consideration in Big Bend. *Wood or ground fires are not permitted in the park*, and you must exercise caution in the use of gas stoves, charcoal grills, and cigarettes. During drought conditions some restrictions may apply to the use of these heat sources. Check with a ranger for the latest information about fire safety in the park. *Smoking is prohibited on all trails in the Chisos Mountains.*

Poisonous Animals

Venomous snakes, scorpions, spiders, and centipedes are all active during the warmer months. Wear shoes or boots at night instead of sandals. Inspect shoes and sleeping bags or bedding before use and always carry a flashlight at night. While snake bites are rare, they usually occur below the knee or elbow. Pay attention to where you walk and place your hands.

Desert Wildlife

Black bears, javelinas, skunks, coyotes, and raccoons frequent Big Bend's campgrounds. Although they sometimes appear tame, all of the animals in the park are wild, and could pose a threat to your health and safety if you attempt to approach or feed them. *Never feed any of Big Bend's wildlife.* To prevent these creatures from becoming habituated to people, store all food, coolers, cooking utensils, and toiletries in a hard-sided vehicle, preferably in the trunk of your car. Food storage lockers are available for hikers and campers in the Chisos Mountains. Dispose of garbage properly in the special animal-proof dumpsters and trash cans provided.

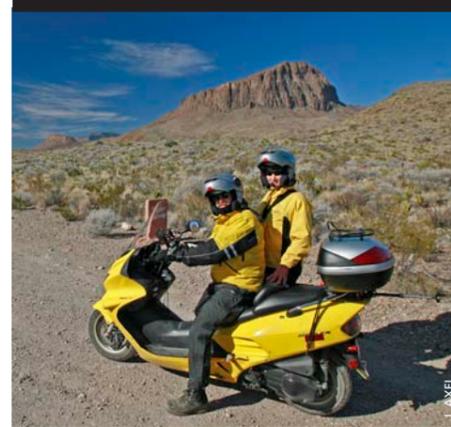
Remember to report all bear or mountain lion sightings to a ranger.

Swimming

Hot weather makes the muddy Rio Grande look very inviting, but swimming is not recommended. Water-borne micro-organisms and other waste materials can occur in the river and cause serious illness. The river can be hazardous, even in calm-looking water. Strong undercurrents, deep holes, and shallow areas with sharp rocks and large tree limbs are common and make the Rio Grande unsafe for swimming. If you do choose to swim, wear a life jacket and avoid alcohol.

If you really want to swim, Balmorhea State Park (three hours north of Big Bend) boasts the "world's largest spring-fed swimming pool." Contact Balmorhea State Park at 432 375-2370 for more information.

MOTORCYCLES



Share the Road

Every year park rangers investigate an increasing number of motorcycle accidents. Unfortunately, a significant number involve serious injuries.

Be alert

Animals may dart out from road edges. Other drivers may pay too much attention to the scenery and cross over the center line into your travel lane or may suddenly stop their vehicles in the middle of the road to observe wildlife. These and other unforeseen conditions can lead to motorcycle accidents.

Suggestions for Motorcycle Riding

- Watch for vehicles straying over the center line.
- Stay alert for sudden stops or traffic slow-downs, especially around scenic pullouts or other congested areas.
- Wear brightly colored clothing or jackets to increase visibility to other motorists.
- Be aware of road surfaces as you ride. Never over-ride the road conditions.
- Watch for wildlife at the road edge.
- Secure your motorcycle and valuables when you are away from your bike.
- Ride with headlights on.

Survive the Sun

In all seasons, whether walking, backpacking, or day hiking, follow these tips to conserve your internal water reserves:

REDUCE YOUR ACTIVITY

During the warmest days, generally from May through August, avoid hiking in the lower elevations during the heat of the day—generally from 10:00 am to 6:00 pm.

FIND SHADE

Shade in the desert means the difference between excessive heat gain from the radiant sun and sheer comfort. In an emergency, a person resting in the shade will survive longer than someone exposed to the sun.

DRINK YOUR WATER

Don't try to conserve the drinking water you have. Whether strolling in the Basin, or hiking the South Rim Trail, you must DRINK your available water. Carry plenty of drinking water—at least 1 gallon per person per day. Balance your food and water intake. Eat a salty snack every time you take a drink of water.

REDUCE ALCOHOL & CAFFEINE INTAKE

Water is the best remedy for dehydration and listlessness. The diuretic effects of caffeine and alcohol can result in an accelerated loss of body water.

PROTECT YOUR BODY

Our sensitive skin burns easily; it needs shade, sunscreen, sunglasses, a widebrimmed hat, and proper footwear. Dehydration is accelerated by exposed skin, so keep your clothing on. Wear long-sleeved, loose-fitting, light-colored clothes.

ALL SPRING WATER MUST BE TREATED: BOIL IT OR USE PURIFICATION TABLETS

Weather and Climate

Weather

Elevational differences in Big Bend mean that temperatures can be vastly different in different areas of the park. The lower areas along the Rio Grande are very hot during the summer months, while the Chisos Mountains are considerably cooler. Winter weather generally occurs between November and February, with temperatures dropping dramatically as cold fronts move through the area. Between June and October thunderstorms and flash floods may occur. Bring clothing for both warm and cool weather, as well as rain gear, when visiting Big Bend any time of the year.

Summer and Fall

Temperatures along the river tend to be the warmest in the park. Plan your activities with the weather in mind; visit the river in the morning, and always carry plenty of water. Higher elevations in the Chisos Mountains lead to lower temperatures. July brings thunderstorms; precipitation can liven up the landscape, but rains can reap havoc on the primitive roads throughout the park.

How Hot Is It?

Average temperatures and rainfall at Panther Junction elevation 3,750 feet

	Avg. High/Low	Avg. Rainfall"
January	61/35	.46
February	66/34	.34
March	77/45	.31
April	81/52	.70
May	88/59	1.50
June	94/66	1.93
July	93/68	2.09
August	91/66	2.35
September	86/62	2.12
October	79/53	2.27
November	66/42	.70
December	62/36	.57
Yearly Avg.	79/47	15.34"

Temperatures in the Chisos Basin vary 5-10 degrees below these readings, while daytime temperatures along the Rio Grande average 5-10 degrees warmer.

Area Phone Numbers

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
Castolon 432 477-2666
Chisos Basin 432 477-2264
Panther Junction 432 477-1158
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

Park Gasoline Service
Panther Junction (diesel) 432 477-2294
Rio Grande Village 432 477-2293

Campground Stores
Rio Grande Village 432 477-2293
Chisos Basin 432 477-2291
Castolon 432 477-2222

Services outside the Park

Lodging
Lajitas
Lajitas Resort 877 525-4827

Marathon
Gage Hotel 432 386-4205
Marathon Motel 432 386-4241
Eve's Garden 432 386-4165

Study Butte/Terlingua area
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

Camping
Big Bend Motor Inn 800 848-2363
Big Bend Ranch State Park 432 424-3327
Big Bend Travel Park 432 371-2250
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 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

Medical Services
Terlingua Fire and EMS 911
Big Bend Medical Center 432 837-3447

Banks
Quicksilver Bank/ATM 432 371-2211

Float Trip Outfitters/Rentals/Guide Services
Big Bend River Tours 800 545-4240
Desert Sports 888 989-6900
Far Flung Outdoor Center 800 839-7238

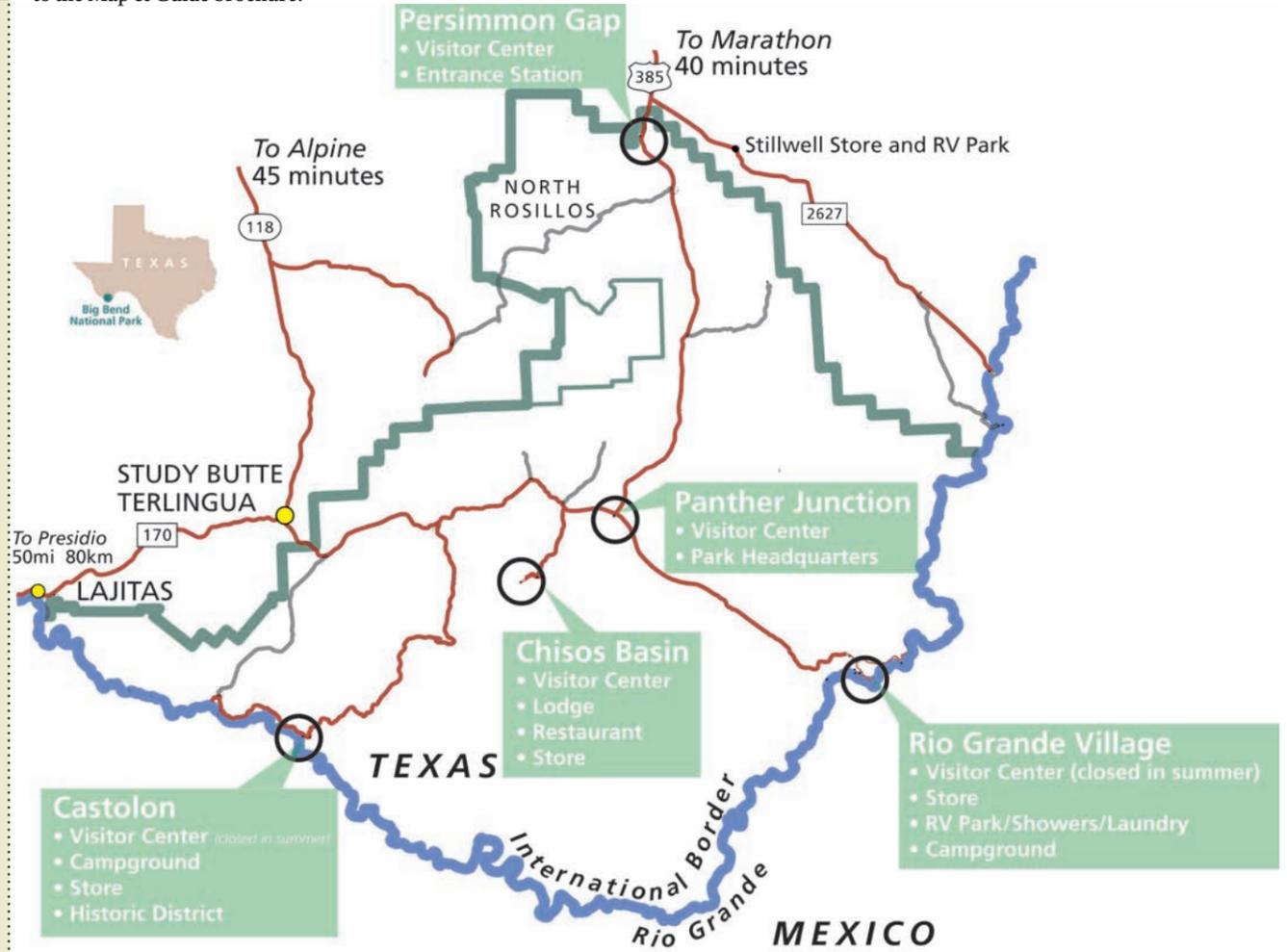
Horseback Riding
Big Bend Stables 800 887-4331
Lajitas Livery 432 424-3238

The facilities and services listed here are located within the greater Big Bend area, and vary from 30 to 100 miles from Big Bend National Park. The communities of Terlingua/Study Butte (30 miles west) and Marathon (70 miles north) offer basic services, including gas stations, restaurants, lodging, and campgrounds. Alpine, 100 miles to the northwest of the park, offers the greatest number of services.

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

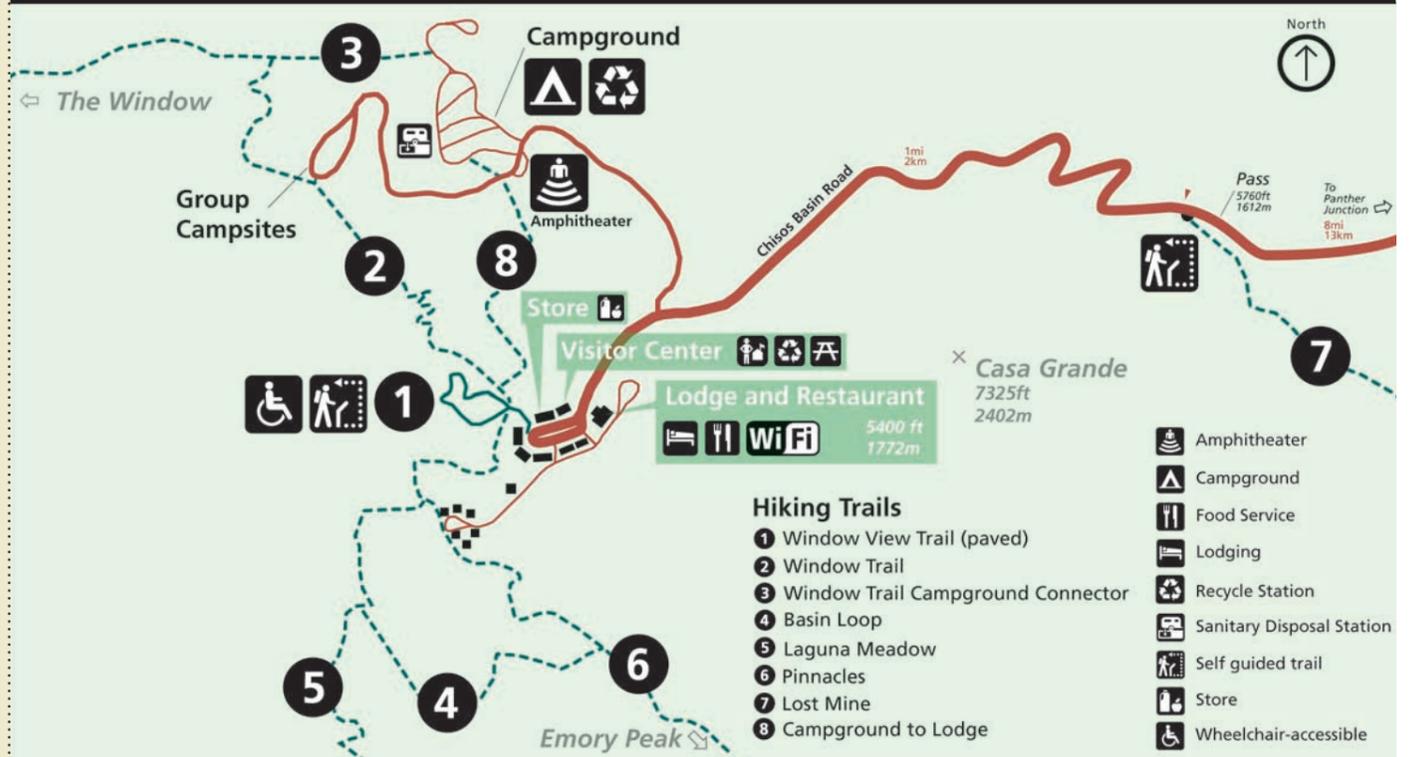
Park Overview Map

For a more detailed park map refer to the Map & Guide brochure.



Chisos Basin

5401ft 1646m



Rio Grande Village

1850ft 564m

