



2008 VOLUME 2 • NUMBER 1



ECHOES



MONTEZUMA WELL • MONTEZUMA CASTLE NATIONAL MONUMENT • TUZIGOOT NATIONAL MONUMENT

Welcome To The Monuments Of The Verde Valley

The Verde Valley, lying under the spectacular pine-clad cliffs of the Mogollon Rim of central Arizona, forms an immense biological transition between desert, grassland and forest vegetation zones.

As the seasons change, this endangered riparian or streamside habitat of the Verde River serves as a migration corridor for many animals traveling from summer to winter ranges in the south. But for thousands of years, the Verde Valley was also a haven for the movement of people, providing the food and water all life needs for survival.

The National Monuments of the Verde Valley - Montezuma Castle, Montezuma Well and Tuzigoot - protect and interpret the legacy of the Sinagua, an Ancestral Pueblo people who flourished in the area for centuries, long before Columbus claimed to have discovered this New World.

Montezuma Castle has been described as the best preserved and most dramatic cliff dwelling in the United States. Montezuma Well is a natural limestone sinkhole with prehistoric sites and several animal species found nowhere else in the world. Tuzigoot is the remains of a 110-room pueblo perched on a high ridge with a panoramic view of the Verde River.

Today's visitors marvel at the well-preserved Sinagua dwellings, but also allow some time to experience the oasis of the riparian area. As the seasons change, we invite you to - ENJOY!

— Kathy M Davis, Superintendent

Echoes from the Past

DISCOVERING THE 10,000 YEAR LEGACY OF PEOPLE IN THE VERDE VALLEY

A visit to Montezuma Castle, Montezuma Well and Tuzigoot National Monuments provokes many questions. Why did they live here? Where did they go? And, perhaps most importantly, how did they live in this land of seemingly harsh contrasts: hot and arid in the summer, cool in the winter?

For at least ten thousand years, the Verde Valley has been a corridor of movement as people followed the seasonal migrations of big game animals, raised their families and utilized the natural resources of the land. Today people flock to Northern Arizona, both to live and to play, precisely because of this variable climate. Whether escaping the even colder northern latitudes in the winter or the oppressive heat to the south in the summer, the Verde Valley still stands as a migration corridor for people from all over the world. But the valley we experience

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For over 100 years, the prehistoric village sites in the Verde Valley have drawn tourists from around the world. But who were these ancient Sinagua? How did they survive in such a harsh climate? And why did they abandon their homes after so many years? These are questions that have fascinated visitors such as these soldiers and their families from Fort Verde out for a picnic to Montezuma Castle in the late 1800's. Even today, despite all that archeology can tell us, the legacy of these ancient people continues to capture our imaginations.

NPS Photo

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GENERAL INFORMATION



National Park Service
U.S. Department of the Interior

Montezuma Castle & Tuzigoot National Monuments

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Kathy M. Davis

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Montezuma Castle

2800 Montezuma Castle Rd
Camp Verde, AZ 86322
(928)567-3322

Montezuma Well

5525 Beaver Creek Rd
Rimrock, AZ 86335
(928) 567-4521

Tuzigoot

25 W. Tuzigoot Rd
Clarkdale, AZ 86324
(928) 634-5564

Hours of Operation (Closed Christmas Day)

September - May: Daily 8am - 5pm
June - August: Daily 8am - 6pm

Ranger Programs

Ranger programs are offered twice daily at Montezuma Castle and as staffing allows at both Tuzigoot and Montezuma Well. These programs range in length from 20 minutes to an hour and cover topics including archeology, Sinagua culture and the geology/biology of the Verde Valley. Ask a ranger at the park visitor center for details on times and locations of these programs.

Education programs and classroom presentations are also available to local and visiting school groups. Call Ranger Paul Ollig at (928)567-3322 x30, or email (Paul_Ollig@nps.gov) for more information and scheduling.

Accessibility

The National Parks and Monuments are areas of great beauty and significance, set aside for all to enjoy. Ask a Ranger if there is any question or concerns about accessibility. Audio cassettes and text in Braille are available. More details about trails and the Visitor Centers are available under individual Monument descriptions.

VIP Program

Our volunteers are priceless! The National Park Service's "Volunteers in Parks" program gives the public an opportunity to share knowledge and experience. Call 928-567-3322, ext. 30



If You Love Wild Animals, DON'T FEED THEM!

They look adorable but remember squirrels and other wild animals can bite! Wild animals can become aggressive if they are accustomed to humans and human food. Feeding them also decreases their chances of surviving the winter. Please enjoy wild animals from a safe distance.

Rock Squirrel have been cavorting on ledges and begging for food since the Sinagua were here! Please don't feed them; they can bite and may transmit diseases, such as rabies or bubonic plague.

Protect your Monuments

- The arid desert landscape is very fragile and wildfires are a real danger. Smoking is permitted in designated areas only.
- All the Monuments are protecting archeological sites as well as natural resources. It is against the law to tamper with, deface or remove any artifact, plant, rock or other natural feature of the park.
- Hiking off the trails can damage the soil crust — a living groundcover of lichens, mosses and other organisms.
- Off-road parking or driving is prohibited.
- Pets on a short leash are allowed on the trails but must be carried into Visitor Centers. Do not leave pets in a vehicle during warm weather. Please clean up after your pet.
- Camping is prohibited in all areas of the Monuments.
- Bicycles, skateboards and any motorized vehicle other than wheelchairs are not permitted on the trails.
- Gas stoves are permitted only at the Montezuma Well picnic area. No ash producing fires are allowed in the Monuments.
- Please help with trash removal and use the waste receptacles. We have an active recycling program for aluminum cans and plastic bottles, with designated blue receptacles.

Protect Yourself

- Remember to drink lots of water, use sunscreen and wear a hat! If you feel thirsty you are already on the way to being dehydrated. Be prepared with appropriate footwear and clothing for temperatures that can exceed 100 degrees in the summer and below freezing in the winter.
- Please stay on the path. Rattlesnakes live here although they are rarely sighted.
- Handrails are there for your safety; please do not go past them. Rock surfaces can be slippery; please stay away from any cliff edge.



Pinacate beetles are a commonly seen throughout the Verde Valley any time of the year. When alarmed this large ground beetle will stick its abdomen into the air and do a headstand. This comical behavior allows the insect to spray whatever is threatening it with a very malodorous chemical from its rear end. Hence, the reason for this beetle's more commonly used name: "stink bug".

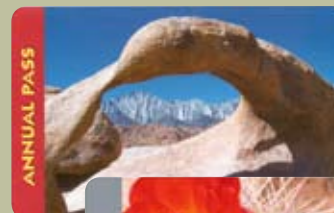
Park Entrance Fees and Passes

Daily Entrance Fees for Montezuma Castle or Tuzigoot:

\$5 per adult (16 & over) Children FREE (under 16)

Combined Fees for Montezuma Castle AND Tuzigoot:

\$8 per adult (16 & over) Children FREE (under 16)



ANNUAL PASS: \$80
Grants access to all federal fee areas in the U.S. (with some exceptions), including all 391 national parks and monuments, for twelve months from date of purchase.



SENIOR PASS: \$10
A one-time fee grants access to all federal fee areas in the U.S. (with some exceptions). For US citizens or permanent residents 62 years of age or older.



ACCESS PASS: FREE
Grants access to all federal fee areas in the U.S. (with some exceptions) for permanently disabled US citizens or permanent residents.

MONTEZUMA CASTLE

It is not a castle — although there is a great magnificence to this prehistoric American Indian structure — and the Aztec emperor Moctezuma II was never here; the Castle was abandoned at least a century before he was born!



People traveling along Beaver Creek would have had this first glimpse of Montezuma Castle, a prehistoric cliff dwelling 100 feet above the floodplain. Montezuma Castle was part of a large, extended community; there are sites approximately every mile and a half along Verde Valley waterways.

Photo by Skip Larson

Rising 100 feet above the Beaver Creek floodplain, Montezuma Castle is a testimony to the resilience and innovations of a people called the “Sinagua,” named after the Spanish term for the San Francisco Peaks, the “Sierra Sin Agua” — “the mountain without water.”

Montezuma Castle is one of the best-preserved cliff dwellings in the United States. It is 90 percent original despite years of unauthorized excavation, visitation and even one attempt to blow apart a wall to collect artifacts.

Origins

Montezuma Castle was not an isolated structure where people lived generation after generation, having little contact with neighbors. The Castle instead was a small, but very dramatic, part of a large community of people spread up and down the waterways of the Verde Valley. As many as 6,000 to 8,000 people may have lived in the valley in small villages no more than two miles apart.

Montezuma Castle is located along Beaver Creek, possibly a final leg in a major prehistoric trade route from northern Arizona. People following this trail were seeking copper, salt, cotton, argillite and other minerals.

Were the residents of Montezuma Castle keeping watch on traders or other visitors entering the area, or was it simply a very nice place to live? No one really knows.

The Castle

Montezuma Castle is built into a deep alcove with masonry rooms added in phases. A thick, substantial roof of sycamore beams, reeds, grasses and clay often served as the floor of the next room built on top. Entrance to most areas was usually from a hole in the roof; a ladder made access easier.

The 19 rooms could have housed 35 to 50 people, conserving precious farmland near the creek. Around the corner was “Castle A,” a site with 45 to 50 rooms that also hugged the limestone cliff. These people were certainly related, sharing food, land, friendships; all ties that bind a community.

There is little evidence of conflict or warfare but perhaps people felt more secure living in the Castle. The series of ladders used to climb to the site could be pulled in for the night and there is a panoramic view of the river and valley from the top parapet level. A small ruin above the Castle, on the top of the cliff, allows views of the entire countryside; a sentry would have advance warning of anyone entering the area.

Just as important — the Castle is simply

a wonderful place to live in all seasons. It is cool in the summer and warm in the winter. The higher elevation gives some relief from biting mosquitoes, juniper gnats and other pesky vermin. Daily activities, such as processing food, were done on the roof, and most areas have an inspiring creekfront view!

Moving Away

Starting around 1380 to 1400, the Sinagua began moving from the area, probably joining relatives in large pueblos to the east. As more explanations are offered for their departure, more questions arise. Stress factors may have included prolonged drought, disease, and nutrient-depleted soil from growing corn.

The departure from Montezuma Castle and surrounding ancestral lands had to have been very emotional. The ties to the land were over centuries and generations — the decision to leave could only have been out of necessity.

The “Halls of Montezuma”

In 1874, some of the first Euro-American explorers to see Montezuma Castle were veterans of the Mexican-American War (1846–1848). When they entered the Verde Valley and saw the great cliff dwellings and large pueblos with standing walls, they didn’t believe the local indigenous people had the knowledge or ability to construct such imposing structures, and so attributed them to the Aztecs, whose magnificent ruins they had seen in Mexico.

A popular Marine marching song of the time referred to the “Halls of Montezuma,” or, Mexico City, center of the Aztec world. Inspired, the veterans felt the Aztec king had to have been somehow involved! Once Mon-

tezuma Castle was recorded on early maps, the name was accepted.

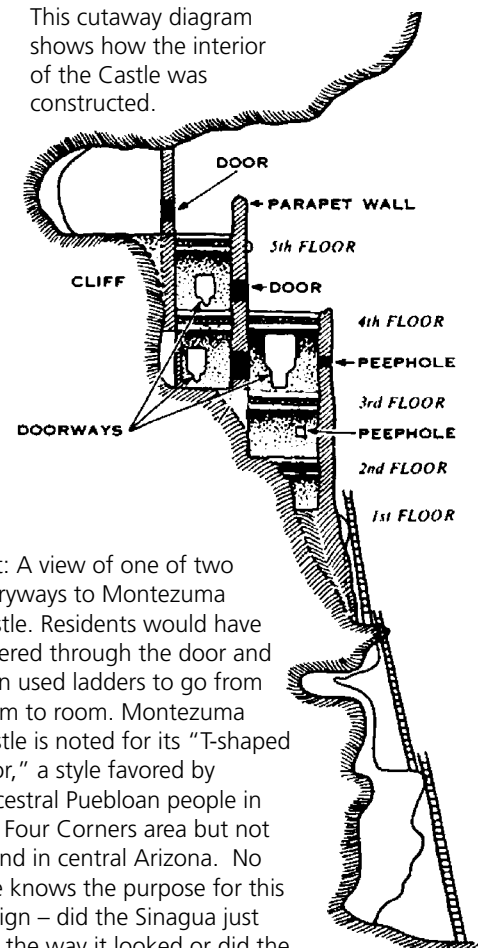
When Fort Verde was established to subdue and round up the Yavapai and Apache people, a popular outing for officers and enlisted men was to visit “The Castle.” Depending on the perspective, the Castle was either a site to preserve—or a treasure chest full of curiosities to take home.

Very few original artifacts remained in 1906 when President Teddy Roosevelt declared Montezuma Castle a National Monument, but protection of the structure for future generations was assured.

In 1933, “Castle A” was excavated, uncovering a wealth of information and artifacts that expanded our knowledge of the Sinagua. The Visitor Center displays at Tuzigoot and Montezuma Castle showcase this culture; a legacy that did not disappear but is still alive with the Pueblo people of today.

By Anne Worthington
National Park Guide

This cutaway diagram shows how the interior of the Castle was constructed.



Left: A view of one of two entryways to Montezuma Castle. Residents would have entered through the door and then used ladders to go from room to room. Montezuma Castle is noted for its “T-shaped door,” a style favored by Ancestral Puebloan people in the Four Corners area but not found in central Arizona. No one knows the purpose for this design – did the Sinagua just like the way it looked or did the shape have a function?

Photo by Skip Larson





NPS photo

The south-facing limestone cliffs and proximity to Beaver Creek, a year-round source of water, made the site of Montezuma Castle National Monument an ideal location for establishing an agriculturally-based village. Evidence unearthed here suggests over 250 people lived and worked beneath these cliffs nearly 1,000 years ago, dependent upon the constant supply of water for cultivating their fields of corn, beans, squash and cotton.

Echoes from the Past: continued from page 1

today is very different from what earlier inhabitants saw.

Northern Arizona was once much cooler and moist and the open range flowed with the deep, thick grasses favored by now extinct large mammals such as camel, giant elk, mammoths and other big game animals. The earliest human inhabitants of the Southwest, the Paleoindians, killed these massive creatures with a distinctive stone spear tip termed the Clovis point, and at least 16 of these extremely rare tools have been identified in the Verde Valley.

The Birth of Agriculture

Over the millennia, the climate gradually changed and the vast grasslands disappeared along with the large animals that once supplied families with food, clothing and other needs. People had to broaden their reliance on other available plants and animals as well as develop and strengthen a network of alliances. Besides creating a market to exchange minerals, textiles, jewelry and other resources, such commerce also provided a mechanism to share new technologies and ideas while extending family and social ties.

This interaction with people from what is now Mexico introduced changes that forever altered life in the Southwest. A new idea challenged thousands of years of a sustainable hunting and gathering lifestyle and revolutionized the way people interacted with and transformed the land: agriculture.

Two warm weather plants native to Mesoamerica, corn and cotton, were hybridized over the centuries and traded into the desert southwest, gradually adapting to the short, arid growing season

of northern Arizona. When properly tended and stored, corn, beans and squash provided a nutritious year-around source of food. People never gave up supplementing their diets with animals and native plants, but as larger game became increasingly scarce, the great hunts of the past were no longer a guaranteed method of survival.

Agriculture also changed the way human society was organized after thousands of years of hunting and gathering. Corn must be planted and tended by people and cannot survive as a wild plant. Accomplishing this required larger communities, enabling people to pool resources and provide the labor needed to weed their crops and process the harvest, not to mention enjoy new social and family connections.

The earliest dwellings in these communities were partially excavated into the ground with a roof of timber, brush, and clay. By A.D. 600, small settlements of these pithouses ringed the periphery of the Verde Valley and scattered along the waterways. One such dwelling, the “Pithouse Ruin,” can be seen at Montezuma Well.

About the same time, durable pottery vessels for cooking and storage were first utilized, since fragile clay pots are impractical for nomadic people who are constantly on the move. Weaving technology, based on spinning cotton fiber into a thread and using a loom, traveled up the large river valleys from Mexico and was quickly mastered by the people of the Verde Valley.

Five hundred years later, around A.D. 1100, people were constructing pueblos - solid masonry structures

with mud-plastered walls. They also made distinctive polished ceramics and produced some of the finest textiles in the Southwest. Archeologists refer to these people as the Sinagua (Spanish for “without water”), one of several groups of people in north and central Arizona that shared basic core cultural concepts.

What’s In a Name?

Visitors to the Southwest encounter many names associated with these prehistoric American Indian cultural groups. Names such as *Anasazi*, *Chaco*, and *Mesa Verde* tend to be more familiar. But these groups encompass only a tiny portion of the prehistoric Southwestern cultures, which also included the *Kayenta*, *Salado*, *Hohokam* and the *Sinagua*. However, they are not the names these people gave themselves, but rather were coined by archeologists in the last century in an attempt to define and describe groups of people who interacted with extensive trade connections, practiced similar lifeways, engaged in agriculture and shared religious concepts and practices.

In 1916, Dr. Harold S Colton, founder of the Museum of Northern Arizona in Flagstaff, began extensive archeological surveys of central and northern Arizona. He was the first to recognize that the distribution of various pottery types reflected different cultural groups. Dr. Colton made an observation that “pottery equals people” and on this basis named prehistoric cultural areas using geographic terms: Mesa Verde, Chaco, Mogollon. Within those areas he recognized even more localized groups: Salado, Sinagua, and Prescott. Dr. Colton called the early people of the Flagstaff and Verde Valley areas “Sinagua” after the name early Spanish explorers gave the San Francisco Peaks in Flagstaff: the “Sierra Sin Agua”, or “mountain without water”.

Chances are, since these cultures possessed no written language, we will never learn what these people called themselves. However, speaking to their descendants can give us tantalizing clues to their identities. The Hopi people of northeast Arizona, descendants of those we call Sinagua, refer to their ancestors as the *Hisatsinom*, or “the ancient people.”

As researchers have learned more about the relationships of prehistoric groups to modern Indian cultures, the term “*Ancestral Pueblo*” is being more frequently used and is a name preferred by the modern Pueblo people. It is also a way to recognize that even though these people of the past had their own unique cultures, they also shared core values that united them into



a larger Pueblo cultural tradition. These concepts, such as a focus on corn, clan social structures, ceremonial societies, kivas for religious structures, the katsina religion and pueblo architecture are still vital to the modern Pueblo people of Arizona and New Mexico.

The contributions of the *Hisatsinom* continue to be manifest in the arts, crafts, ceremonies and practices of Pueblo people today, strengthening a deep connection with the past and preserving this traditional knowledge for future generations.

They Did Not Disappear!

Many theories have been proposed for why the Sinagua abandoned their homes in the Verde Valley to move to larger pueblos in the north and east. The great trade networks, in place for centuries, disappeared, ending commercial and social contact between people. A prolonged period of drought starting in A.D. 1380 made farming a challenge in areas away from perennial waterways. Disease, conflict and depletion of resources may have been factors. The Hopi people of today say it was a migration of their ancestors; preordained to fulfill a covenant with one of their most important spiritual beings, and they stress the fact that they did not disappear. They are still very much here.

Whatever the reason for their departure, one thing remains true to this day: the Verde Valley is never completely without people. The ancestors of today’s Yavapai and Apache people became caretakers of the land after the great Sinaguan exodus. In fact, their descendants continue to live within sight of one of the most recognizable and enduring symbols of the ancient Sinagua, Montezuma Castle.

Echoes of the Past

A visit to Montezuma Castle, Montezuma Well or Tuzigoot National Monuments is more than simply an occasion to see some impressive ruins, or a chance to take a short break during the long drive to the Grand Canyon. It is an opportunity to glimpse a 10,000 year story of the ingenuity and perseverance of a people skilled at adapting to an ever changing, and often unforgiving landscape. **It is a time to listen to the echoes of a past filled with change and struggle, fear and hope, and perhaps learn a little about how we might cope with these challenges in our own lives. And it is a chance to discover the enduring legacy of a people who, like millions of us today, called northern Arizona home.**

By Anne Worthington
National Park Guide

Frank Pinkley, one of the first employees of Montezuma Castle National Monument, supervised and documented much of the restoration work accomplished between 1923 and 1925 to preserve the legacy of the Sinagua in the park.

NPS photo

MONTEZUMA WELL

A Natural Oasis

As seasons change, flocks of migratory green-winged teals and mallard ducks rest briefly on the surface of Montezuma Well. Muskrats, pond sliders and Sonoran mud turtles ply through the thick beds of brown-green algae that flourish through the year. This unique refuge is like no other on Earth...

This natural limestone sinkhole offers a unique setting as you experience the contrast of two distinct life zones along the one-third mile trail. The Well rim, like most of the area nearby, is a high desert life zone. The riparian area along Beaver Creek creates a yellow and green ribbon of lush growth through this semi-arid countryside.

The perennial flow of this spring-fed stream together with water from Montezuma Well and its irrigation canal truly creates a natural and soothing haven for visitors.

to form. The passage of time and the force of water carved a cavern larger and larger until, about 11,000 years ago, the roof of one of these caverns gradually crumbled forming Montezuma Well.

Underwater Chain Of Life

Water entering Montezuma Well is at a constant 74 degrees with a flow of over 1,400,000 gallons a day. As the water passes through limestone it collects high amounts of dissolved carbon dioxide nearly 100 times higher than most natural aquatic environments.

algae through appendages below their mouths.

Leeches, living by day in the bottom sediments of the well, rise at night and, searching with sensory hairs on their bodies,

gulp large quantities of the small amphipods. Night-swimming water scorpions also make evening meals of the shrimp-like creatures.

With the first light of day, these creatures sink back to the depths of the Well until sunset, and the beginning of another cycle.

The Mystery Of The Water

Scientists have not discovered the origin of the consistently warm water that feeds Montezuma Well. A current research topic with scientists from Northern Arizona University is trying to decipher where the water is coming from and from what level. Scientists have noted the flow rate from the Well rarely fluctuates — but the source deep in the earth's layers remains a mystery.

By Rex Vanderford
National Park Ranger

“What’s That Tree With the White Bark?”

The Arizona Sycamore is a Highlight of Any Visit

Mostly white trunks and spreading gnarled branches rise in stark contrast to the vivid hues of green along the riparian, or streamside, areas of the Verde Valley. The Arizona Sycamore, often reaching heights of 80 feet, is one of the most distinctive sights at Montezuma Castle and Montezuma Well. This member of the Plane Tree family once blanketed Arizona 63 million years ago when the climate was cool and moist. As the weather became drier these deciduous trees retreated to areas close to permanent water, such as the perennial riverways and canyon bottoms that bisect the state.

Some amazing adaptations help the Arizona Sycamore survive from seeding to old age, at least 200 years. Each fruit pod contains an average of 667 seeds with a protective coating designed to withstand seasonal flooding; the torrents of water reshaping the land, moving and depositing masses of rocks, earth and debris.

The roots of the young plant must be able to penetrate the rock-laden, compacted substrate. If torrential flooding scours the area, the seedlings may be left literally high and dry with roots that have to remain in moist soil to thrive. Once established, the trees help protect against erosion, capturing precious topsoil for other plant life.

The sycamore hosts a myriad of species native to Arizona. Large palm-shaped leaves protect and shelter the many small birds using the waterways as a migration corridor. Woodpeckers and other burrowing animals nest in the spreading branches and insects go through various life stages as they become sustenance for even more creatures. In the hot, dry summer months, sycamores offer shade and relief to all life along the banks.

People in the Verde Valley have used the soft wood of the Arizona Sycamore for thousands of years.

The ancient Sinagua use these trees for many of the support beams still visible in Montezuma Castle. Some of these beams, which were hoisted 80 feet above the valley floor, are estimated to weigh over two tons!

Montezuma Castle National Monument is one of the best locations to view Arizona Sycamore in its natural state. Sadly, over 90 percent of Arizona's riparian areas, habitat necessary for the survival of these glorious trees, have been lost to development or are not accessible to the general public.

Montezuma Well features a large curved sycamore along the Outlet Trail, unchanged since it was photographed in the 1870's, this tree stands as a relic of the distant past and continues to inspire awe in visitors today.



NPS photo

Montezuma Well hosts a variety of wildlife but fish cannot survive in the waters; the carbon dioxide level is too high. Instead, several species found only in the depths of Montezuma Well have evolved, adding to the rich tapestry of this life zone in the Upper Sonoran Desert.

Time And Water: The Birth Of Montezuma Well

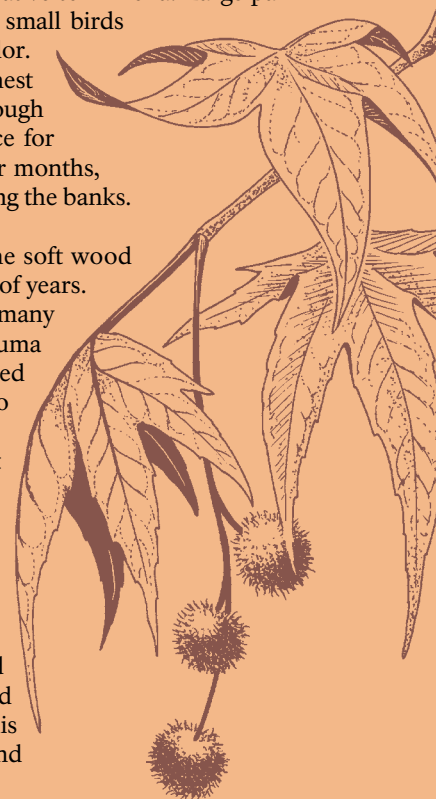
The story of Montezuma Well began 12 million years ago, when this part of the Verde Valley was covered by a large shallow lake. Floating plants in this body of water caused dissolved limestone to form minute crystals which slowly sank to the bottom, accumulating into thick layers of soft limestone rock.

About 2 million years ago the lake waters began disappearing. Underground streams started dissolving softer areas of the underground limestone and a cavern began

The high levels of CO₂ make Montezuma Well completely inhospitable to fish, despite the presence of oxygen in the water. In their absence, an aquatic community of unique species, each dependent on the other, has evolved. Four of these species are found nowhere else on the planet!

Algae, small floating plants, manufacture food from light energy and the rich supply of carbon dioxide in the water.

At night, a great feeding frenzy begins among the creatures who have adapted to this harsh aquatic environment. Amphipods, tiny shrimp-like animals, feed by combing



Slide Rock State Park

This park, in scenic Oak Creek Canyon, takes its name from the 30-foot water slide naturally worn into the rocks of the creek bed. There are opportunities for bird watching, fishing, hiking, and relaxing along the creek. Pets are allowed if on leash in most areas of the park, but not in the swimming areas.

HOURS: Day use only. 8am to 5pm

ADDRESS: 6871 N. Highway 89A

Sedona AZ 86339 (in Oak Creek Canyon).

ADMISSION: fee per car up to four adults. Call for details

PHONE: 928-282-3034



Fort Verde State Historic Park

General Crook's US Army scouts and soldiers were stationed at Fort Verde in the late 1800s. Several original buildings still exist.

Historic military living quarters are open to visitors and teach about life on the frontier. The museum located in the old headquarters buildings displays artifacts explaining the history and methods of frontier soldiering.

HOURS: 8am to 5pm daily; closed Christmas Day

ADDRESS: 125 E. Hollamon Street, Camp Verde AZ 86322

ADMISSION: fee; children under 13 free

PHONE: 928-567-3275

WEB: www.azstateparks.com

Jerome State Historic Park

The mansion of James Douglas built in 1916 perches atop a hill overlooking the Verde Valley. The building once served as a hotel for mining officials as well as a private home. Displays feature local mining history.



Photo by Pamela Ravenwood

HOURS: 8am to 5pm daily; closed Christmas Day

ADDRESS: 100 Douglas Road, Jerome AZ 86331

ADMISSION: fee

PHONE: 928-282-5381

ARIZONA GAME AND FISH

Page Springs Hatchery

This is Arizona's largest fish hatchery. A self-guided tour takes visitors through the main hatchery where rainbow and brown trout are raised to be released in waters throughout Arizona. There are two additional nature trails and some of the walk is along Oak Creek. The Page Springs Hatchery is also an Audubon-designated Important Bird Area; sightings of bald eagles are common in winter months.

HOURS: 8am to 3:30pm daily; closed

Thanksgiving and Christmas

ADDRESS: 1600 N Page Springs Road, Cornville AZ 86325

ADMISSION: no charge

PHONE: 928-634-4805

U.S. FOREST SERVICE



Palatki Heritage Site

Cliff dwelling and pictograph trail, interpreting the prehistoric Sinagua culture. There is a small visitor center with exhibits and bookstore. Reservations are required because the parking lot only has 16 spaces.

HOURS: Reservation required;

9:30am to 3:30pm daily; closed

Thanksgiving and Christmas Day

ADMISSION: fee; Red Rock, Annual, Senior or Access pass.

PHONE: 928-282-3854

WEB: www.redrockcountry.org

Honanki Heritage Site

Cliff dwelling with associated rock art, interpreting the prehistoric Sinagua culture.

HOURS: 10am to Sundown daily; closed

Thanksgiving and Christmas

ADMISSION: fee; Red Rock, Annual, Senior or Access pass.

PHONE: 928-282-4119

WEB: www.redrockcountry.org

V-V Heritage Site

Rock art site highlighting over 1200 petroglyphs. There is a small visitor center and gift store.

HOURS: 9:30am to 3:30pm daily; open

Friday-Monday; closed Thanksgiving and Christmas

ADMISSION: fee; Red Rock, Annual, Senior or Access pass.

PHONE: 928-282-4119

WEB: www.redrockcountry.org

Ranger Districts

Red Rock District Ranger Station

Coconino National Forest
PO Box 300, Sedona AZ 86339
928-282-4119

WEB: www.fs.fed.us/r3/coconino

Verde Ranger District

Prescott National Forest

300 East Highway 260,

Camp Verde AZ 86322

928-567-4121

WEB: www.fs.fed.us/r3/prescott

YAVAPAI-APACHE NATION



Yavapai-Apache

Tourism Department

Information on activities through the Yavapai-Apache Nation.

ADDRESS: 355 Middle Verde Road, Camp Verde AZ 86322

PHONE: 928-567-1004

WEB: www.yavapai-apache-nation.com

HISTORICAL SOCIETIES & MUSEUMS

Camp Verde Historical Society and Museum

Museum displays the rich historical past of the Verde Valley with timeline and exhibits on prehistory, mining, ranching and settlement.

ADDRESS: 435 South Main Street, Camp Verde AZ 86322

PHONE: 928-567-9560

WEB: www.sedona-verdevalleymuseums.org

Sedona Historical Society & Heritage Museum

This museum highlights Sedona's history of pioneers and settlers from 1870 to 1950. Displays show the lifestyles and works of people who ranched, farmed and worked this area during that time period.

HOURS: 11am to 3pm daily; closed major holidays

ADDRESS: 735 Jordan Road, Sedona AZ 86339

ADMISSION: fee

PHONE: 928-282-7038

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Displays related to the history of Cottonwood and the Verde Valley. Photographs, newspapers, letters, maps and other artifacts from the 1870s to the present.

HOURS: Wednesday 9am to noon; Friday to Sunday 11am to 3pm

ADDRESS: 1 North Willard Street, Cottonwood AZ 86326

ADMISSION: no charge

PHONE: 928-634-2868

WEB: www.sedona-verdevalleymuseums.org

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PHONE: 928-634-5477

WEB: www.jeromehistoricalsociety.org

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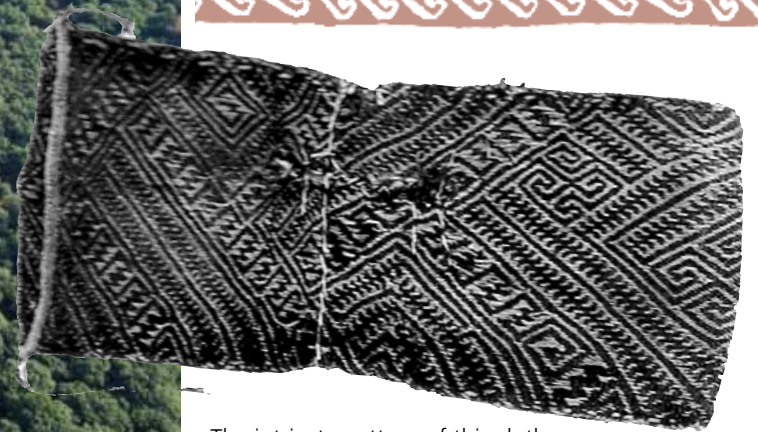
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TUZIGOOT sits on a long, limestone ridge 150 feet above the Verde River floodplain. Also in the photo are the tailings from the former copper smelter located in Clarkdale.

PHOTO BY ERNIE SILVA



The intricate pattern of this cloth bag speaks to the aesthetic sense of the ancient peoples populating the area.

TUZIGOOT

Dawn comes easily to the world — touching upon the mountain ridges and then brightening down into the valleys. As the light comes to this hill above the river, the old walls reflect again a memory of life uncovered from times dust.

Archaeologists with a Civilian Works Administration crew excavated and stabilized the ancestral village in 1933 and built a museum to hold its material story in 1935.

Our present understanding is of hunters passing through this abundant valley perhaps several thousand years ago and then populated before A.D. 1100 by farming peoples who built their way of life on the available resources of land and water.

Although the last word is yet to be written on the goings and comings of these people, we know from our scientific inquiries some clues about the climate of the times. Rainfall is sometimes marginal; the crops may have depleted the soil nutrients after years of planting.

By the time the people of Tuzigoot left the region around A.D.1400 the citadel had housed perhaps 250 people in its hundred rooms. It was the city of its day where people learned to resolve the problems of living life together. And though with more people come more problems, there are also more of

the same people to find solutions. There is a creativity of survival and choices threading through the generations that lived here.

How big was the world they called their own? By the stories of people and artifacts we know the Sinagua traded for shells from the coast and macaws from the south. Where did they go? Depending on our use of the language, “vanished” may come to mean moving on to other resources and other promised lands. The Hopi people of today tell, in their clan stories, of living in places like this before migrating to their present northern mesas.

Why did they leave? Perhaps resources became little and politics too much — or perhaps the Promised Land lay just beyond the horizon.

Enjoy your visit to Tuzigoot and look past the ruins to a time when the best world was on top of a hill made golden by dawns’ light.

By John Reid
National Park Ranger



Tavasci Marsh: Relic of an Ancient World

Tuzigoot National Monument overlooks Tavasci Marsh, a natural riparian area protecting an old meander of the Verde River. This ancient scene would have been familiar to the Sinagua who used water from the marsh and the Verde River to irrigate their crops. Today, Tavasci Marsh has been designated an Audubon Society Important Birding Area for the number and diversity of biological species that inhabit the area.



©1999 Zoology Division

“Will We See a Rattlesnake?”

New research changes perspective on these elusive animals



Rattlesnakes are part of the natural landscape in the Verde Valley and the warmer days of spring signal it is time for these reptiles to leave their dens and begin the search for food.

Biologist Erika Nowak of the USGS Science Center in Flagstaff has been studying so-called ‘nuisance rattlesnakes’ in Arizona’s National Monuments and the Grand Canyon for ten years. Her research may help reduce the fear people have for these elusive animals.

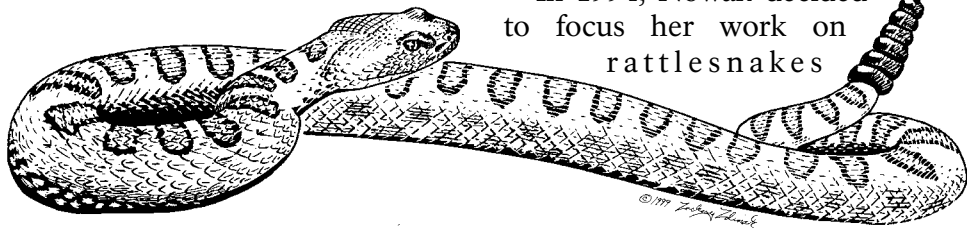
When a rattlesnake is sighted near a Park Service Visitor Center, it is captured, weighed,

measured and tagged with a small chip. Park rangers receive special training in handling the snakes so the animal—and the ranger—are not injured.

The snakes are released in areas away from the public and then tracked by the researchers.

Data Results

In 1994, Nowak decided to focus her work on rattlesnakes



because, “I felt sorry for them. There is a general fear of rattlesnakes but there really hadn’t been much research. We needed to learn something about the animal and its behavior.”

Some conclusions have been reached after years of collecting data. As a controlled study, Nowak initially released 7 snakes outside Park boundaries, miles from their dens. She observed 7 snakes left in home territory.

The relocated snakes had a higher mortality rate and over half made their way back to their home range. Because of Nowak’s research, captured snakes are now moved away from the public but not miles from their dens as they had been in the past. The mortality rate for the animals is much lower and there have been very few times when visitors even see a snake.



Researchers carefully weigh and measure a rattlesnake. The scientists give talks to the public, trying to promote more understanding about this frequently misunderstood animal.

Photo: Robbie Hannawacker

The Prey Base

In a related study, biologists AJ Monatesti, Justin Schofer and Amy Madara are examining the small rodent populations on the Monuments to determine if there is any correlation between number of snakes and number of small mice, or, the “Prey Base”.

“Rodents are the peanuts of the wilderness—everyone wants to eat them!” explained Monatesti. Over a long weekend, he and Madara set no-kill traps protected inside milk cartons to see what small creatures roamed the park. Out of the seven species of small rodents living in the area, “we got them all!”

Part of the research will determine what rattlesnakes are eating and how the small rodent population is affected. The rattlesnakes at Tuzigoot tend to be larger than the snakes at Montezuma Castle; is this because there are more rodents at Tuzigoot and Tavasci Marsh and a continual source of protein? The researchers feel this is a possibility.

STAY AWAY!

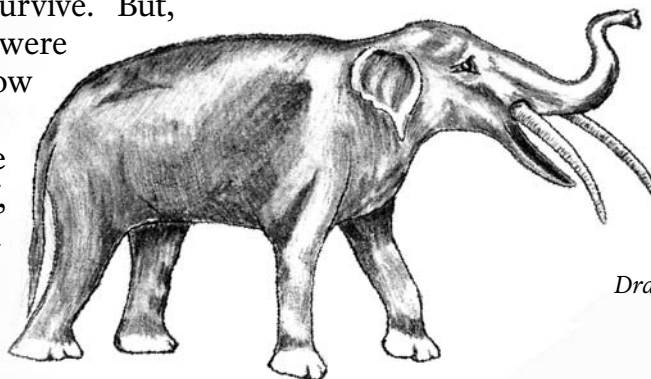
Erika Nowak says it is important for visitors to not approach a rattlesnake if one is sighted. “They are only going to strike at you if they feel threatened in some way. They want to get away from you as quickly as possible!”

Rattlesnakes are a crucial member of the local ecosystem that deserve not only our respect, but our admiration.

Galloping Gomphotheres: Back from the Ice Age!

Tens of thousands of years before humans entered the Verde Valley, large Ice Age mammals, including mammoths, roamed this area on a never-ending search for the tons of plants they needed to survive. But, before there were mammoths, there were Gomphotheres, a very distant but now extinct member of the elephant family.

Paleontologist David Gillette of the Museum of Northern Arizona, Flagstaff, says this creature had skin like a modern-day elephant and probably did not have the thick fur of a mammoth or mastodon.



Drawing by Diana Rushford

But, notice what is really distinctive about this unique creature? The tusks point down toward the ground rather than curled up like a mammoth’s. Why might its tusks point down? Did this help it clear out grasses he could then eat? Your guess is really as good as anyone’s!



TURTLES IN TROUBLE!

Montezuma Well's unique habitat provides an ideal home for one of the desert's more peculiar inhabitants, the Sonora mud turtle. The constant supply of warm, fresh water and an abundance of small invertebrates and aquatic insects is all these resilient turtles need to survive and to thrive.

But there is trouble in paradise!

The only turtle native to Montezuma Well, Sonora mud turtles are easily spotted basking on logs and swimming around the water's edge. Usually found in streams and ponds set in habitats ranging from low desert to arid woodlands, these turtles have also found a home in the unique aquatic habitat and isolation of the well.

NPS photo

Scientists at Montezuma Well hope a live-capture project can teach us more about the shy Sonora mud turtle while restoring the natural balance of its aquatic home.

Through the years people have released red-eared sliders, a turtle commonly sold in pet stores, into the waters of the well. These aggressive invaders out-compete the smaller, native mud turtles and jeopardize the health of an aquatic ecosystem like no other in the world.

To address this pressing issue and help protect Montezuma Well's fragile ecosystem, the National Park Service is teaming with the USGS Southwest Biological Science Center, the Western National Parks Association, and the Arizona Game and Fish Department to conduct an ambitious project to study the negative impacts of the invasive red-eared sliders and relocate them to zoos and public school classrooms outside the park.

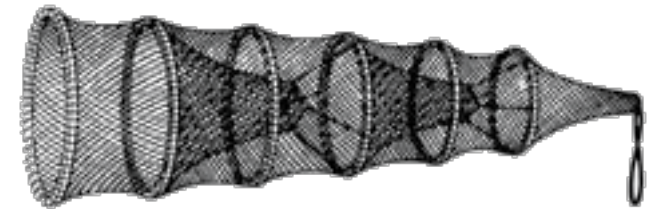
To remove the invasive red-eared sliders from the ecosystem, an intensive trapping program is being conducted within Montezuma Well. Using non-lethal baited hoop traps, park scientists hope to capture every red-eared slider in the well, and

as many Sonora mud turtles as possible.

Sliders captured in the traps are removed from the park, while mud turtles are marked, measured and examined to evaluate trends and health in the native turtle population, and are then released back into the well.

Red-eared sliders caught in the hoop traps are "adopted" for use in public displays and school classrooms, with information provided on the biology of the turtles and why they were removed from Montezuma Well. This effort will help educate children and adults about the problems caused by releasing unwanted pets into areas where they do not naturally occur.

During this project, each mud



Non-lethal, Baited Hoop Trap

turtle captured will be uniquely marked with notches in the margin of the shell, measured, aged using growth "rings" in the shell (similar to tree rings), and examined to determine the animal's general health and record the presence of shelled eggs. Sliders will be measured in the same manner, except they will be removed from the park. Marking the mud turtles in this way will allow park scientists to estimate and monitor the size of the population, and

determine the extent of movement into and out of the well.

It is hoped that the removal of red-eared sliders from Montezuma Well will aid in restoring balance to one of the most unique ecosystems in the Southwest. It will also ensure that our native Sonora mud turtles will continue to flourish in the warm waters of the well.

By Paul Ollig
National Park Ranger



NPS photo

Sonora Mud Turtle (*Kinosternon sonoriense*)

- Medium-sized (up to 6 ½ inches long)
- Smooth, high-domed shell
- Uniform light-brown or yellowish-brown color
- Often covered in algae

Red-eared Slider (*Trachemys scripta*)

- 2x larger than native turtles (12+ inches long)
- Flat, oval-shaped shell
- Top of shell marked with map-like stripes
- Red stripe behind eye, body heavily striped



NPS photo

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Western National Parks Association was founded in 1938 to aid and promote the educational and scientific activities of the National Park Service. As a nonprofit organization authorized by Congress, we operate visitor center bookstores, produce publications, and support educational programs at more than 63 parks in 11 western states.

Bookstore Sales

Bookstore sales are WNPA's primary source of income and this income is used to support National Park Service interpretive programs. The following publications, available from WNPA, are recommended for making the most of your visit to the Verde Valley National Monuments in central Arizona.

For our full catalog, visit our visitor center bookstore, or browse online at www.wnpa.org.

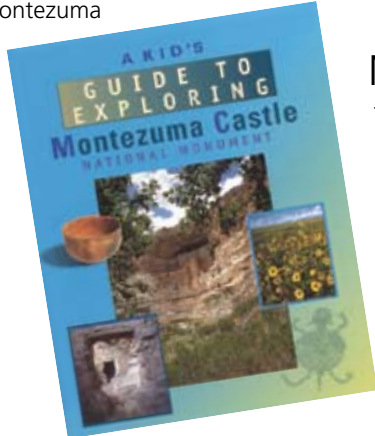
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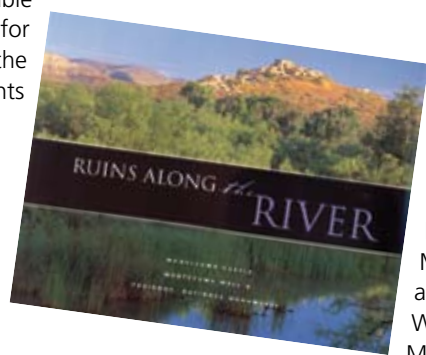


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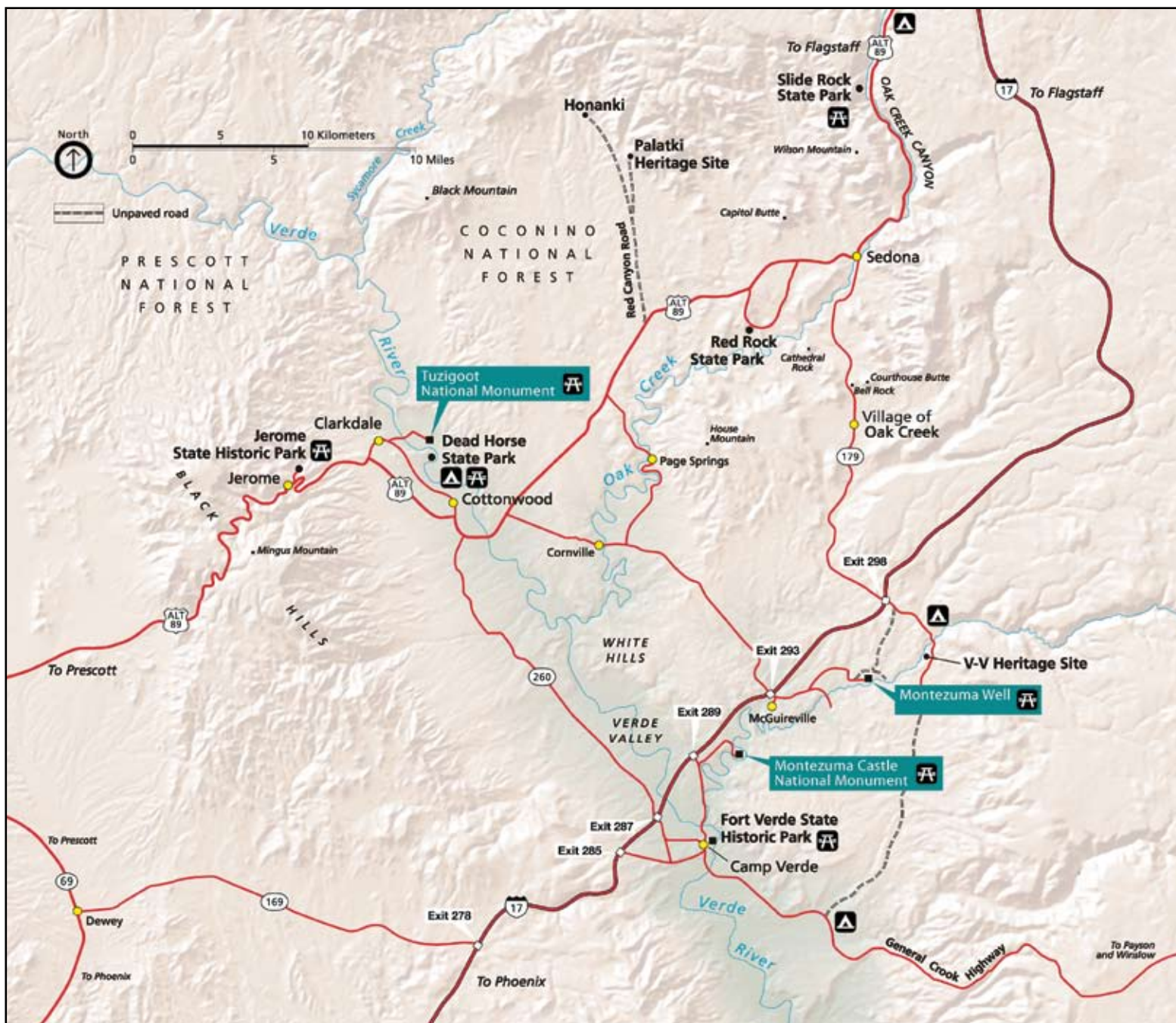
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Montezuma Castle Tuzigoot

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Montezuma Castle & Tuzigoot National Monuments



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EXPERIENCE YOUR AMERICA



Can you tell a mano from a metate? What kind of lizard was that one you spotted along the trail? How did those people get up into the castle, anyway? If you've ever asked yourself any of these questions, or if you think you know the answer to them, you'd make a great Junior Ranger!

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