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Geologic Map of Big Bend National Park, Texas

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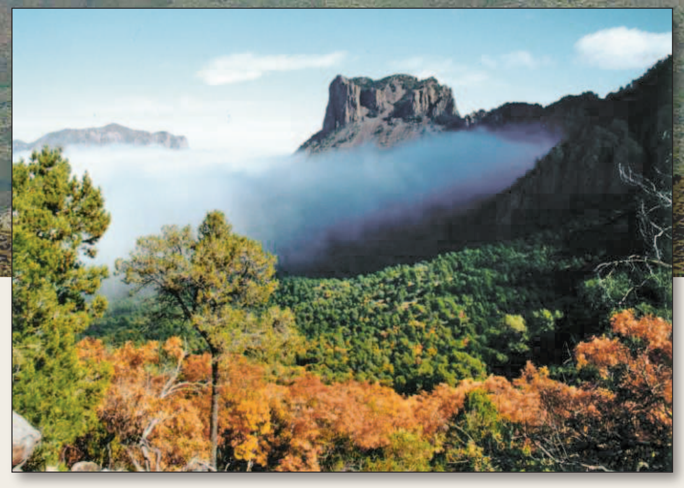
(Above) The Rio Grande near the mouth of Santa Elena Canyon. As the international boundary between the U.S. and Mexico (Mexico is on the left side of the river and the U.S. is on the right), the Rio Grande is the lifeblood of the region and is a fragile, riparian ecosystem with unique plant and animal communities, and a critical shared water resource of bi-national communities along this desolate course.



(Above) Mule Ear Peaks. Mule Ear Peaks are one of the most distinctive geologic landforms in the park, and are composed of the Chisos Formation and overlying Burro Mesa Formation.

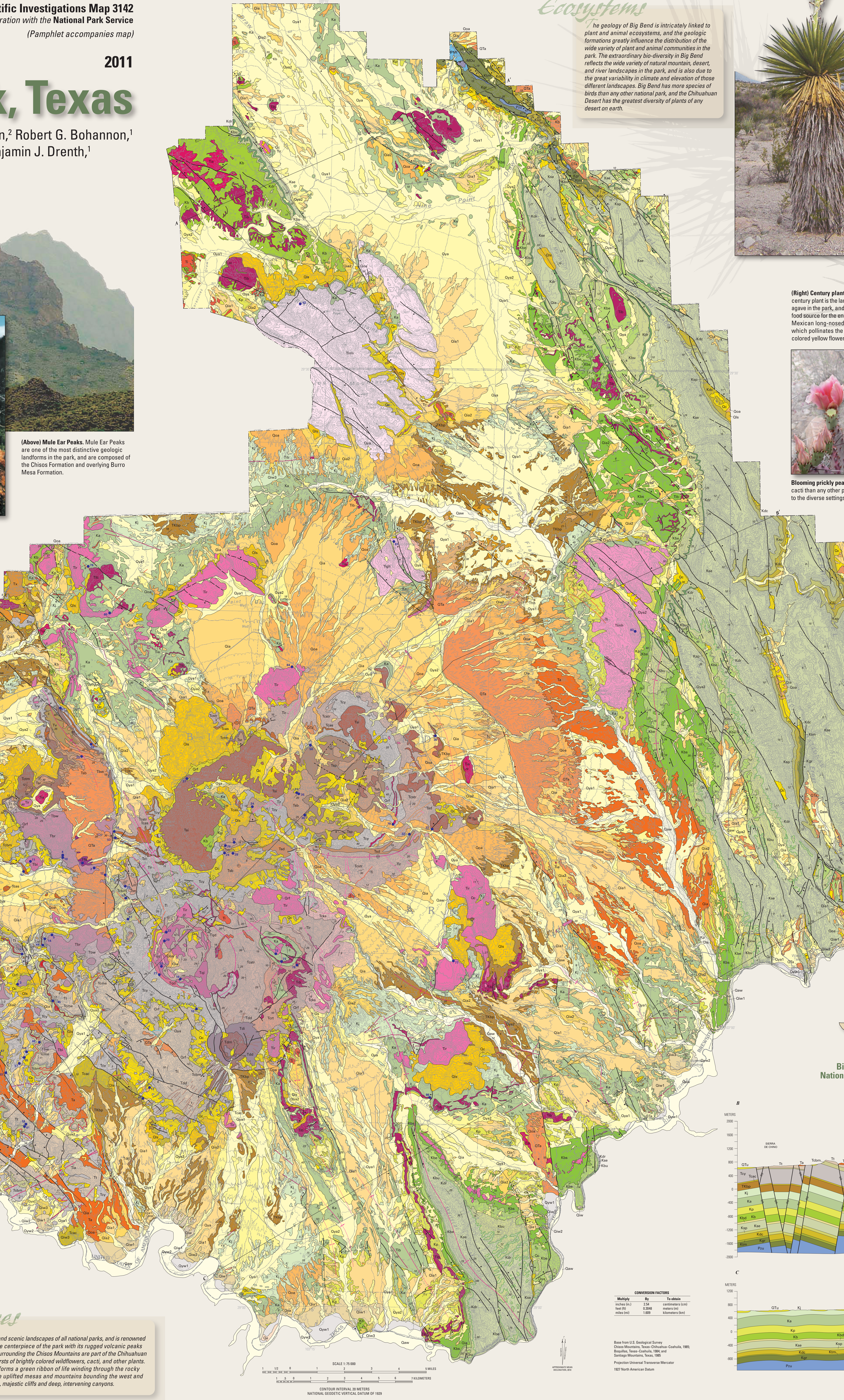
Casa Grande. Casa Grande is one of the highest peaks (7,325 ft elevation) in the Chisos Mountains, and in Texas. The peak's name, meaning "Big House" in Spanish, comes from its massive, steep-sided profile, which towers above the Basin. Casa Grande is an extra-caldera vent, or volcanic dome, of the Pine Canyon caldera, which erupted rocks of the South Rim Formation.

(Right) Chisos Formation. Spires of orange-weathering tuffaceous sandstone of the Chisos Formation, near Blue Creek Ranch.

View of El Pico in the Sierra del Carmen. Although El Pico is located across the Rio Grande from Big Bend, in Coahuila, Mexico, the Sierra del Carmen extends northward into Big Bend National Park, where the range forms towering limestone cliffs, originally deposited in ancient seas during Cretaceous time. The high mountain range is a series of uplifted, east-tilted fault blocks, which mark the easternmost range of the western North American cordillera.

Scenic Landscapes

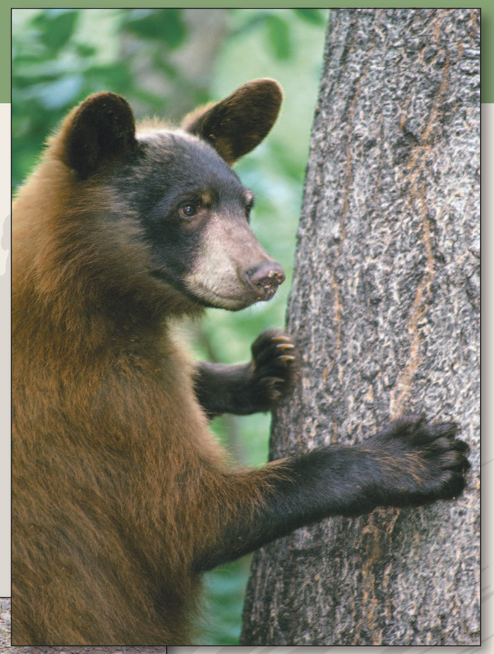
Big Bend National Park offers some of the most diverse and scenic landscapes of all national parks, and is renowned for its spectacular geology. The Chisos Mountains are the centerpiece of the park with its rugged volcanic peaks in an evergreen and oak woodland setting. The lowlands surrounding the Chisos Mountains are part of the Chihuahuan Desert, where each Spring the desert floor blooms with bursts of brightly colored wildflowers, cacti, and other plants. The Rio Grande contrasts sharply with the desert, and forms a green ribbon of life winding through the rocky landscape. Mesa de Anguila and Sierra del Carmen are uplifted mesas and mountains bounding the west and east sides of the park, respectively, where they form steep, majestic cliffs and deep, intervening canyons.



Ecosystems

The geology of Big Bend is intricately linked to plant and animal ecosystems, and the geologic formations greatly influence the distribution of the wide variety of plant and animal communities in the park. The extraordinary bio-diversity in Big Bend reflects the wide variety of natural mountain, desert, and river landscapes in the park, and is also due to the great variability in climate and elevation of those different landscapes. Big Bend has more species of birds than any other national park, and the Chihuahuan Desert has the greatest diversity of plants of any desert on earth.

Yucca *Faxoniana*. This towering variety is also known as giant or Spanish dagger, beaked yucca, or soaptree yucca. Native Americans ate flowers, petals, and young stalks of the plant, and used the leaves for rope, mats, sandals, and baskets.



(Right) Collared lizards. Collared lizards are some of the largest lizards in the park, and are a critical part of the Big Bend ecosystem because they are the food source for many birds in the park, and they help control the population of insects.

(Left) Black bears. Black bears were common in the park in the early 1900s, but none were observed after Big Bend became a park in 1944. They returned to the park from Mexico in the 1980s, and remain there today mostly in the Chisos Mountains; their recolonization is rare and enigmatic. They are well adapted to the Chisos Mountains, mainly because of their food source of acorns, juniper berries, pinon nuts, all available in this woodland environment.

(Right) Century plant. The century plant is the largest agave in the park, and is the food source for the endangered Mexican long-nosed bat, which pollinates the bright-colored yellow flowers.

Blooming prickly pear. Big Bend boasts more species of cacti than any other park, and the wide variety is attributed to the diverse settings of the park.

(Above) Gulf Fritillary. Over 160 species of butterflies occur in Big Bend National Park, and the Gulf Fritillary, also known as Passion Butterfly, is one of the more common varieties in the park.

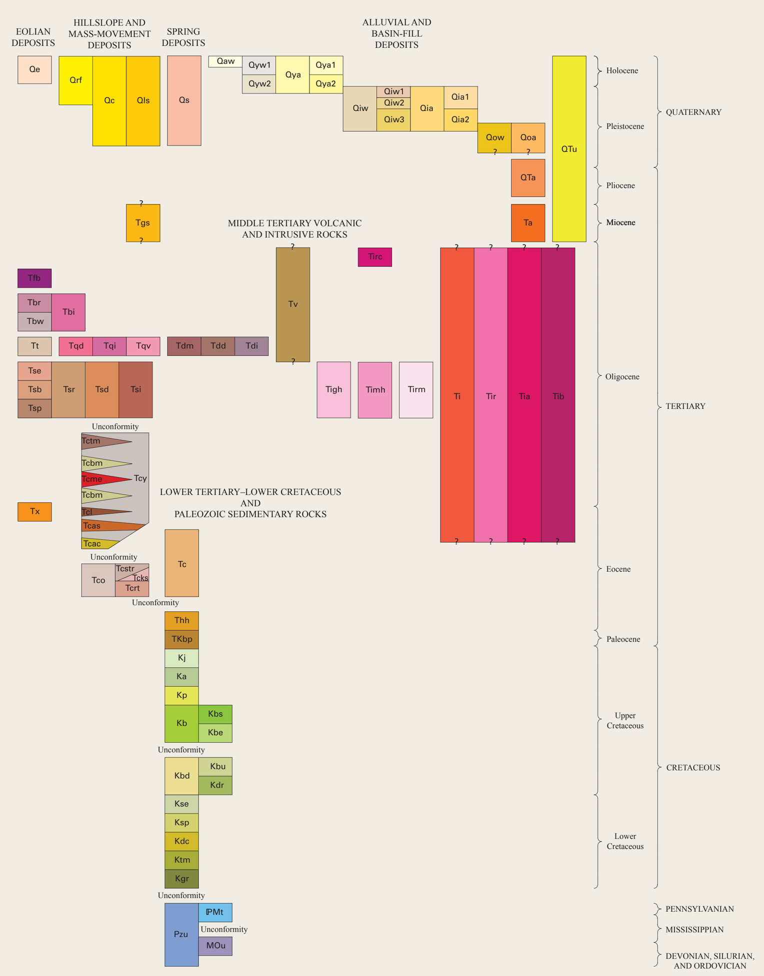
(Right) Mexican Jay. Big Bend National Park is one of the best localities in the U.S. for bird watching, and more species have been recorded there than any other National Park. Some of the more rare species include the Mexican Jay, Mexican mallard, Lucifer hummingbird, and Colima warbler.

Face off. A coyote (left) and a black-tailed jackrabbit (above) face off. Coyotes are well adapted in Big Bend, and are found in almost all environments in the park. The black-tailed jackrabbit is actually a hare, and is prey for mountain lions, coyotes, fox, bobcats, and hawks and eagles.

Texas Brown tarantula. The Texas Brown tarantula is a common variety of spider found in Big Bend National Park. Texas Browns can grow in excess of a four-inch leg span, and weigh more than 3 ounces as adults.

Geology

CORRELATION OF MAP UNITS



LIST OF MAP UNITS

MAP EXPLANATION

LOCATION MAP