



Cliff Notes



New Administration Building at Tonto

By Facilities Manager Cinda Ewing

The recently completed administration building incorporates many sustainable design features with an emphasis on high efficiency and alternative energy systems. The building was designed to earn Leadership in Energy and Environmental Design (LEED) platinum certification. All work was accomplished by utilizing a combination of contractors and park staff which cut costs considerably. The new building provides much needed office space, a meeting room, and a laboratory for the park.

Inside the block walls and concrete foundation of the new administration building, over 150 sheets of rigid 2" foamboard was placed, which reduces energy loss and significantly lowers heating and cooling bills. In areas where there were voids, it was applied 3 layers thick.

Right: The new administration building at Tonto National Monument
Photo by Jan Harper

This was in addition to the rolled insulation used in interior walls and the ceiling. Eight foot energy efficient drop ceilings with acoustical tiles were also installed to minimize heating and cooling. The windows and appliances are all Energy Star rated. The hot water heater is on an energy efficient timer, and the thermostat is made of recycled materials. The picnic tables on the back porch are made of recycled plastic. Even the door mats are made of recycled water bottles.



Photo by Peg and Rex Lavoie NPS Volunteers

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Join volunteers Rex and Peg Lavoie on a Photo Walk to the Upper Cliff Dwelling catered to professional and serious amateur photographers!

Slow Down and Enjoy the Scenery!

**SPEED
LIMIT
25**

- The 25 mph maximum speed limit on the park road is intended to protect park wildlife.
- Desert wildlife can cross the road in front of you at any moment.
- Watch for javelina, deer, and rabbits grazing alongside the road.
- Reptiles frequently cross the road near the pumphouse as this is where Cave Creek crosses from one side of the road to the other.

Your Fee Dollars at Work!

By Facilities Manager Cinda Ewing

A unique piece of Tonto history southwest of the Visitor Center has undergone yet another renovation. Originally built as the Park's first Ranger's quarters, it was later converted to a small picnic area with a ramada-style roof, allowing visitors to gain a reprieve from the hot summer sun. After modification and stabilization of the adjacent slope, contractors and park personnel have nearly completed construction of a new amphitheatre on the site.



The new amphitheatre at Tonto National Monument. Photo by Jan Harper

During the Park's annual Heritage Days event in the Spring, vendors use this area to set up their booths and tents. During the event, visitors can interact with skilled flintknappers, weavers, potters, and other primitive skills specialists, as they teach and demonstrate their crafts.

Coming Attractions!

With the completion of the new amphitheatre this fall, we will be able to expand our interpretive offerings to include programs such as astronomical viewing of solar and lunar eclipses, star parties, Native American dancing and ceremonial events. The area seats at least 50 people and is completely handicapped accessible.

The single enduring feature of the area is the historic Ranger quarters rock wall and fireplace which has been incorporated into the new concrete floored rendezvous area for Ranger guided tours to the Upper Cliff Dwelling. Park personnel and hired contractors went to great lengths to preserve this unique piece of Tonto's history.



Maintenance worker David Jansen adding some finishing touches to the new amphitheatre.
Photo by Jan Harper

Give us a break!



Tonto Treated to Rare Astronomical Events

By Park Guide Mark Stewart

Annular Eclipse



Astronomer Mark Stewart

On May 20th, 2012, Tonto National Monument hosted an astronomical viewing of the first annular eclipse in the Southwestern United States in 18 years. Park Guide Mark Stewart provided the telescopes. This eclipse was due to the alignment of the earth, moon, and sun. The moon's orbit is elliptical and during this part of its orbital path, the moon was farther away from the earth than usual. As the moon passed in front of the sun, the "smaller moon" created an "annulus" or ring. An eclipse consists of two shadows, one being the "Penumbra" or path of shadow and the other which is the "Umbra" or area of darkness. The main event passed north of Tonto National Monument around the Grand Canyon; however, we were treated with an eclipse of almost eighty percent totality.

There were about 40 visitors and park staff in attendance. The viewing was quite good as the skies were clear and the image being outstanding, in that numerous sun spots were visible at both polar regions of the sun. For the vast majority of those viewing these events, this was their first time looking through a telescope and the resultant experience was shared by all.



Visitors enjoying the annular eclipse at the entrance to Tonto National Monument.
Photo by Jan Harper



Sunspots were visible in both hemispheric regions.

Right: Progression of the Annular Eclipse.
Photos by Mark Stewart



Transit of Venus

On June 5th, 2012, Tonto National Monument observed the last Transit of Venus that will occur this century. No one alive today will witness this event within their lifetime or their children's lifetime. Park Guide Mark Stewart set up two telescopes to provide ample observing opportunities for well over 50 guests and park staff.

From an astronomical standpoint, the position of the Sun and Venus are critical to allow for this rare event, given the size of both bodies involved and the orbital paths required for the alignment of Venus to cross the face of the sun. The transit began around 3:30 pm as Venus made "first contact" with the sun and continued until nightfall around 8 pm. During this event, numerous sun spots were visible as the sun is nearing the peak of its eleven year solar cycle. This year has seen some of the most spectacular solar events in decades. Visitors could observe numerous stars emerging as the path of darkness moved across the landscape and the temperatures dropped.

Some interesting historical and astronomical facts about the Transit of Venus:

Only seven of these events have occurred since the invention of the telescope. The years are as follows: 1639, 1761 and 1769, 1874 and 1882, 2004 and 2012. It was during Captain Cook's epic around the world voyage, that after obtaining astronomical data of the 1769 transit of Venus, he discovered an unknown continent now known as Australia and the Island of New Zealand.

Venus aligns to cross the face of the sun for the last time this century.
Photo by Mark Stewart



Become a National Park Service Volunteer!



Rex and Peg Lavoie, NPS Volunteers
Photo by David Sunfellow

Want to find a place to volunteer? Start by visiting the National Park Service Volunteer website:

www.nps.gov/volunteer

Find a place to volunteer by typing in a park name, state, or zip code.

You can print a volunteer brochure or a volunteer application from the website as well. It's easy!

You can also join NPS Volunteers on Facebook or follow the Volunteer Network on Twitter.

For information about volunteering at Tonto National Monument, please contact our volunteer coordinator:

Susan Hughes, Chief Ranger
(928) 467-2241 ext. 8400

There are nearly 400 national parks and even more ways that you can help . . . Find an opportunity at a park near you!



Photo Walks Offer Unique Opportunities ...

NPS volunteers Rex and Peg Lavoie will offer their popular photo walks again this season! The tours provide a way for professional and serious amateur photographers to photograph along the Upper Cliff Dwelling trail and the ruin itself without disrupting the regular ranger-guided tours.

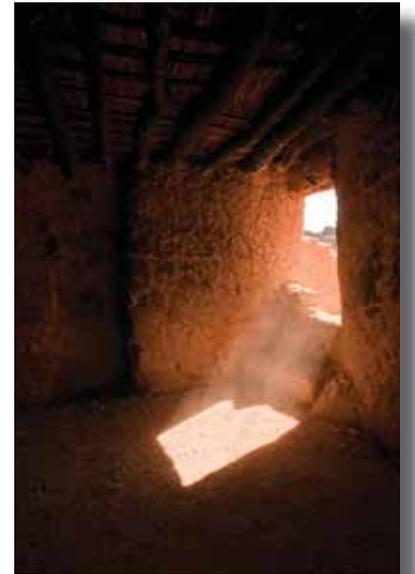
The photo walks allow participants the time to compose images and are timed to provide the best lighting conditions. Group size is limited to 5-7 people to make it easier to photograph in the dwelling without getting in each other's way. Below are some photos from past photo walks:



Sunrise at the Upper Cliff Dwelling
Photo by Jabon Eagar



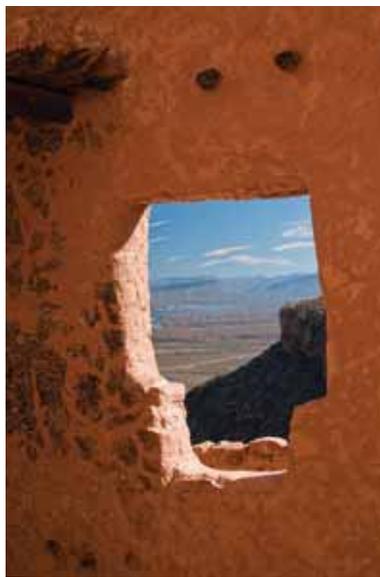
Tonto Gold
Photo by Peg Lavoie, NPS Volunteer



Doorway to the Past
Photo by Rex Lavoie, NPS Volunteer



Upper Cliff Dwelling Trail
Photo by Rex Lavoie, NPS Volunteer



Upper Cliff Dwelling
Photo by Rex Lavoie, NPS Volunteer



Photo Walk participants 'seeing the light' with their host Rex Lavoie (fourth from the left).
Photo by Peg Lavoie, NPS Volunteer

"It's such a pleasure to visit a magical place with so unique people ... Thanks, Rex and Peg!"

Clare Marie Fritz

Photo Walk Schedule for 2012-2013

November 15th 9 am

February 7th & 21st 9 am

December 13th 9 am

March 7th and 21st 9 am

January 10th 6 am
Sunrise Walk

April 4th & 18th 9 am

January 24th 9 am

All walks are on Thursdays

Upper Cliff Dwelling
Photo by Rex Lavoie, NPS Volunteer

Call the monument to make your reservations!
(928) 467-2241 ext. 8450

Battling Buffelgrass at Tonto

By Biological Science Technician Tina Greenawalt

Invasive species have long been a problem throughout the United States. Plant and animal species that are accidentally, or even intentionally, introduced can crowd out native organisms and quickly overtake an area. Here at Tonto National Monument, we are constantly monitoring for invasive species such as buffelgrass (*Pennisetum ciliare*).

Buffelgrass, which was introduced in the 1930s from Africa for cattle forage, has been spreading throughout Arizona's deserts and competing with native plants for valuable water and nutrients. This invasive bunch grass grows in dense colonies and is extremely flammable (it can burn at temperatures up to 1800 degrees fahrenheit!), posing a great wildfire risk. Since our native cactuses and trees did not evolve with a wildfire regime, buffelgrass creates a serious threat to our native plants such as the iconic saguaro. In addition, buffelgrass is destructive to habitat for wildlife such as mule deer.



Biologist Tina Greenawalt

Photo by Jan Harper

We regularly monitor for invasive species throughout the park. Our efforts mostly involve manual removal to help stop them from spreading further into the park or onto adjacent lands. The highway that passes through the park has posed the biggest problem for managing invasive plants like buffelgrass. Roadway shoulders are typically disturbed areas where these types of plants thrive. Passing vehicles can also carry seeds on their tires, which can become distributed along the road. Luckily we've been able to eliminate the buffelgrass along the highway and so far it has not invaded the rest of the park. With continual monitoring hopefully we can keep the park free of buffelgrass.

How Can You Help Stop the Spread of Invasive Species?

- Stay on the trail.
- Don't collect seeds or other items from the park.
- Volunteer for "weed pull" events and help eradicate invasive plants from your park.
- Remove invasive species from your yard before they can spread.
- Remove seeds from your shoes and socks so they do not spread to other areas.

Heritage Days

This year's Heritage Days event will be held on **March 16th and 17th**. The Upper Cliff Dwelling will be open to visitors to tour on their own without a guide, for an entire weekend. Uphill travel on the trail is allowed between the hours of 9 am and 2 pm. Be sure to bring the family for a fun filled **FEE FREE** weekend!



Photo of basketmaker by Rex and Peg Lavoie NPS Volunteers



Demonstrators produced and displayed replicas of artifacts during a recent Heritage Days weekend. Photo by Rex and Peg Lavoie NPS Volunteers



Melissa Reilly of Adobe Mountain Wildlife Center holds a Harris Hawk. Photo by Jan Harper

If you visit the ramada area during our Heritage Days weekend, you can watch Native American basketmakers, potters, and flintknappers at work. Be sure to visit the raptors and other animals from the Adobe Mountain Wildlife Center as well.

Just For Kids

Climate Changes Everything!

By Park Guide Jan Harper

How did climate change affect the people who lived here 700 years ago?

We have two rainy periods in the Southwest: one during the fall and winter months and one during the summer months. The summer rains are called the _____ season.

People living in Tonto Basin prehistorically were primarily farmers who lived in masonry homes called _____.

People living near the Salt River used it to _____ their crops. People living in the upland areas had to depend on _____ in order for their crops to grow.

Weather events in the Southwest consist of alternating cycles of droughts and floods. At times these cycles can become more severe.

Perhaps a particularly long _____ cycle resulted in crop failure ... especially for those farmers that did not live near the river.

Or perhaps massive _____ wiped out ditches, dams and canals near the river destroying the irrigation system for their crops.

Or, perhaps it was a combination of both! These, and other factors led to the general abandonment of the Basin around AD 1425. The people simply _____ to other areas where the environmental conditions were more favorable.

The intention to return was always there though, and in some cases the people did!

Fill in the blanks above with these words:

irrigate

pueblos

floods

monsoon

rainfall

migrated

drought

Become A Junior Ranger!

Explore your national parks while learning how you can help take care of them for the future. Pick up your activity sheet at the Visitor Center or go online to:

www.nps.gov/tont

Click on "For Kids" and then "Be a Junior Ranger." Complete the activities for your age group and return your activity sheet to the Visitor Center (or by mail) to earn a Tonto National Monument Junior Ranger badge!

Visit our website:
www.nps.gov/tont
for more fun stuff!

Have a Safety Mindset Around Animals and Nature

By Park Guide Beverly Swift Pony

It seems so many places we go today are crowded with people. Sometimes being in a crowd is expected, like at an amusement park or theme park. Many people who come to National Parks want to get away from the "crowds." National Parks have always been places to seek quiet and solitude ... where seeing creatures in their natural habitat, roaming free and unrestricted can be exciting and heartpounding. While visiting a park you might get "lucky" and see something you have only read about in a book or magazine, or seen on television.

Believe it or not, there are some people who think National Parks *are* amusement or theme parks. They forget that these are not tame places. They are not supposed to be! There can be dangerous plants, animals and areas where slipping and falling are a possibility.

Responsible visitors are respectful of nature and aware of their surroundings. They do not feed or approach wild animals; they admire them from a safe distance or use their camera's telephoto lens to get "closer." Good stewards do not deface park structures or litter, pick plants or flowers, and obey all signs and warnings. They stay on the designated trails and watch where they are stepping. So enjoy the beautiful surroundings, stay safe and help keep your parks WILD!



The most frequent close encounter that visitors have in the park is with the Teddy Bear Cholla cactus. Even the little pods are very painful and require the use of strong tweezers or pliers to remove the barbed spines! Photos by Jan Harper

Plan Your Visit

Tonto National Monument is located 30 miles northwest of Globe on Highway 188. Driving time from Phoenix, Scottsdale or Mesa is approximately 2 to 2 1/2 hours; from Tucson or Flagstaff, 3 to 3 1/2 hours.

The Visitor Center has a museum, bookstore, viewing deck, an 18 minute orientation video, and is open daily (except Christmas Day) from 8 am to 5 pm. The park also has a picnic area for your enjoyment with restrooms.

Self-Guided Lower Cliff Dwelling Trail

A paved trail winds its way through the Sonoran desert to the Lower Cliff Dwelling. You will climb 355 vertical feet, so be prepared for a steep climb. Signs along the trail provide information about the desert plants, geology of the area and lives of the ancient Salado. Sit on one of several benches along the path and enjoy the view of Roosevelt Lake. Once you arrive at the dwelling, walk through homes that were last occupied 700 years ago. On your return walk, the Cactus Patch Trail branches off the main trail and ends in the parking lot. Learn how desert plants have adapted to arid conditions and how the Salado used these plants to provide food, shelter, and clothing. Bring water, sunscreen and a hat with you. The one mile roundtrip walk takes about an hour to complete so plan to arrive at the park before 4 pm. Allow extra time to visit the museum, bookstore, and watch the video.



Lower Cliff Dwelling

Photo by Rex and Peg Lavoie NPS Volunteers



Upper Cliff Dwelling

Photo by bcphotography.com

Ranger-Guided Upper Cliff Dwelling Tours

Early Bird tours of the Upper Cliff Dwelling are offered on some Saturdays at 8:15 am in October and May. During the winter season (November through April), rangers give guided tours to the Upper Cliff Dwelling. Tours are offered every weekend. Additional weekday tours are added as visitation increases. This 3 mile roundtrip backcountry trail travels through a riparian area by way of a creekbed, then gains 600 feet in elevation via switchbacks and numerous steps. The tour lasts 3-3 1/2 hours. Full moon hikes to the Upper Cliff Dwelling for experienced hikers are offered in the winter months only. Reservations are required for all Upper Cliff Dwelling tours. See page 7 for a schedule of *Ranger Programs*.

**FOR RESERVATIONS OR INFORMATION
CALL TONTO NATIONAL MONUMENT (928) 467-2241 ext. 8450**

Where's the Water?

The National Park Service has implemented a reusable water bottle program in an effort to reduce litter, keep plastics out of landfills, and reduce greenhouse gasses. Inexpensive souvenir water bottles are available in our bookstore. Do your part to help the planet: Bring or buy a reusable water bottle and fill it with *FREE* refreshing spring water!



Fresh spring water is available at the new water station.
Photo by Jan Harper

Pets in the Park

- Leashed pets are allowed on the Lower Cliff Dwelling Trail but not in the dwelling itself. They are also allowed on the Cactus Patch Trail, in the picnic area and the Visitor Center.
- Pets are not allowed on the Upper Cliff Dwelling Trail and cannot be left in your car while you are on a tour.
- Do not leave your pet in the car. Temperatures can rise greatly in a parked vehicle, even with the windows open.
- Pick up after your pets and be sure to bring them plenty of water for the hike also.
- During the hot summer months, the pavement on the trail can be too hot for your pet to walk on.
- Rattlesnakes are generally out of hibernation from early April through November. Keep the leash tight and don't allow your dog to snoop under the bushes!

Activity	Location	Time	Duration	Frequency
Early Bird Upper Cliff Dwelling Tours      <p>Early Bird tours of the Upper Cliff Dwelling are offered on some Saturdays in October and May. Because of the heat, we stop less often and hike a little faster. See the description of the trail (on page 6) under Ranger-Guided Upper Cliff Dwelling tours.</p> <p>NEW!</p>	Visitor Center	Tours leave at 8:15 am	3-4 hours	Saturdays: October 27th May 4th & 11th
Meddler Point Platform Mound Tours    <p>Excavations at the Meddler Point Platform Mound revealed a complex construction sequence. The mound and other structures within a large enclosing wall are believed to have been the ceremonial center of a local community that included migrant groups from areas northeast of the Tonto Basin.</p>	Call the park for directions to the site: (928) 467-2241 ext. 8450	Tours leave at 10:00 am	2-3 hours	Saturdays: December 8th February 9th
Wildflower Walks      <p>Wild flower walks along the Upper Cliff Dwelling trail are offered on some Wednesdays in March and April. The walk will include a tour of the Upper Cliff Dwelling as well! See the description of the trail (on page 6) under Ranger-Guided Upper Cliff Dwelling tours.</p>	Visitor Center	Tours leave at 10:00 am	3-4 hours	Wednesdays: March 6th, 13th, & 20th April 3rd & 10th
Cline Terrace Platform Mound Tours     <p>The Cline Terrace Platform Mound site is similar to other sites along the Salt River but it also has several distinct characteristics. There is a massive compound wall around the complex, and many walls are faced with white gypsum. Why? This site must have been quite impressive in the moonlight!</p>	Call the park for directions to the site: (928)467-2241 ext. 8450	2:00 pm	Approx. 2 hours	Saturdays: November 17th December 15th
Schoolhouse Platform Mound Tours    <p>The Schoolhouse Platform Mound site is unique in that it was occupied for over 100 years while most other settlements in the basin were smaller and were occupied only briefly. People from neighboring villages apparently moved to the Schoolhouse Platform Mound. Why?</p>	Call the park for directions to the site: (928)467-2241 ext. 8450	2:00 pm *11:00 am in April	Approx. 2 hours	Saturdays: November 24th January 5th & 19th February 2nd & 16th March 2nd *April 6th
Photo Walks      <p>Photo walks along the Upper Cliff Dwelling trail as well as at the ruin itself are offered to small groups of professional and serious amateur photographers. These tours allow plenty of time for composing photos and are timed to provide the best lighting conditions. The tours are led by volunteers Rex and Peg Lavoie, retired professional photographers.</p> <p>See Page 3 for more information.</p> <p>CALL THE MONUMENT TO MAKE RESERVATIONS. (928) 467-2241 ext. 8450</p>	Visitor Center		Varies	Thursdays 9am: November 15th December 13th January *10th & 24th February 7th & 21st March 7th & 21st April 4th & 18th *Sunrise Walk 6am

 Bring plenty of water, a hat and sunscreen. Wear boots or tennis shoes, no flip flops!

 Reservations required. Call (928) 467-2241 ext. 8450

 Venomous creatures may be encountered in the desert.

 Program may be canceled due to foul weather or flooding.

 No dogs allowed; don't leave pets in your vehicle!

 High clearance vehicle needed to get to the site.

Children must be accompanied by an adult on all programs.

The WNPA Nonprofit Bookstore at Tonto National Monument provides educational and interpretive materials through an active publishing program. Proceeds from retail sales are used to support educational, research and interpretive programs at Tonto National Monument and other National Park Service units.

Help Us Help Tonto National Monument!

Your annual \$25 membership entitles you to a 15% discount on purchases in the WNPA Bookstore (20% discount for Seniors). **Teachers receive a 20% discount** with a valid ID! Discounts are honored at many other cooperative association bookstores in National Park Visitor Centers. Your membership contribution directly supports research and educational programs at Tonto National Monument.

To order by phone, call our bookstore manager Sherrie Brooks (928) 467-2241 ext. 8451

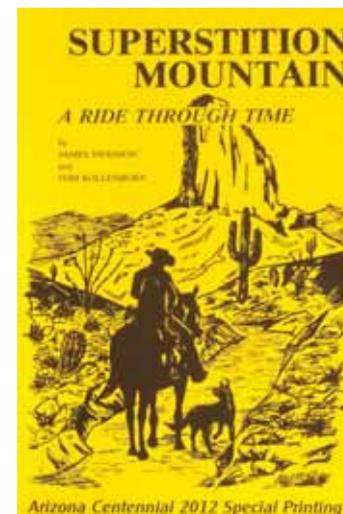
To order online visit: www.wnpa.org

Children's Section

- Audubon Hummingbird and Quail with Real Bird Calls* \$8.99
- Constellations Activity Book* \$5.95
- Things That Bite Southwest Edition* \$12.95



Medicines of the People
Handmade traditional Native American Navajo herbal remedies.

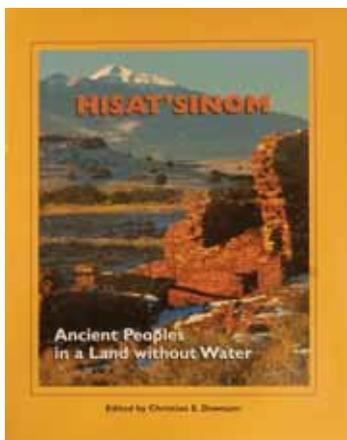


Local History

- Images of America: Around Miami* \$21.99
- Superstition Mountain: A Ride Through Time Special Centennial Reprint* \$25.95

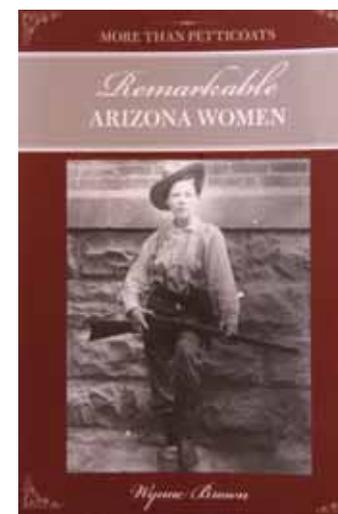
New Arrivals!

- Four Corners Region Map* \$11.95
- Medicines of the People Salves "A Life Way Revolution"* \$9.99



Edible & Medicinal Plants

- Edible and Medicinal Plants of the West* \$21.00
- Indian Uses of Desert Plants* \$12.95
- Medicinal Plants of the American Southwest* \$19.95
- Plants of the Sonoran Desert and Their Many Uses* \$19.95



Archaeology

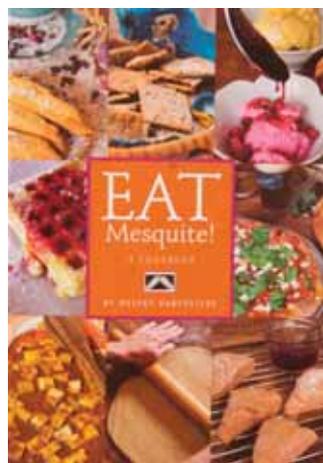
- Confluence of Change* \$21.95
- Hisat'sinom Ancient Peoples in a Land Without Water* \$24.95
- Salado Archaeology of the Upper Gila, New Mexico* \$17.95



A variety of unique Southwestern Christmas ornaments now in stock!

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- More Than Petticoats Remarkable Arizona Women* \$14.95



Cookbooks

- Cooking the Wild Southwest* \$19.95
- Eat Mesquite: A Cookbook* \$26.99
- Southwest Comfort Food* \$16.95

Gifts

- Handpainted Glass Christmas Ornaments* \$14.99
- Wild Soap Bar Sampler* \$12.99
- Medicine Pouches (different styles)* \$10.99-\$18.99
- 'Advice From' Sweatshirts (Small, Med., Lg., X-Lg.)* \$24.99-\$29.99

All Native American CD's **40% Off While Supplies Last**

Be sure and look for specialty items in our bookstore including: Calendars, CD's, DVD's, Patches, Pins, Postcards, Replica Miniature Pottery, T shirts, and much more!



The bookstore is open daily (except Christmas Day) from 8 am to 5 pm.