Grand Canyon

National Park Service
U.S. Department of the Interior

Grand Canyon National Park







LETTER FROM THE EDITOR

Hello, and welcome to Grand Canyon National Park!

No matter who you are or where you are from, you cannot help but be impacted by Grand Canyon and have a story to tell as a result. This immense gorge is as intensely rooted in our culture as it is deeply carved into the history of the Earth. It has played a significant role in the lives of millions of people—whether they tried to profit from it, study it, live in it, protect it, been inspired to create art because of it, or made a life-changing trip to it. These diverse relationships between people and nature at Grand Canyon reflect America's history and values.

Throughout this magazine you will see stories from just a small percentage of the incredible people whose lives are woven into the fabric of the park's history. You will also read about the important work the park is doing using research and stewardship to contribute to our understanding of Grand Canyon's various facets. In the end, you will see you do not need to be a superhero, celebrity, or public figure to make a positive impact on the park. It is people like you who make a difference. People who have been inspired and changed by Grand Canyon and want to help protect it for future generations to enjoy.

I am excited you chose to spend our centennial year celebrating with us. You are not only a part of Grand Canyon's history but also an important part of its future. This is your Grand Canyon. How will you help steward us into our next 100 years? Use #MyGrandCanyonStory to share how Grand Canyon has inspired you and how you help protect the park.

Jo Lombard

Johanna "Jo" Lombard
Publications Program Manager

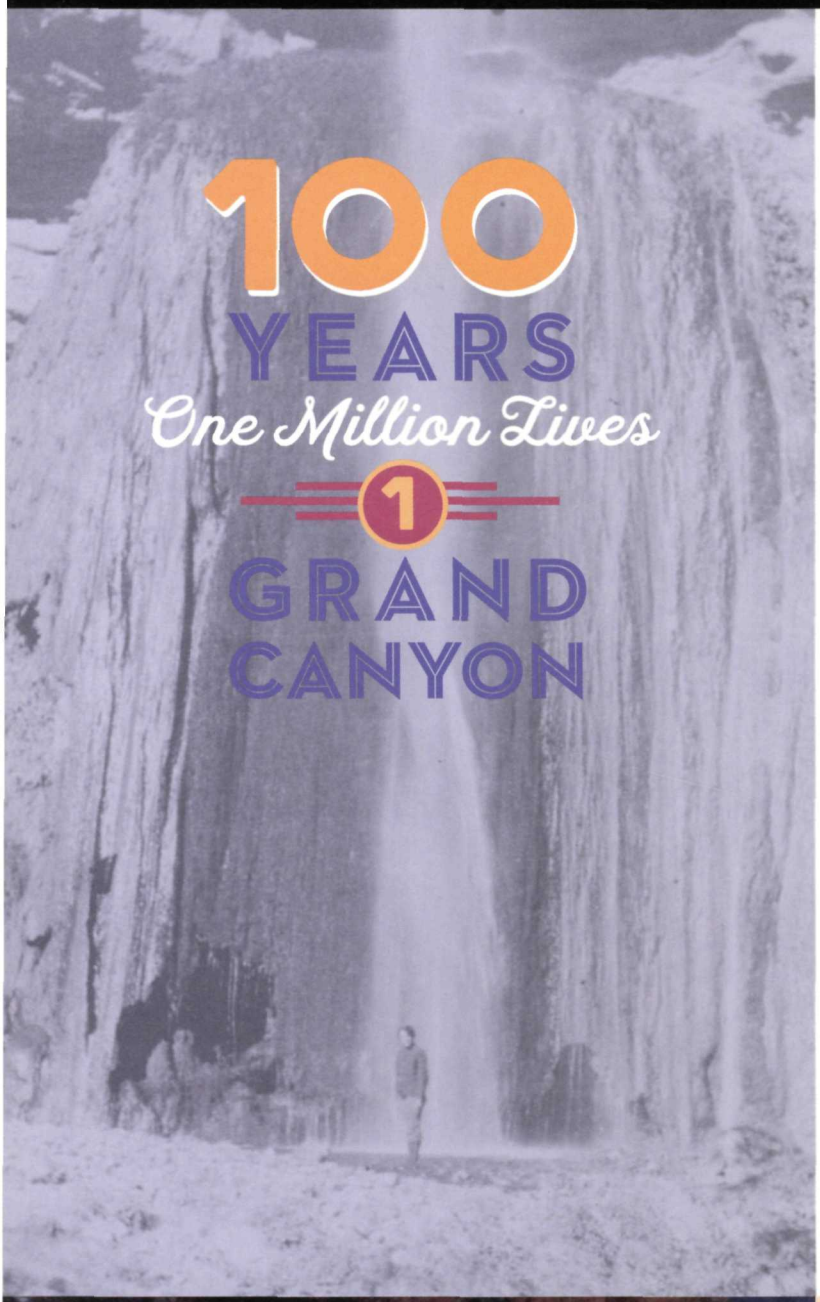


#MYGRANDCANYONSTORY

When I was 10, I backpacked the North Kaibab Trail with my family. Ten years later I returned as a volunteer park ranger. Today I inspire the next generation of Grand Canyon stewards through the park's publications.

Look for this symbol throughout the publication to share your stories with us in celebration of Grand Canyon National Park's centennial!

Left and inside back cover: *The Grand Cañon at the foot of Toroweap—looking East* (1882). Clarence E. Dutton (1841–1912). Courtesy David Rumsey Map Collection, Stanford University Libraries.



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Located in northern Arizona, this World Heritage Site encompasses 277 miles (446 km) of the Colorado River and adjacent uplands. One of the most spectacular examples of erosion anywhere in the world, Grand Canyon offers visitors incomparable vistas.

This magazine is published by Grand Canyon National Park with support from your entrance fees and Grand Canyon Conservancy.

Ask in visitor centers for maps and hiking information.

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

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As the official nonprofit partner of Grand Canyon National Park, Grand Canyon Conservancy is thrilled to be sharing the park's centennial with visitors and friends from around the world. It is a time to celebrate the last 100 years while preparing for the next 100. And we hope you will be a part of it!

Grand Canyon Conservancy is partnering with the park to present events and activities throughout the year at the canyon, across the Grand Canyon State of Arizona, and online. Whether you come to the South Rim or log on to grandcanyon.org, you can participate in this milestone celebration!

If you are planning to come to the park to celebrate, the Grand Canyon Conservancy Field School offers classes, tours, and day hikes that are perfect for the entire family. And no centennial celebration would be complete without Grand Canyon National Park Centennial gear—make sure to visit Grand Canyon Conservancy stores in the park or online to get t-shirts, water bottles, caps, and more to commemorate this very special year.

Thank you for your support of
Grand Canyon National Park, and
GO GRAND!

GRAND CANYON CONSERVANCY

Grand Canyon Conservancy is the official nonprofit partner of Grand Canyon National Park.

For more information, visit grandcanyon.org

The Grand Canyon Conservancy (EIN #86-0179548) is a 501(c)(3) nonprofit organization.

CENTENNIAL EVENTS

JANUARY 21
Martin Luther King, Jr. National Fee-Free Day

FEBRUARY 20–23
Grand Canyon Historical Society Symposium

FEBRUARY 23
"Teddy Roosevelt: The Man in the Arena"

FEBRUARY 26
Founder's Day Centennial Celebration

APRIL 16
Naturalization Ceremony

APRIL 20
National Park Week Fee-Free Day and Earth Day

MAY 10
Railroad Day and Transcontinental Sesquicentennial

MAY 19
Pete McBride Presentation on
"Grand Canyon: Between River and Rim"

MAY 19
John Wesley Powell Memorial Plaque Dedication

MAY 31–JUNE 1
Wildlife Days

JUNE 22
Junior Ranger Day

JUNE 22–29
Summerfest and Star Party

THROUGHOUT JULY
"Echoes from the Canyon" Living History

AUGUST 8–9
Native American Heritage Days (North Rim)

THROUGHOUT SEPTEMBER
Hispanic Heritage Month

SEPTEMBER 7–15
Celebration of Art

SEPTEMBER 28
Public Lands Fee-Free Day and Naturalization Ceremony

NOVEMBER 9–10
Native American Heritage Month Celebration

NOVEMBER 11
Veterans Day Fee-Free Day

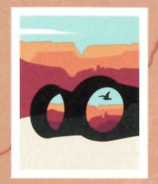
Find Details Here: go.nps.gov/2019_events

GRAND ADVENTURES

25 THINGS TO DO

In Grand Canyon National Park

© Gema Cañada



1. PICNIC

Pack a lunch and walk along the Rim Trail until you find a quiet spot in the pine forest filled with birdsong, overlooking Grand Canyon. Think you will ever forget this picnic?

2. RELAX

Have a late afternoon drink on the patio of the El Tovar Hotel, because a view like this guarantees the happiest of happy hours.

3. IMAGINE

Spend some time at Hermits Rest. Imagine you are the hermit and this is your place. Feels good, right?



4. CREATE

Watch a sunset, and snap photos, draw, paint, or write down everything you witness.

5. ADVENTURE

Take a class, learn a skill, or go on a guided discovery adventure with the Grand Canyon Conservancy Field Institute.

6. PONDER

Study the Fred Kabotie murals at Desert View Watchtower. Ponder their meaning.

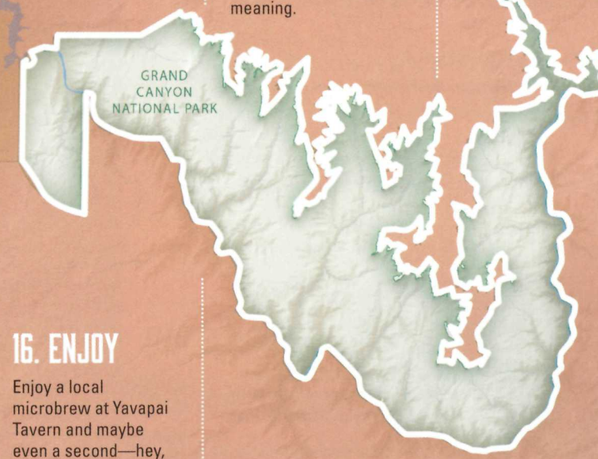


7. BOAT

Plan a river trip. You can spend a few days or two weeks on the mighty Colorado River. Either way, you can be sure it will be the ride of a lifetime.

8. UNPLUG

Find a comfortable seat near the canyon rim, turn off your phone for 60 minutes and count all the California condors that fly past. If none do, you have just spent an hour doing nothing but gazing across Grand Canyon. Congratulations. You are that kind of person now.



16. ENJOY

Enjoy a local microbrew at Yavapai Tavern and maybe even a second—hey, you are on vacation.

17. QUESTION

Attend a park ranger talk. Do not be afraid to ask plenty of questions.

18. WAVE

Stand on the rim looking across the canyon and wave. When you return to the canyon in the future—and you will—visit the opposite rim and wave back.

19. VISIT

Make a winter visit to see the canyon blanketed in snow, because it is the Grand Canyon blanketed in snow, and it is even more stunning than you imagine.

9. VOLUNTEER

Look into ways to volunteer in the national park. There is bound to be one right up your alley.

10. SAVOR

Savor a nighttime sky unlike any you have ever seen, one laden with stars, planets, and mystery.





11. CAMP

Pitch a tent in a designated campground and sleep amid a cluster of pines beside the yawning Grand Canyon. It is the most intimate experience you can have at the canyon without backpacking.

12. RUB

Rub Brighty's shiny bronze nose. A sculpture of the famous burro welcomes visitors to Grand Canyon Lodge.

13. EMBRACE

Wake up in a cabin on the edge of one of the Seven Natural Wonders of the World. Imagine what the day will bring.

14. WONDER

Peer through the window of an angel. Drive to the end of Cape Royal Road on the North Rim and gaze through the natural arch known as Angels Window.



15. RIDE

Climb onto the saddle and ride a mule along the rim or into the canyon. For the rest of the day, call everyone you meet "pardner."



20. BIKE

Rent a bike at Bright Angel Bicycles and tour the canyon in style. See how great the wind feels in your face.



21. EXPLORE

Explore the fascinating Tusayan Museum and Ruin.

22. DINE

Take a break and dine in one of our cozy restaurants. Refuel yourself for the next adventure.



23. HIKE

Stand beneath the cooling spray of Ribbon Falls. That trek is going to involve some serious hiking. Consult a park ranger and then start planning your trip.



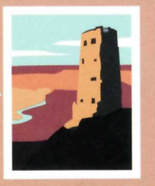
24. CRUISE

Cruise through history by arriving at the South Rim aboard the Grand Canyon Railway.



25. REDISCOVER

Rediscover the genius of architect Mary Colter with a visit to the historic Desert View Watchtower.

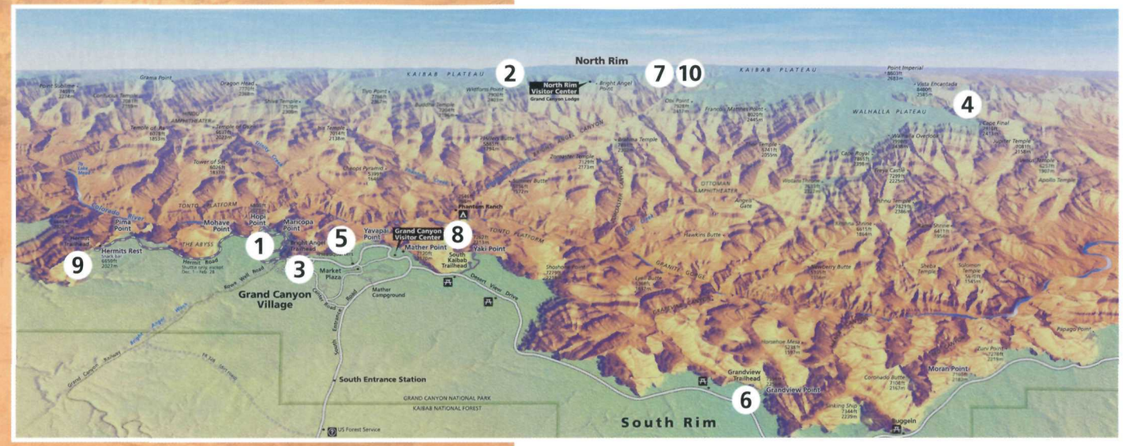




SHARE YOUR PHOTOS WITH #MYGRANDCANYONSTORY.
Pick up maps at any visitor center to discover more possibilities for your unique Grand Adventures throughout the park!

TAKE A WALK ON THE WILD SIDE

TOP 10 DAY HIKES



t will come as no surprise that Grand Canyon offers amazing hiking opportunities. What may be surprising is the sheer diversity of trails—everything from gentle woodland strolls to lengthy treks along the rim to challenging adventures deep in the canyon. Find the trail that is right for you. Leave some footprints amid the scenic splendor and rich history. Create a truly unforgettable experience at this special place simply by walking.

First, a word of warning: hiking at Grand Canyon can change your life. Proximity to such an epic landscape can provoke an internal examination of priorities and perspectives. You may experience emotions ranging from serenity to curiosity to excitement to unabashed joy. You may rediscover a part of yourself long forgotten. Spend time walking around Grand Canyon, and you will walk away as a different person. Here are a few trails to get you started on that journey.

1 UP TO 13 MI/21 KM ONE-WAY
EASY - 200 FT/61 M ELEVATION GAIN

☐ RIM TRAIL



Imagine a trail with incredible canyon views, one right after another. Now imagine the trail is level, shady, and offers pickup and delivery service. Welcome to the Rim Trail. Panoramas are endless on this 13-mile (21 km) path that is mostly paved as it stretches along the edge of the South Rim from South Kaibab Trailhead to Hermits Rest. Away from the hubbub of the Village, hikers enjoy a quiet connection to the canyon. Use the free shuttle buses to create the perfect hike.

2 UP TO 5 MI/8 KM ONE-WAY
MODERATE - 315 FT/96 M ELEVATION GAIN

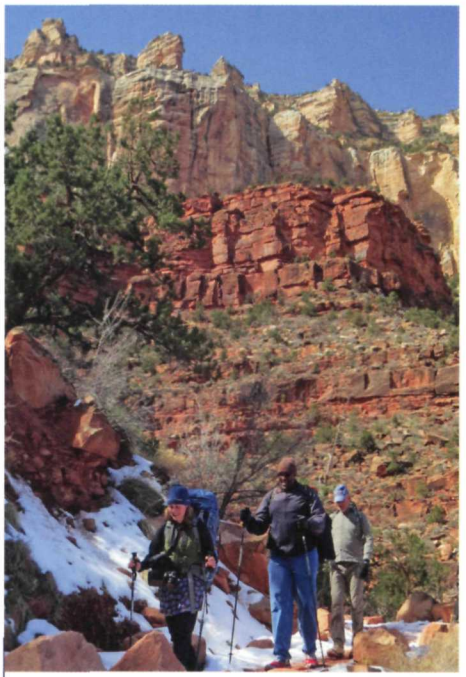
☐ WIDFORSS TRAIL



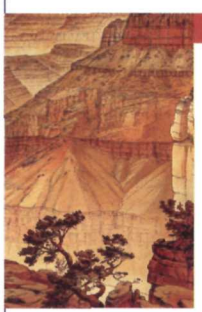
Named for Gunnar Widforss, an artist who lived and painted at Grand Canyon in the 1930s, this North Rim trail rambles through shaggy woods offering big canyon panoramas along the way. Widforss was known for his watercolors that captured the canyon's vivid hues and rich geologic detail. The trail crosses mostly level terrain beneath a shady canopy of tree branches, making for a very pleasant outing. This is the essence of the North Rim experience, walking in a lush, wildflower-carpeted conifer forest that breaks apart just long enough to expose magnificent views. Grab a brochure from the metal box near the trailhead to learn about special points of interest. The trail ends at Widforss Point for a one-way hike of 5 miles (8 km). If you brought your brush and easel, set up here and go to work, and do not forget the picnic lunch.



SHARE YOUR PHOTOS WITH #MYGRANDCANYONSTORY.
CHECK OFF YOUR FAVORITE HIKES.



© Mike Buchheit



FAST FACT

Do not let the name fool you. Most of the trees growing on Cedar Ridge are Utah juniper. No true cedars grow at Grand Canyon.

3 UP TO 4.5 MI/7.2 KM ONE-WAY
MODERATE TO VERY DIFFICULT
UP TO 3,040 FT/925 M EL. GAIN

☐ BRIGHT ANGEL TRAIL



You will not find solitude on the Bright Angel, which happens to be one of the most famous hiking trails in the world, but plenty of beauty. Located right at the edge of the Village, many visitors feel the pull of the Bright Angel as it descends in a series of switchbacks. The route was originally carved by American Indians and later turned into a toll road by an enterprising miner. It passes through two short tunnels along the upper reaches that are framed by massive cliffs. Look for a panel of pictographs—ancient images painted on the rocks—just past the first tunnel. Many day hikers will make their way to 1½-Mile Resthouse or 3-Mile Resthouse, where toilets and seasonal water await. The shady oasis of Indian Garden sits below the switchbacks of Jacob's Ladder, but that will make for an extremely difficult 9-mile (14.5 km) roundtrip hike.

4 2.1 MI/3.4 KM ONE-WAY
EASY - 194 FT/59 M EL. GAIN

☐ CAPE FINAL TRAIL



On the North Rim, wander through ponderosa pine forest across Walhalla Plateau with almost no change in elevation. The trail leaves from Cape Royal Road, 2.4 miles (3.9 km) north of the Cape Royal parking lot, and brushes past a few choice canyon overlooks early on, but this is just the prelude for the drama yet to come. The last section of the 2.1-mile (3.4 km) path cuts through a woodland of oak and juniper, ending atop a sprawling promontory with eye-popping views of rocky formations falling away from the rim. Tucked among the waves of mesas, snippets of the Colorado River are visible far below, frothy with whitewater.

5 1.4 MI/2.3 KM ONE-WAY
EASY - 128 FT/39 M EL. GAIN

☐ TRAIL OF TIME



Any hike at Grand Canyon is a step back in time. We are given a rare opportunity to ponder the geologic record laid bare by the colorful walls. Trail of Time reveals just how far back into the ancient past we go at the canyon. This 1.4-mile (2.3 km) section of the Rim Trail stretches from Yavapai Geology Museum to Verkamp's Visitor Center. Posted signs and samples of rocks help explain the formation of Grand Canyon. Viewing tubes along the trail connect segments of the timeline to features and rocks deep in the canyon. Who knew that learning about geology could be so much fun?



6 3 MI/4.8 KM ONE-WAY
VERY DIFFICULT - 2,500 FT/762 M ELEVATION GAIN

☐ GRANDVIEW TRAIL



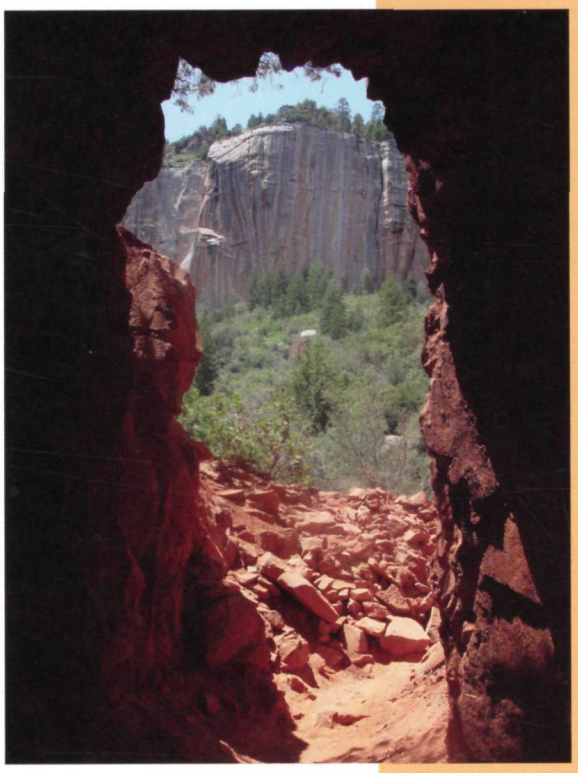
Thank goodness for optimistic prospectors. Without them, there would be no Grandview Trail. When Pete Berry discovered copper on Horseshoe Mesa in 1891, he needed a way to haul it out, so he began work on a seemingly impossible design, attaching the bones of a trail to sheer rock walls. Upper sections of this very steep trail are still braced by logs and steel rods. Only experienced canyon hikers should attempt this trail that begins at Grandview Point along Desert View Drive. The plunging grade eases slightly after the first mile, and soon you cross a saddle between Hance and Grapevine canyons. You reach Horseshoe Mesa atop the Redwall Limestone in 3 miles (4.8 km) to find remnants of Berry's Last Chance Mine, which operated until 1907. Spur trails fan out across the mesa and offer a variety of views. Please leave artifacts in place.

7 2.0 M/3.2 KM ONE-WAY
DIFFICULT - 1,400 FT/425 M EL. GAIN

NORTH KAIBAB TRAIL TO SUPAI TUNNEL



From the North Rim, only one trail penetrates the depths of the canyon. The North Kaibab drops steeply through big timber. Groves of tall Douglas-firs, Engelmann spruce, and ponderosa pines follow you downhill as you reach the Coconino Overlook. If you have the time and stamina, continue to Supai Tunnel, 2 miles (3.2 km) from the rim. This 20-foot (6 m) corridor is blasted from solid rock. There are toilets and drinking water, and this makes a good turnaround point for all but the hardiest of hikers. Rest up before starting back. Your knees have earned a break.



TOP 10 DAY HIKES

Create a truly unforgettable experience at this special place simply by walking.



© Mike Buchheit

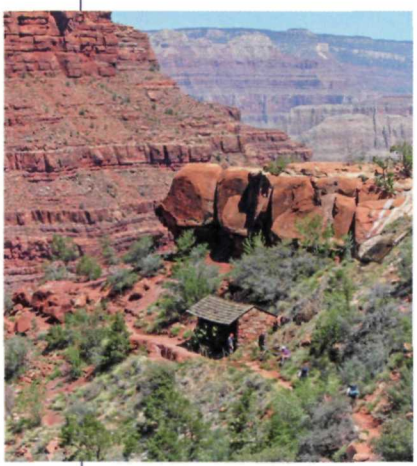


8 1.5 MI/2.4 KM ONE-WAY
DIFFICULT - 1,120 FT/340 M ELEVATION GAIN

☐ SOUTH KAIBAB TRAIL TO CEDAR RIDGE



Most trails descending into Grand Canyon follow a natural break in the rocks as they zigzag into the depths. Views are spectacular but limited to what is in front of you. That is not the case with South Kaibab Trail. After a few tight switchbacks, this corridor trail bursts into the open as it chases a ridgeline down and out across the canyon, exposing wide-ranging panoramas. After just 0.9 miles (1.4 km) you reach aptly named Ooh Aah Point, a rocky shelf with what feels like the entire canyon wrapped around it. Views go on forever. Another series of switchbacks deposits you on Cedar Ridge, a broad mesa 1.5 miles (2.4 km) from the rim, where vistas are just as dazzling—only now you have a place to sit and savor them for as long as you like.



9 2.5 MI/4 KM ONE-WAY
DIFFICULT - 1,680 FT/512 M ELEVATION GAIN

☐ HERMIT TRAIL TO SANTA MARIA SPRING



Located at the end of Hermit Road, even the name of this historic route conjures up a sense of solitude. Built in 1911, the trail provided access to a luxury campsite near Hermit Creek. Erosional forces have taken a toll, and today the Hermit Trail is gnawed, rocky, and relentlessly steep. Experienced hikers will enjoy a profound sense of quiet to accompany the vistas. Keep an eye peeled for fossilized lizard-like tracks in the Coconino Sandstone. It is 2.5 miles (4 km) to Santa Maria Spring, where a cool stone resthouse guards the trail. Make this your turnaround point. Sit inside and pretend the entire Grand Canyon is your yard.



FAST FACT

Children of a certain age are thrilled by this: to protect itself from predators, the desert horned lizard, found at the canyon, squirts blood from its eyes up to six feet (1.8 m).

10 5 MI/8 KM LOOP
MODERATE - 230 FT/70 M ELEVATION GAIN

☐ UNCLE JIM TRAIL



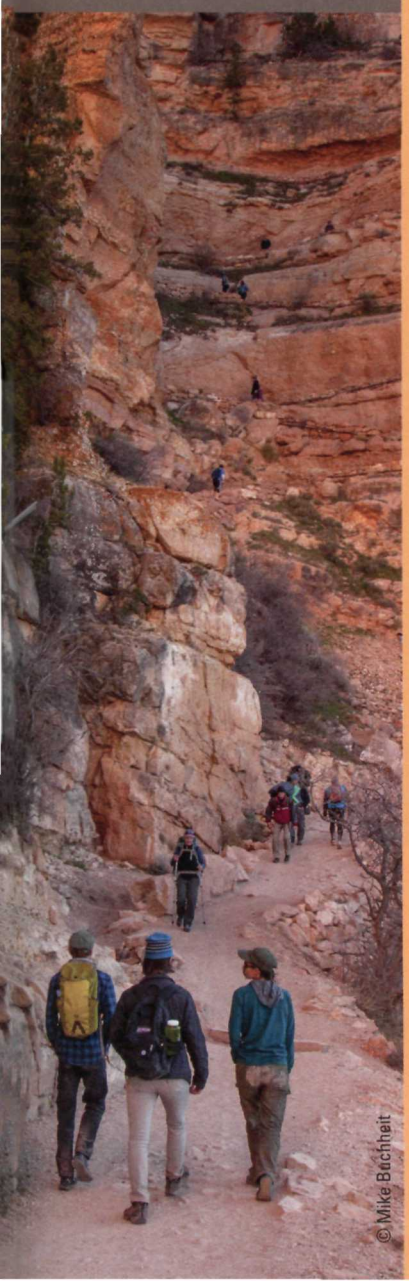
Named for a former game warden, this 5-mile (8 km) loop swings through a mixed-conifer forest on the North Rim. It overlaps the Ken Patrick Trail for the first mile before branching to the right. From there the Uncle Jim Trail angles downhill, crossing a lush little drainage. The loop begins at the next intersection. Take either branch through quiet forest. Downed logs crisscross meadows, ferns blanket slopes, and clusters of lithe aspen saplings fill open spaces created by burn scars. The trail skirts the head of Roaring Springs Canyon, and gaps between the trees offer tantalizing views all the way to Uncle Jim Point. The trail begins at the North Kaibab Trailhead.



HIKE SMART

NPS/Michael Quinn

NO MATTER WHICH TRAIL YOU CHOOSE, BEING PREPARED WILL MAKE THE OUTING MORE ENJOYABLE. STAY SAFE BY HIKING SMART.



© Mike Buchheit

WATER

Always carry a sufficient amount and bring extra in case of emergency. That means at least two liters if it is hot or you are hiking in the canyon. Remember, the farther you descend below the rim, the hotter it will become.

FOOD

One of the best aspects of hiking is that it gives you *permission to snack. Salty and* high-calorie snacks are best for keeping your energy level up. Trail mix, energy bars, nuts, and dried fruit are just a few tasty treats to liven up any hike.

SUN PROTECTION

Slather on the sunscreen and wear sunglasses and a wide-brimmed hat. A bandana around the neck makes a fine fashion accessory and one more way to prevent sunburn. As an added bonus, wet the bandana to help you stay cool on a warm day.

GOOD FOOTWEAR

Sandals may be suitable on a short paved trail, but hiking boots or trail shoes are a must in the woods or below the rim for protection and comfort.

APPROPRIATE CLOTHING

Weather can change quickly at the canyon, so layers are always a good idea. Keep a poncho or waterproof jacket handy if rain is predicted.

MAP OR TRAIL GUIDE

It will help you stay on track, and learn about some highlights along the way.

GOING BELOW THE RIM

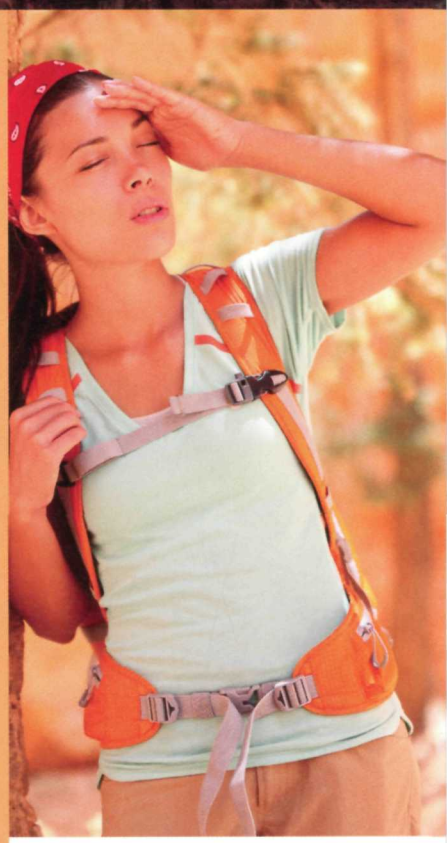
A day hike into Grand Canyon is a harshly wonderful adventure. There are no shortcuts. It will be steep on the way down and seem even steeper on the ascent. The switchbacks do not actually *triple in number on your climb* out of the canyon, although it might feel that way.

KNOW YOUR LIMITS

Knowledge, preparation, and a good plan are all keys to success. Assess your health and fitness honestly, know your limits, and avoid spontaneity. Grand Canyon is an extreme environment, and overexertion affects everyone at some point.

BE PREPARED

Park rangers say, "Going down is optional, but coming up is mandatory." Plan to take twice as long to hike up as it takes to hike down. If you are hiking below the rim, in addition to the checklist of items above, you should also carry a first aid kit (with blister care), pocket-knife, flashlight or headlamp, whistle or signal mirror, and lightweight tarp or other emergency shelter.



WARNING!

Hiking to the river and back in one day is not recommended due to long distances, extreme temperature changes, and a near 5,000-foot elevation change each way. If you think you have the fitness and experience to attempt this extremely strenuous hike, please seek the advice of a park ranger at the Backcountry Information Center.



Split Rock
Oil on canvas, 54 x 44 in.
© Bruce Aiken



Seven Gold Stripes with Blue
Pastel on Arches paper, 21 x 28 in.
© Bruce Aiken

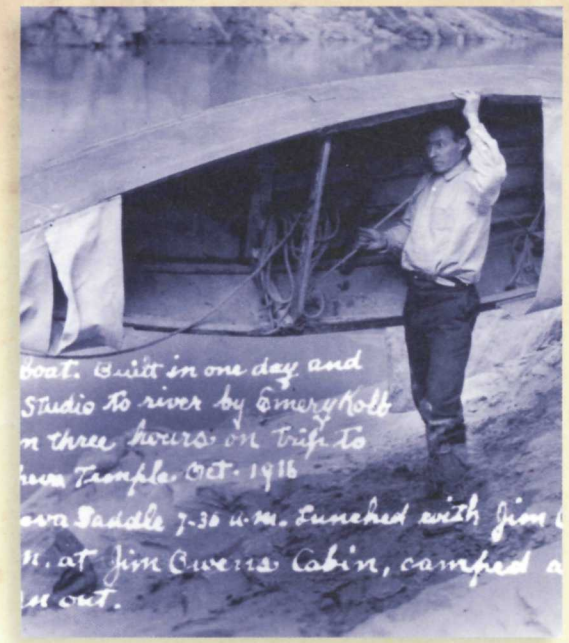
ARTIST PROFILE

Bruce Aiken

One of today's leading painters of the Grand Canyon and the American Southwest, Bruce Aiken was born in New York City, where he was classically trained at the School of Visual Arts, but left for Arizona in 1970. Serving with the National Park Service from 1973 to 2006, he lived at Roaring Springs, some 5.5 miles (8.9 km) below the North Rim. There, he oversaw the production of the public water supply for Grand Canyon National Park. He and his wife, Mary, raised their three children in the canyon's depths while he maintained a dual career as an artist and NPS employee. See more of Bruce's work at bruceaiken.com.

SHARE YOUR DRAWINGS, PAINTINGS, AND STORIES AT #MYGRANDCANYONSTORY.

View from Cape Royal on the North Rim.
© Kristen M. Caldon


boat. Quit in one day and
Studio to river by Emery Kolb
n three hours on trip to
hum Temple. Oct. 1916
own Saddle 7:30 a.m. Lunched with Jim
M. at Jim Owens Cabin, camped
on out.









PERSONALITIES & PERSPECTIVES

CELEBRATING THE PEOPLE AND EVENTS THAT CONTRIBUTED TO THE VALUE OF GRAND CANYON NATIONAL PARK OVER THE PAST 100 YEARS

Grand Canyon defines the American frontier. Hard to reach and impossible to describe, it was the stuff of legend. Human history at the canyon dates back nearly 12,000 years, when hunter-gatherers roamed the landscape. The ancestors of Grand Canyon's modern tribes made their homes on the rims and within the Inner Gorge for centuries. It was not until the arrival of Europeans that written history of the canyon began.

Early explorers found little value here. They considered the yawning chasm an obstacle to overcome or avoid. In the late 1800s, a handful of prospectors sought to exploit the canyon's natural resources. Although mineral wealth proved elusive, it soon became apparent that Grand Canyon offered other types of rewards. The raw, rugged, and untamed beauty captured in tales and paintings resonated with the public. The first tourists endured arduous horseback and stagecoach rides just for a glimpse of the vista. The railroad created the large-scale tourism that continues to modern times.

Visitors today come for many of the same reasons they always did. They come for renewal and inspiration. They come to touch the infinite, to hear music that exists nowhere else, and to understand their place in the cosmos. They come to gaze at Earth's most impressive scar. They come to glimpse the lingering frontier, where Grand Canyon is now hard to leave and still impossible to describe.



Images left top clockwise: Norm Nevills; Louis Boucher; Havasupai dwelling; Mary Colter; John Muir (top figure) on mule ride. Right: CCC commemorative stamp.

WILLIAM "BUCKEY" O'NEILL

They robbed the wrong train.

Four masked bandits held up a train east of Flagstaff, Arizona, and disappeared. Unfortunately for them, the robbery took place within the borders of Yavapai County. Although covering a vast tract of land, the county had just elected a new sheriff. "Buckey" O'Neill organized a small posse and set out. He managed to pick up the trail and took off in pursuit across the Painted Desert. After nearly three weeks, the manhunt ended near the Utah border in a quick blaze of gunfire. O'Neill shot a horse out from under one of the outlaws, and all were captured.

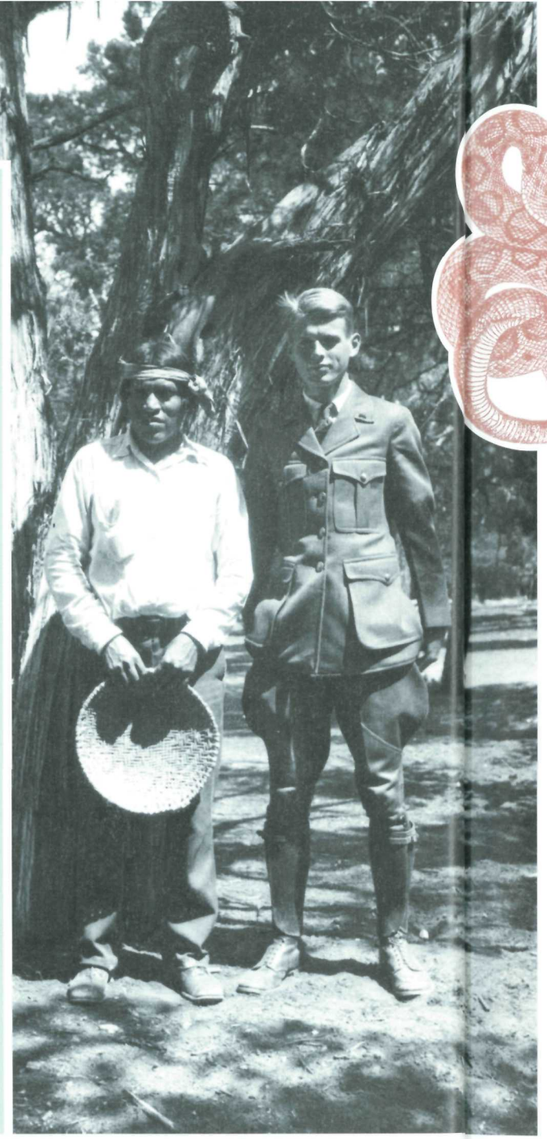
Yet despite his steely-eyed nerve, O'Neill was defined by more than his gun. He was the Western version of a Renaissance Man. Arriving in Arizona Territory in 1879, he went on to become a court reporter, school superintendent, probate judge, newspaper editor and publisher, author, sheriff, miner, and mayor of Prescott. His nickname came from bucking the odds in Whiskey Row faro games.

O'Neill rode into Grand Canyon in the 1890s and recognized its tourism potential. He helped form the Grand Canyon Railroad Company. But then fate took a hand. When war broke out between the United States and Spain in 1898, O'Neill joined the Rough Riders and became captain of Troop A. During the battle of San Juan Hill, O'Neill was killed by a sniper's bullet.

O'Neill's vision of a railroad to the canyon rim became reality three years after his death. Today, visitors can sleep in the Buckey O'Neill Cabin, preserved and restored by architect Mary Colter, who incorporated it into her design for Bright Angel Lodge. The historic cabin sits just footsteps from the rim, a special place built by a special man.



Sharlot Hall Museum Library & Archives



Eddie McKee with Hopi Jason Quanoholva. © Edwin McKee family.



EDWIN "EDDIE" MCKEE

He was one of the most respected and influential geologists ever to work at Grand Canyon. Yet Eddie McKee was more than your typical "rock nerd." He became Grand Canyon National Park's full-time naturalist in 1929. McKee researched and wrote about everything he encountered, from butterflies to bats to lizards. He catalogued Havasupai basketry and conducted lectures for park visitors. In 1932, McKee founded the Grand Canyon Natural History Association, which continues today as Grand Canyon Conservancy. In his spare time he managed to court his future wife, Barbara Hastings, who worked on the North Rim. So, each of their dates began with a cross-canyon hike.

On one of McKee's days off, he was hiking in the canyon when he encountered a rattlesnake that was a strikingly pink color. Realizing it was not something he had seen before, he caught the snake by hand and hiked it out of the canyon. Reaching his car, he drove to the nearest ranger station while holding the rattler out the window, prompting startled looks from passing motorists. Biologists determined it was a previously unclassified species of rattlesnake uniquely adapted to life among the canyon strata. No doubt a find like that had to hold special significance for a rock star like Eddie McKee.

POLLY MEAD PATRAW

Love brought Polly Mead to Grand Canyon, but love also snatched her away. She first saw the canyon as a botany student in 1927 and was immediately smitten. Upon graduation, Mead's aunt gave her the choice between a European trip or a return to Grand Canyon. For the next two years, instead of dancing in Paris nightclubs, Mead climbed trees, collected specimens, and slept in North Rim forests with only a bedroll and pistol.

Upon completing her thesis, she applied for a position as a ranger-naturalist with the US Forest Service. They turned her down because she was a woman. Gender was a deal-breaker in those days. Undaunted, Mead applied for the same position with the National Park Service, and this time was accepted. On August 1, 1930, she became the first female ranger at Grand Canyon and second female in the National Park Service. Her duties included giving campfire lectures, leading nature hikes, planting wildflowers, and writing about her findings.

Love, however, was not finished with Polly Mead. When she became a park ranger, she was sworn in by the park's assistant superintendent, Preston Patraw. The two began dating and were married in 1931. At her husband's urging, groundbreaking Polly Mead Patraw stopped working as a park ranger. Yet she continued to study and write about botany until her death in 2001.



12,000 YEARS AGO



12,000 YEARS AGO
Paleo-Indians first arrive at Grand Canyon

4,000 YEARS AGO
Hunter/gatherers of the Late Archaic culture create small split-twig figurines—later found in Grand Canyon caves

1,000 YEARS AGO
First evidence of farming at Grand Canyon

1185 Construction begins at Tusayan Pueblo

1225

1225 Possibly following a lengthy drought, the ancestral Puebloans moved away from the canyon while Southern Paiute, Havasupai, and Hualapai people continued their lives here

1540 Garcia Lopez de Cardenas becomes the first European to see Grand Canyon



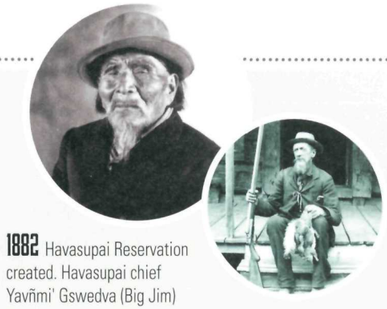
1848



1848 At the end of the Mexican-American War, Grand Canyon becomes part of the United States

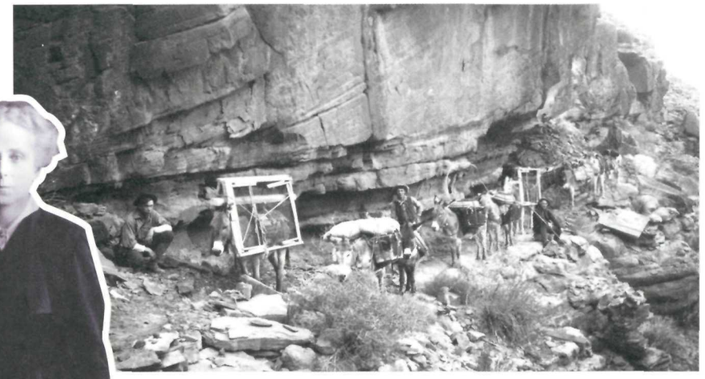
1869 Major John Wesley Powell leads the first successful expedition down the Colorado River through Grand Canyon

1873 Lees Ferry begins operation, offering the only Colorado River crossing for hundreds of miles



1882 Havasupai Reservation created. Havasupai chief Yavñmi' Gswedva (Big Jim) shown above in 1901

1883 John Hance becomes the first Anglo prospector to live at Grand Canyon





WILLIAM WALLACE BASS AND ADA BASS

No one ever got rich from mining in Grand Canyon. Although some claims produced ore, it was never in great quantity and never enough to overcome the high cost of transportation. Yet one of the canyon's earliest pioneer/prospectors landed a genuine treasure, and her name was Ada.

Born in Indiana, William Wallace Bass traveled to Arizona seeking better health and arrived at Grand Canyon in 1883. He set up tent cabins on the rim, built miles of stage roads and canyon trails, constructed a tramway across the river, befriended Havasupai people, and established several mining claims. While working the claims, Bass also began guiding tourists down his rough trail.

He must have been pretty good at it. At least he made quite an impression on one of his clients, a young Boston-trained music teacher named Ada Diefendorf. The two began a courtship and married in 1895. It was Ada's hard work and perseverance that allowed Bass's tourism business to grow and eventually flourish. She cooked, cleaned, and served the guests. She even led the occasional tour. Doing laundry often meant bundling up dirty clothes for a three-day trek to the river and back. She did secretarial work for William's mining ventures, taught music to help make ends meet, and wrote in her diary. Along the way she managed to raise four children, making her a pioneer of a different sort. Ada Bass became the first Anglo woman to raise a family at Grand Canyon.



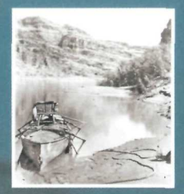
I told them to hang on. They just don't make passengers like they used to.

GEORGIE WHITE

You could not miss renegade river rat Georgie White. She cut an unmistakable figure coming down the Colorado River. Wearing a leopard-print leotard and holding a beer, she guided her signature G-Rig, three inflatable pontoon rafts lashed together and crammed with wide-eyed passengers, through frothy rapids. White became the first woman to run a boat through Grand Canyon and the first woman outfitter when she began guiding commercial trips in the early 1950s. Her river trips started as no-frills adventures and never changed. She provided hardboiled eggs, canned food, beer, and not much else.

During the flood of 1983, White ran the Colorado River full-tilt like she always did. As she approached monstrous Crystal Rapid, she tightened her helmet and plunged into the roaring hole, a nearly three-story drop. Waves crashed over the bow. The entire raft buckled and released, spewing passengers and gear into the river. When it was over, White managed to guide the now-empty rig to shore. The National Park Service scooped up the 30 passengers left bobbing in the water. When a park ranger asked the 72-year-old White what had happened, she responded in typical Georgie fashion, "I told them to hang on. They don't make passengers like they used to."

BOATING THROUGH TIME



1872

JOHN WESLEY POWELL'S BOAT THE *EMMA DEAN* WAS OUTFITTED WITH AN ARMCHAIR FOR HIS SECOND EXPEDITION



1928

ILL-FATED NEWLYWEDS GLEN AND BESSIE HYDE IN THEIR SCOW



1947

NORM NEVILLS HELPED PIONEER COMMERCIAL RIVER RUNNING ON THE COLORADO RIVER



1949

A MEMORIAL INSCRIPTION ON BERT LOPER'S BOAT IS INSPECTED BY NORM NEVILLS DAYS AFTER LOPER'S DEMISE

BACKGROUND: GRAND OLD MAN OF THE COLORADO BERT LOPER FLIPPED HIS BOAT AT MILE 24½ AND DROWNED IN 1949 AT AGE 79

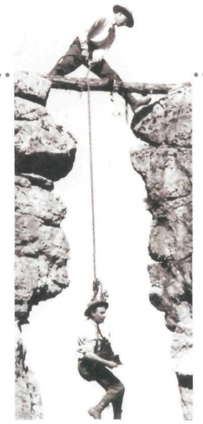
1901



1901 The Atchison, Topeka and Santa Fe Railway completes a branch line from Williams, Arizona, to the South Rim

1902 Fred Harvey hires architect Mary Colter, "a formidable woman in pants"

1902 The first automobile arrives at the South Rim, although horses towed it the final miles



1904 Photographers Ellsworth and Emery Kolb build Kolb Studio

1905 John Verkamp opens a curio shop *in a tent east of* Hopi House

1905 Elegant El Tovar Hotel opens for business



1908



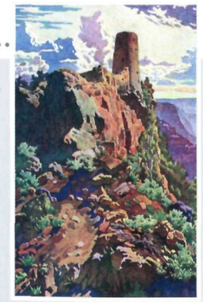
1908 President Theodore Roosevelt proclaims Grand Canyon National Monument

1913 Grand Canyon Highway *constructed, connecting* Jacob Lake, Arizona, to the North Rim

1916 Congress creates the National Park Service

1919 Congress establishes Grand Canyon National Park

1923 Painter Gunnar Widforss first visits Grand Canyon, eventually making his home on the South Rim



CIVILIAN CONSERVATION CORPS BUILDS A LEGACY

Many buildings at Grand Canyon come with impressive pedigrees. They were commissioned by the Fred Harvey company and designed by architects like Mary Colter and Charles Whittlesey. Yet some structures have more humble origins. They were built not by master craftsmen but by out-of-work auto mechanics, farmers, and shoe salesmen.

With unemployment soaring during the Great Depression, President Franklin Roosevelt formed the Civilian Conservation Corps (CCC) in 1933 as part of the New Deal. The work relief program provided manual labor for worthwhile conservation projects. Young men received shelter, food, education, and basic health care while they worked on public lands across the country. They were paid a wage of $30 per month, of which $25 had to be sent home to their families.

During its nine-year existence, the CCC planted nearly three billion trees and constructed roads, trails, and shelters in more than 800 state and national parks. Crews fought forest fires, re-seeded grazing lands, and implemented soil-erosion controls. It was a classic win-win scenario, boosting the economy and restoring and preserving the natural resources of a nation. The program ended in 1942, after the outbreak of World War II.

At Grand Canyon, the CCC provided the connective tissue for the national park, building roads, bridges, and culverts. Workers landscaped the Village, constructed the stone wall along the rim between El Tovar Hotel and Bright Angel Lodge, and significantly improved the Bright Angel Trail.





They were built not by master craftsmen but by out-of-work auto mechanics, farmers, and shoe salesmen.

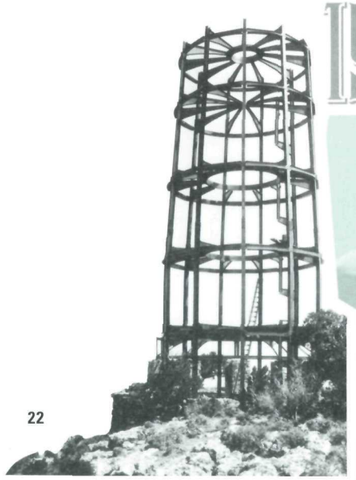
With one CCC crew starting from the North Rim and another from the South Rim, they strung telephone lines on metal poles down the cliffs and across ravines. For years, the transcanyon telephone line connected Phantom Ranch, Indian Garden, and both rims.

The CCC carved out several of the inner-canyon trails, including the spur trail to Ribbon Falls, Clear Creek Trail, and the River Trail, which involved dangerous blasting of the schist and granite cliffs above the Colorado River between the South Kaibab and Bright Angel trails. If you ever pitched a tent at Bright Angel Campground, you were sleeping on the former CCC camp at Phantom Ranch.

The hardy young men of the CCC are also responsible for two of the most appreciated buildings in the park, 1½-Mile Resthouse and 3-Mile Resthouse along the Bright Angel Trail. If you do not think these simple rock and timber shelters are truly cherished, even greeted with wide smiles, sighs, and cries of relief, then you have never come hiking up out of the inner canyon in the sizzling heat of a summer day when they shimmer in the sun like marble palaces.

FAST FACT

Notable alumni of the Civilian Conservation Corps included actors Robert Mitchum, Raymond Burr, and Walter Matthau, baseball Hall-of-Famer Stan Musial, and test pilot Chuck Yeager.



1928

1928 Newlyweds Glen and Bessie Hyde disappeared in Grand Canyon while attempting to run the Colorado River

1931 Ferde Grofé writes *Grand Canyon Suite*, which became the best-known musical portrait of the canyon

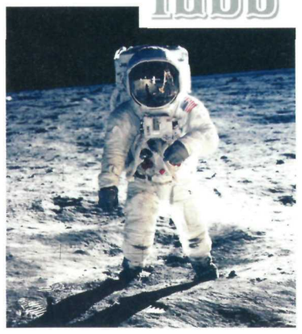
1932 Mary Colter builds Desert View Watchtower on the eastern edge of the park

1936 Eager for entertainment, the men of Civilian Conservation Corps carry a pool table down the trail to their Phantom Ranch camp



1938 Elzada Clover and Lois Jotter become the first *women to boat the length of* Grand Canyon (background photo)

1953

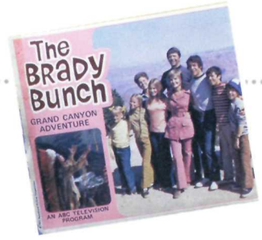


1953 Regularly scheduled motorized river trips begin through Grand Canyon

1956 Park visitation at Grand Canyon tops one million for the first time

1964 Neil Armstrong, first man to walk on the moon, trains in Grand Canyon

1968 New pipeline constructed from Roaring Springs on the North Rim brings drinking water to the South Rim



1971 *The Brady Bunch* visits Grand Canyon in a three-episode story arc

1979 Grand Canyon is designated a World Heritage Site

FORMATION OF THE FAA

June 30, 1956, was one of those beautiful stormy days over Grand Canyon that people cherish. Rain is always a welcome visitor to this arid region, so hopes soar when great arcs of clouds sweep in, casting shadows on the cliffs below.

Earlier that morning, United Flight 718, bound for Chicago, and TWA Flight 2, on its way to Kansas City, both departed from Los Angeles International Airport just minutes apart. Each plane had experienced pilots at the helm, and their flight plans were different enough they should have crossed paths without incident. As the weather worsened, the TWA flight received permission to climb above the clouds. At that altitude, the pilot would operate under visual flight rules—the "see and be seen" principle—and would assume the responsibility for spotting and avoiding other planes.

What happened next remains a mystery. At approximately 10:30 am, the planes were above Grand Canyon. It is believed they navigated around the same towering cloud from opposite sides and then collided. Later analysis suggested the United flight banked to the right at the last moment, possibly because the pilot suddenly saw the TWA plane emerging from the clouds.

When neither plane could be reached by radio, a missing aircraft alert was issued. They were quickly located. A scenic-flight pilot remembered seeing smoke earlier in the day and flew out to the eastern edge of the canyon, where he discovered the fiery wreckage. The mid-air collision occurred near the confluence of the Colorado River and the Little Colorado River. All 128 people aboard the two planes were killed, making it the deadliest civilian aviation disaster in history to that point.

The crash spurred Congress to step in and repair a strained and ineffective air transportation system. As a result, the Federal Aviation Administration was formed and given complete control over American airspace. More air traffic controllers were hired, training was improved, and new safety procedures were implemented.

In 2014, the crash site was designated a National Historic Landmark, the first to commemorate an event that occurred in the air. Some wreckage is still scattered in a remote corner of the canyon, and on clear days, bits of metal glint in the sunlight, a sad reminder of a stormy day from the past.

Be sure to stop at Desert View Point on the eastern edge of the national park.

A stone plaque near the canyon rim pays tribute to the site and the role it played in making the skies safer for all.



1983



1983 In *National Lampoon's Vacation*, the Griswold family visits Grand Canyon

1989 Grand Canyon Railway begins operations, restoring train service to the canyon rim

1991 Landmark agreement signed to minimize air pollution from Navajo Generating Station, a major source of winter haze over Grand Canyon

1991 The first captive-bred California condors are released into the wild

2000 Grand Canyon Railway is placed on the National Register of Historic Places



© John Sherman



Neil Armstrong training in Grand Canyon, 1964. Astrogeology Science Center, USGS



Apollo 11 liftoff, 1969. NASA

ASTRONAUTS LAND IN GRAND CANYON

When NASA plotted a course to the moon, the agency chose the least obvious route—right through Grand Canyon. Before Neil Armstrong walked on the lunar surface, he hiked the South Kaibab Trail, as did the other Apollo astronauts. Of the 24 men who flew to the moon, all but one trained in Grand Canyon.

The frenzied race to the moon focused primarily on simply overcoming the countless engineering challenges sure to be faced on such an epic journey. Yet at some point NASA realized that if it were going to all the trouble of sending a man to the moon, he ought to have a task to perform after he arrived—preferably with a scientific purpose. That is how geology entered the picture.

Although the astronauts fairly bristled with the Right Stuff, they did not necessarily have a deep understanding of rocks. So, NASA gave them an intensive course in geology that began in a classroom and ended in the greatest natural classroom on Earth.

No one expected the sedimentary rocks exposed in Grand Canyon to resemble anything found on the moon, but the canyon could teach the astronauts many basic principles of geology. They could learn how to identify various strata, detect faulting, see the impact of erosion, and read geological maps. The hope was that while they were kicking up dust on the moon, they would become better scientific observers and sample collectors, enriching the outcome of their lunar mission.

In March 1964, the crew of Apollo 11—Neil Armstrong, Buzz Aldrin, and Michael Collins—was among the first group of astronauts and their instructors to hike to the bottom of Grand Canyon. Two more groups made the long trek to Phantom Ranch, where they spent the night before returning to the rim via the Bright Angel Trail.

What do the canyon and the moon have in common? They both impart a sense of awe and wonder to human beings. They contain the secrets of the ages and captivate the explorer in everyone. Harrison H. Schmitt, Apollo 17 astronaut and the only scientist to walk on the moon, had this to say about landing on the lunar surface: "It's like trying to describe what you feel when you're standing on the rim of the Grand Canyon or remembering your first love or the birth of your child. You have to be there to really know what it's like."

2008



2008 After more than a century in business, the Verkamp family closes their South Rim store, and it reopens as a visitor center

2012 Arizona turns 100 years old

2015 Park visitation tops five million for the first time

2016 The National Park Service celebrates its centennial



2016 Grand Canyon National Park receives Provisional Dark Sky Park status

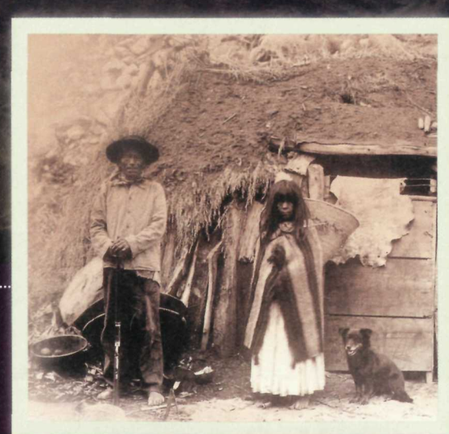


2019 GRAND CANYON NATIONAL PARK TURNS 100 years old!

11 TRIBES THAT CALL GRAND CANYON HOME

Ancestral connections from time immemorial define the tribes' enduring relationship with Grand Canyon. For centuries, American Indians farmed, hunted, gathered, and made a life here. You can glimpse into the past lifeways of some of these people at Tusayan Museum and Ruin, Walhalla Glades pueblo, and Unkar Delta.





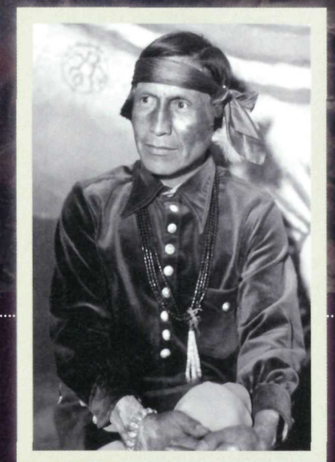
HAVASUPAI

The Havasupai have made Grand Canyon their home for millennia. They lived on the rims and in the canyon at places such as Indian Garden prior to park establishment in 1919. An ancestral route of the Havasupai people, the Bright Angel Trail, connected their rim homes with their farms along Garden Creek. Today they live and farm in Havasu Canyon in western Grand Canyon and manage tourism for their famous blue-green waterfalls. The Havasupai are considered the guardians of Grand Canyon because they are the only tribal group still living within it.



NAVAJO

For the Navajo people, Grand Canyon is part of the landscape they view as their ancestral lands—a landscape that creates the beauty of the Navajo lifeway, which they honor through their traditions, language, kinship, history, and ceremonies. Navajo people have lived and worked in the area for hundreds of years, traditionally using the park's resources as part of their seasonal life here. The sprawling Navajo Nation stretches east from the park and extends across three states.



HOPI

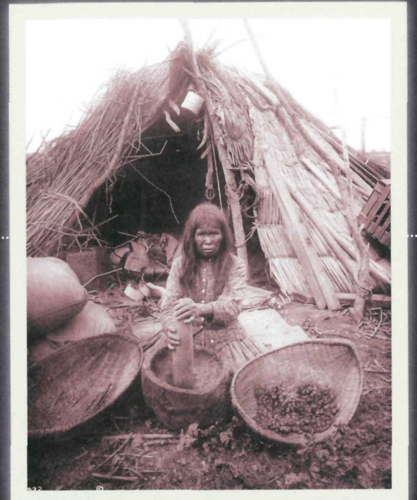
The Hopi people consider their place of emergence to be located at the Sipapuni, near the Little Colorado River and Colorado River confluence. For generations, Hopi people have made significant contributions to the history and development of this park and others through their interaction with the Santa Fe Railway and the Fred Harvey company. The architecture at Hopi House and Desert View Watchtower speaks to their influence in early park development. Today, the Hopi people live on three mesas, consisting of 12 villages, to the east of the Grand Canyon.

© Grisha Levit



HUALAPAI

The Hualapai people, known as the "people of the tall pines," consider Grand Canyon as their traditional homeland. The "backbone" of their people, the Colorado River plays a significant role in tribal identity. The Hualapai have lived in Grand Canyon since time immemorial and today make their home in western Grand Canyon. As part of their visitor accommodations, they operate the world-famous Skywalk, a glass-bottomed walkway suspended above the canyon floor.



PAIUTES

Five southern Paiute bands traditionally used the Grand Canyon region, with four of the groups occupying the northern portions of the canyon and one group using the south side of the Colorado River. The bands traveled extensively throughout the canyon on prehistoric trails they developed for trading, hunting, and maintaining contacts with neighbors. Most of the Southern Paiute bands live north and west of Grand Canyon in Arizona, Utah, Nevada, and California.



YAVAPAI-APACHE

Yavapai-Apache comprise two distinct tribes, the Yavapais and Tonto Apaches, each of which has its own dialect, history, and culture. The Yavapais and Apaches often traveled to the Grand Canyon in summer and fall when edible plants like pinyon nuts were abundant. The Yavapai-Apache live south of Grand Canyon.

Today, Grand Canyon's 11 Traditionally Associated Tribes retain and honor the deep cultural ties they have with this important landscape. Every tribe ever associated with Grand Canyon has played a significant role in contributing to the ongoing story of Grand Canyon and in helping to preserve its natural and cultural resources.

Havasupai Tribe
Hopi Tribe
Hualapai Tribe
Kaibab Paiute Tribe
Las Vegas Paiute Tribe
Moapa Paiute Tribe
Navajo Nation
Paiute Indian Tribe
San Juan Southern Paiute Tribe
Yavapai-Apache Nation
Zuni Tribe



ZUNI

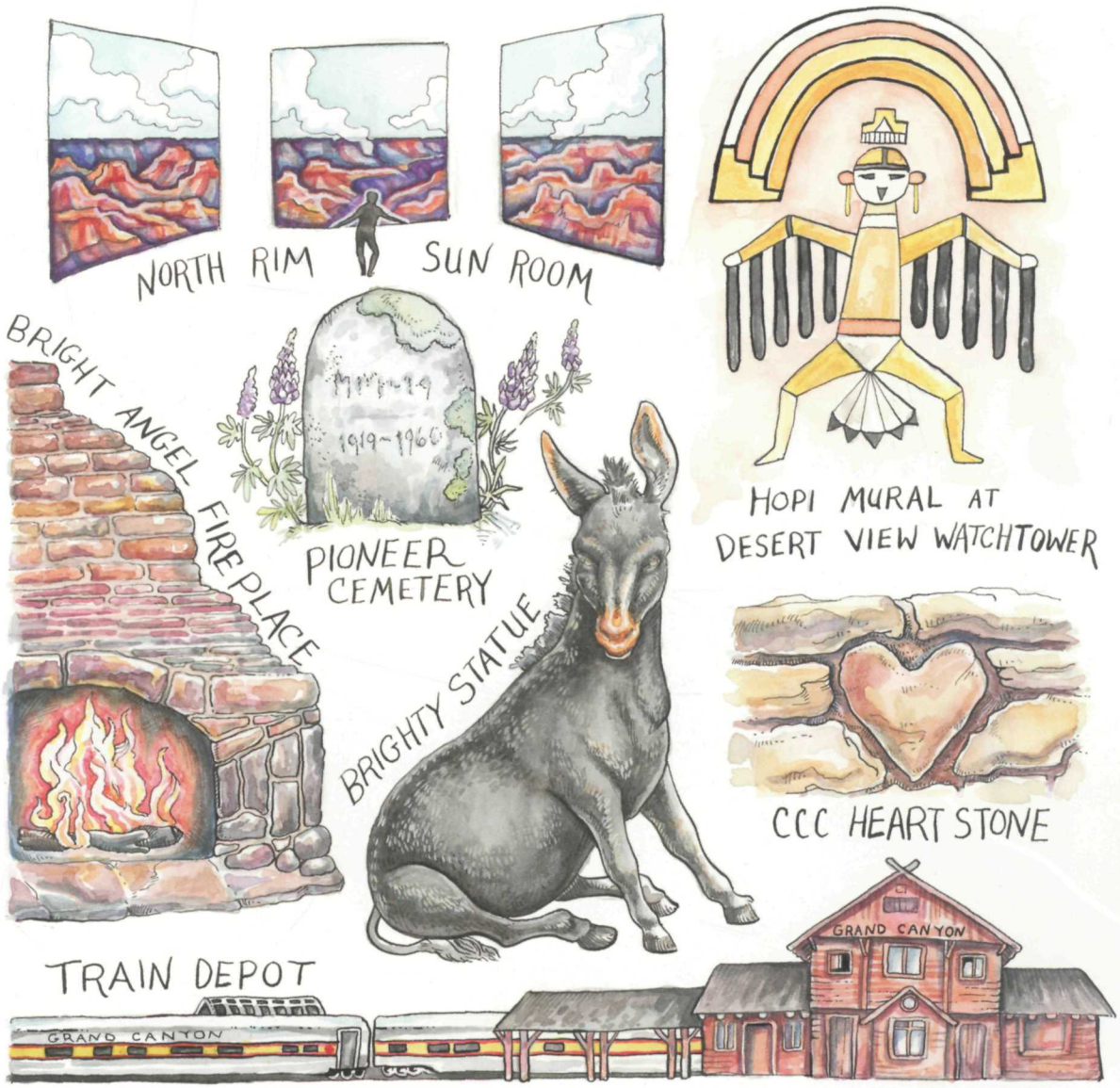
The Zuni people consider Ribbon Falls, a side drainage along Bright Angel Creek, to be their place of origin into this world. Zuni origins are depicted through rock paintings in the canyon and in the modern-day interpretations of their history as shown in the *A:shiwi Map Art* project that shows places of importance through their own eyes and language. Today, the Zuni people live in western New Mexico and still stay connected to Grand Canyon through traditional ceremony and retelling of history.



Connecting in Light. Acrylic on canvas, 48 x 24 in.
© Shonto Begay


A FREE GOVERNMENT SERVICE
GRAND CANYON
NATIONAL PARK
U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Hidden Gems Scavenger Hunt



© Claire Baldwin

Explore the park & see how many you can find!

- ☐ North Rim Sun Room
- ☐ Hopi Mural at Desert View Watchtower
- ☐ Bright Angel Fireplace
- ☐ Historic Grand Canyon Train Depot
- ☐ Pioneer Cemetery
- ☐ Brighty Statue
- ☐ CCC Heart Stone

See if you can find these bonus gems!

- ☐ Hopi Murals in El Tovar Hotel Dining Room
- ☐ Upper Tunnel Pictographs
- ☐ CCC Telephone Line
- ☐ Hermits Rest Arch
- ☐ Mule Team Driver
- ☐ Old Park Ranger Boots (at Verkamp's Visitor Center)
- ☐ Evidence of a Swimming Pool (at Phantom Ranch)



© Julie Sullivan Brace, Shine Creative Industries

© Harun Mehmedinovic

A CENTURY OF SCIENTIFIC RESEARCH AND STEWARDSHIP

Scientists know what poets and painters know—that Grand Canyon holds a vast array of secrets. Each day they probe these mysteries in their search for truth.

Although national parks were established to protect places of extraordinary beauty, their early focus emphasized the recreational experience. People regarded the parks as part cathedral, part playground. The scientific community was tasked with little more than cataloging the parks' flora, fauna, and cultural resources. That responsibility gradually evolved over the decades, however, when increased development and changing priorities prompted a reevaluation. It became clear these protected lands also were essential laboratories for scientific research.

Grand Canyon National Park serves as a prime example. It harbors a sprawling and complex ecosystem, the impetus for exemplary research in biology, geology, archaeology, paleontology, dark skies, and other scientific fields. Research conducted in the park provides a better understanding of the ecosystem's components, the processes that shape them, and the threats they face. It offers techniques to prevent future problems and initiates programs that help to preserve not just the big old hole in the ground but also the myriad of details that make this a truly special place.

Efforts by scientists continue day in and day out as they face new challenges in an ever-changing world. They strive to understand and maintain the integrity of the ecosystem, protect the history of past peoples, and preserve the staggering beauty of the canyon—allowing the poets and painters to continue with their important work.

GRAND ARCHAEOLOGY

Digging up the past



At its core, archaeology gives voice to the people who came before. Archaeologists are part scientist, part detective, and part interpreter. They peer into the past using scattered clues and the knowledge of tribal scholars to better understand how ancient people lived—long before there was a written history.

The Grand Archaeology project was the largest of its kind at Grand Canyon in a generation. The National Park Service excavated nine archaeological sites along the Colorado River during three years of fieldwork that started in 2007. These were the first major excavations along the river corridor in Grand Canyon in 40 years and conducted only as a last resort.

The National Park Service has a "preservation-in-place" mandate and excavates archaeological sites only when they cannot be stabilized and preserved in place. The sites chosen were disappearing due to erosion, with artifacts literally being swept into the river. Excavations were conducted under a partnership between Grand Canyon National Park and the Museum of Northern Arizona, while working closely with Traditionally Associated Tribes.

Information gathered during the excavations provided a rare glimpse into the daily life of people who made Grand Canyon their home hundreds of years ago. After the work was complete, sites were restored to a natural state. Yet the data acquired ensures the lives of people who came before remains very much part of the Grand Canyon story.

Take a Virtual Tour: go.nps.gov/virtual

All photos this spread © Dawn Kish Photography

LIGHTS OUT

Revealing Grand Canyon's dark skies

Sunset has long been a defining Grand Canyon experience, with crowds flocking to their favorite viewing spots, tour groups jockeying for position, and photographers setting up tripods. A stunning fusion of textured light and dazzling colors, sunset over Grand Canyon is now being recognized not as the end of the day but as the beginning of the night.

The pervasiveness of artificial light means that people from all over the world likely have never savored the breathtaking panorama of the night sky, regardless of where they live. Grand Canyon's dark skies alter visitors' perception of the universe and their place in it. The time has come to experience Grand Canyon National Park in an entirely new way—after dark, where there is so much more to see.

In 2016, Grand Canyon was designated a provisional International Dark Sky Park by the International Dark-Sky Association (IDA). According to the association's website, the prestigious classification is granted only to "land possessing an exceptional or distinguished quality of starry nights and a nocturnal environment that is specifically protected for its scientific, natural, educational, cultural heritage, and/or public enjoyment."

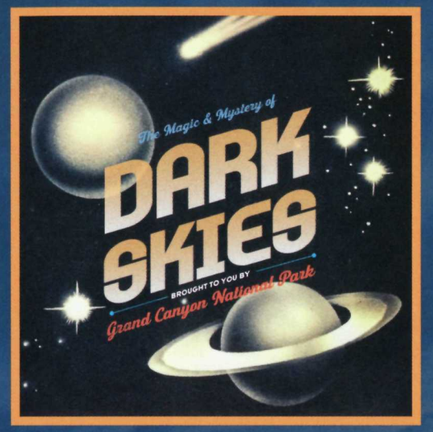
Achieving International Dark Sky status continues Grand Canyon National Park's mission. Reducing light pollution slashes energy costs and carbon footprints, improves visitor experiences, and minimizes the impacts on ecosystems. Wildlife in particular is at risk. Nocturnal animals that rely on natural darkness to hunt, forage, or navigate can become disoriented by pervasive artificial light. It can confuse migratory patterns, change predator-prey relations, and cause physiological harm.

Light pollution is defined as excessive or misdirected outdoor lighting. When the light outside runs rampant, it washes out the canopy of stars, planets, and nebulae once part of our everyday lives. Almost anyone who lives in an urban environment is submerged in the eerie blaze of brightly lit billboards, stadiums, store signs, and streetlights. Yet artificial lighting also disrupts the inky blackness above small towns and spills into rural areas. Preserving pristine patches of night sky above the parks becomes increasingly important.

A tremendous amount of work had already gone into protecting the starry skies above Grand Canyon before the park submitted an application to the IDA. It started with a long, complex inventory of thousands of outdoor light fixtures scattered across two rims and the inner chasm, followed by the development of a Standard Operating Procedure—Park Outdoor Lighting Guidelines. The process continues with retrofitting lights to comply with the stringent lighting guidelines of the IDA and the park. It also includes a necessary educational component, such as interpretive night programs and Grand Canyon star party.

Visitor safety remains a high priority for the park. Not all lights are necessary, but simply replacing bulbs and/or fixtures ensures visitor safety while also effectively shielding the light. Artificial light should be directed toward the ground where it is beneficial and does not shine into our eyes, or drift into the atmosphere. In many instances, retrofitting gave park staff the chance to install more efficient as well as more historically accurate lighting. The park's nonprofit partner, Grand Canyon Conservancy, funded the retrofitting project.

"The designation of Grand Canyon National Park as an International Dark Sky Park is an important step in ensuring the Colorado Plateau remains a protective harbor for some of the best night skies in the country," noted J. Scott Feierabend, executive director of IDA.



TOP 5 WAYS TO ENJOY THE NIGHT SKY

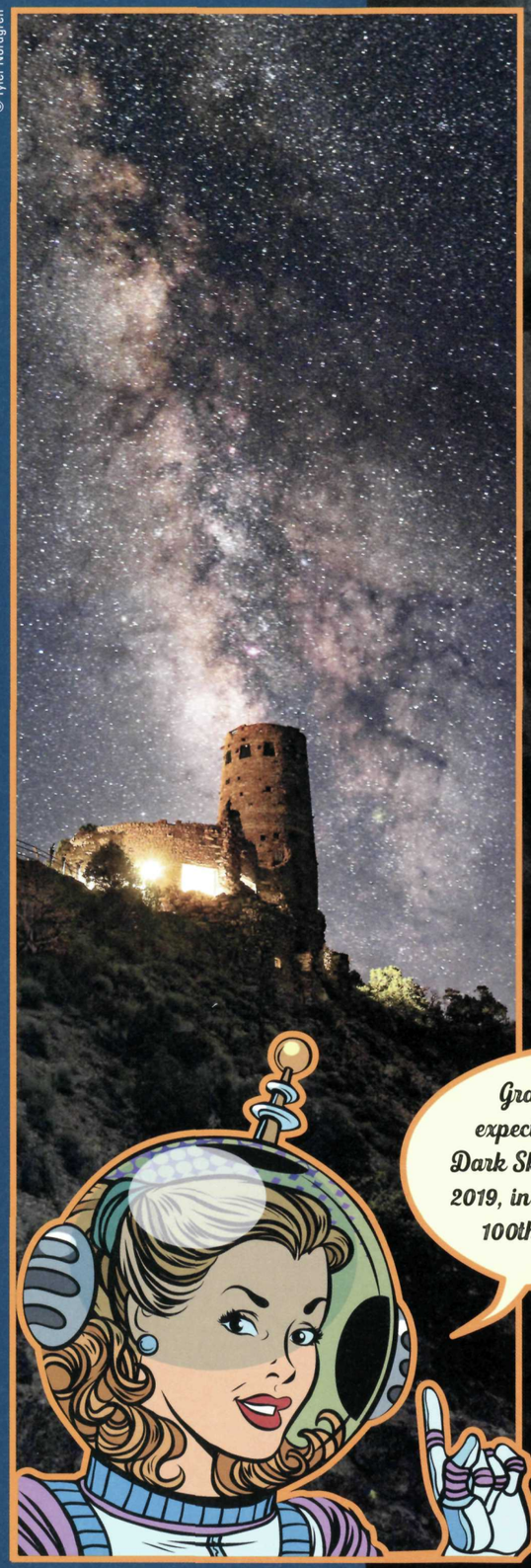
1. Attend park ranger star talks, constellation tours, and star party events.
2. Do nothing for 10 minutes but gaze at the night sky, then write down or record everything you saw and felt.
3. Have a picnic beneath a full moon.
4. Learn to identify at least three new constellations.
5. Sleep under the stars.

TOP 5 WAYS TO PROTECT THE NIGHT SKY

1. Become a citizen scientist by measuring light pollution using mobile apps such as Loss of the Night or Globe at Night.
2. Make lighting in and around your home dark-sky friendly.
3. Look for ways to reduce light pollution in your community. Do not be afraid to initiate the process by speaking at public meetings, writing letters to the editor, etc.
4. Join a local astronomy club.
5. Share your passion with others via social media and good old-fashioned conversation.

© Harun Mehmedinovic

© Tyler Nordgren



© Harun Mehmedinovic

Grand Canyon became the 12th national park site certified by the IDA. Including Grand Canyon, eight of these parks are located on the Colorado Plateau. That should come as no surprise, because the Colorado Plateau has a special relationship with the sky. Stretching across the Four Corners region, through Utah, Colorado, New Mexico, and Arizona, this vast tableland rose not in a furious jumble like the mountains surrounding it but as a single tectonic block, as if the sky needed a place to rest its feet.

As is the case with sunsets and sunrises, Grand Canyon adds a touch of drama to every celestial event. What visitors see overhead at night will be just as stunning, humbling, and inspiring as what they gazed at beneath their feet during daylight hours.

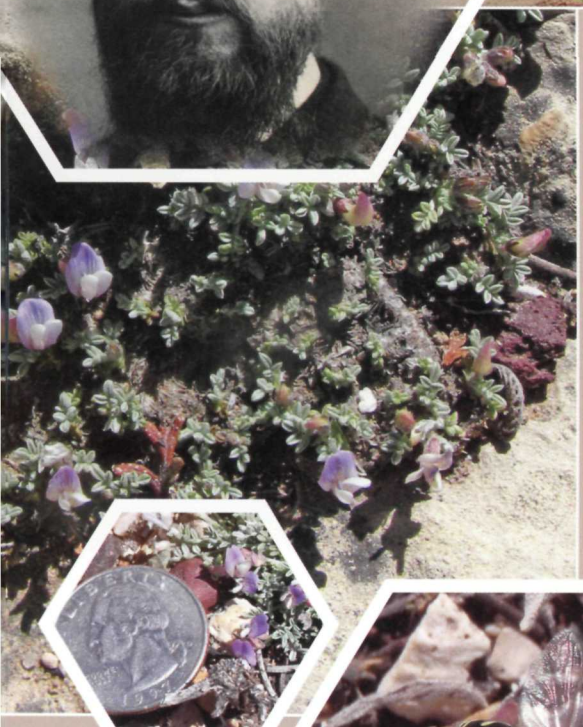
Imagine not just a smattering of stars but a sky so laden it can barely contain them all. A crescendo of stars emerge from the shadows like splintered diamonds as twilight surrenders to the night. The moon plays tug of war with the tides, planets appear, comets blaze across the sky, and wonder of wonders—the long arched streak of the Milky Way stretches overhead. Eighty percent of Americans can not see the Milky Way from where they live. Yet it hovers above the canyon, a river of frosted light. The Milky Way is the galaxy we call home. How nice to be able to connect to it again.



SENTRY MILK-VETCH

Lives on the edge









FAST FACTS

Marcus Eugene Jones discovered sentry milk-vetch in Grand Canyon in 1903.

Mason bees and hover flies pollinate the sentry milk-vetch.

Of the more than 1,750 species of plants found at Grand Canyon National Park, sentry milk-vetch is the only one officially listed as endangered.

In every conceivable way, the sentry milk-vetch teeters on the edge. This tiny member of the pea family is critically endangered, with the total population numbering only a few thousand plants. And all of them are rooted on the rim of Grand Canyon.

This feels like one of the all-time great friendships. Although the little plant and massive canyon may seem an unlikely pair, they are inextricably connected. Even the species name of *cremnophylax* speaks to that bond. It means "gorge watchman." These two belong together, and the National Park Service is working diligently to make sure the relationship continues well into the future.

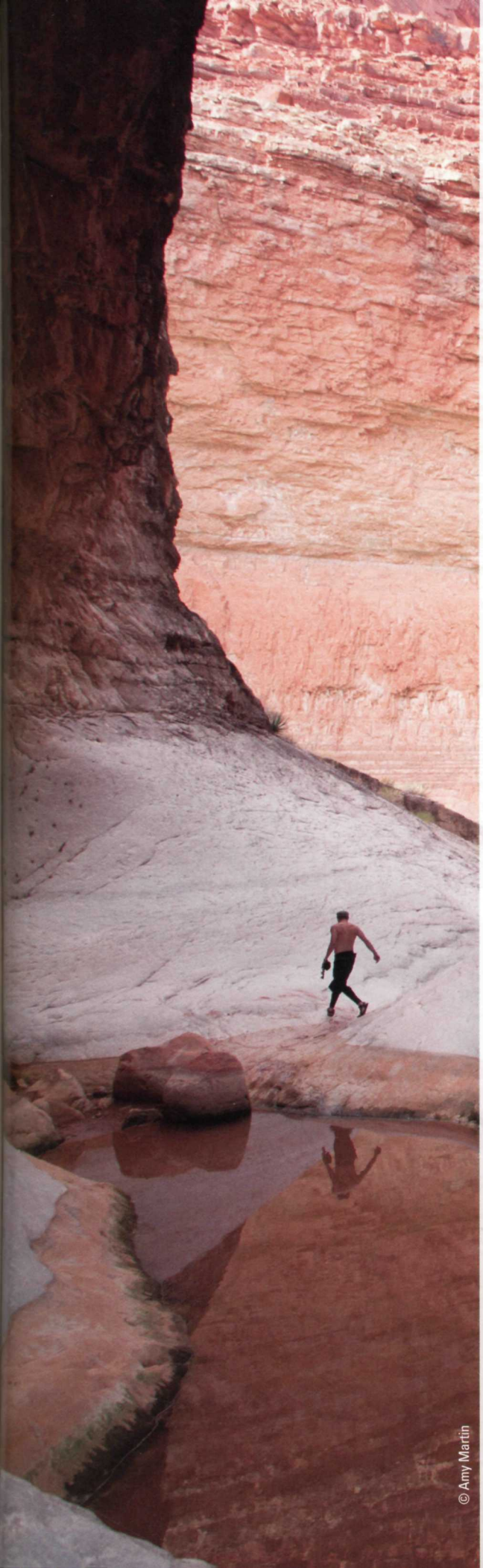
Endemic to Grand Canyon, sentry milk-vetch grows nowhere else in the world. The perennial herb takes root in shallow soil pockets in cracks and crevices of the Kaibab Formation, always within 25 feet (7.6 m) of the rim.

When a population of sentry milk-vetch was discovered at Maricopa Point, an entire parking lot was removed and the area fenced off to keep visitors from inadvertently trampling the plant, which grows only one inch (2.5 cm) in height and can spread to eight inches (20 cm) in diameter. The landscape was restored with native plant species and a section was set aside for sentry milk-vetch reintroduction.

In 2009, a population of the plant was started in a passive solar greenhouse using seeds collected in the wild. They began flowering the next year, a milestone in the recovery project. Hand-pollination was required so the plants would produce seed. Researchers would squeeze each flower open with tweezers, retrieve pollen from the stamens with a fine paintbrush, and then repeat the action on another flower.

Plants and seeds from the ex situ greenhouse population were carefully introduced to the restoration site at Maricopa Point. For weeks, volunteers would arrive each morning to record data and care for the plants and seedlings until they were ready to survive on their own. In addition, two other populations of sentry milk-vetch have been established elsewhere at the canyon. With such limited habitat, the plant is especially susceptible to drought and extreme weather events, not to mention inadvertent trampling by park visitors.

The ultimate goal is to create enough self-sustaining populations of sentry milk-vetch that the plant can be downlisted from endangered to threatened. If any plant can make its way back from the brink of extinction it will be the little gorge watchman. No other living thing has so much experience teetering on the edge, yet always holding on. With help from the National Park Service, the tiny plant will be watching out for its friend, the canyon, for a long time to come.



AGE OF THE CANYON

How old is it?

If Grand Canyon is a geologic book, it is one still being written. Hard as it is to imagine, visitors never experience the same canyon twice. The natural forces that created this masterpiece are still at work every day, making it a little deeper, a little grander. But do not expect to notice any differences between visits. Over a year's time, the Colorado River deepens Grand Canyon by a miniscule amount—approximately the thickness of a piece of paper.

The canyon's vistas prompt visitors and scientists alike to ask the same questions: How long has the process been going on? How old is Grand Canyon?

Ever since John Wesley Powell's 1869 expedition, researchers have sought answers to those questions. Until recently, two theories have been debated: 1) Grand Canyon is "old," having been carved about 70 million years ago during the first stage of uplift of the Colorado Plateau; or (2) Grand Canyon is the new kid on the block, a relative youngster in geologic time, sculpted by a fiercely turbulent Colorado River over the past six million years.

In the past decade, however, new data collection techniques unveiled an "intermediate canyon" theory. Evidence suggests an East Kaibab paleocanyon, perhaps a thousand feet deep, was carved 15–25 million years ago. An even older paleocanyon existed further west along the Hurricane Fault. Yet "young" gorges are documented at both ends of Grand Canyon. Can such conflicting theories be reconciled?

Old rivers died out but not before etching canyons into the uplifted landscape. Remnants of these paleocanyons may have remained dry for tens of millions of years, but never bet against the restlessness of water. No matter where water is, it always wants to be somewhere lower. About six million years ago, snowmelt from the Rocky Mountains sought a path to the ocean. Finding an initial route partially hewn, it flowed through the existing paleochannels, gathering strength and momentum and eventually linking together the path of the modern Colorado River. Then the real work of carving the canyon began.

This new paleocanyon solution finds a way to honor all the data. How old is Grand Canyon? It now seems that about six million years ago, the Colorado River carved a "young" Grand Canyon by etching its way through "old-" and "intermediate-" age paleocanyon segments to establish a path from the Rockies to the Gulf of California.

In geologic time, the gap between 6 million and 70 million years is not that dramatic—some of the canyon's rocks are nearly two billion years old!

To better understand this immense geologic timescale, stroll along the Trail of Time, a part of the Rim Trail that stretches from Yavapai Geology Museum to Verkamp's Visitor Center. Each meter walked on the trail represents one million years. Rock exhibits are placed along the trail at the point where they appear in the timeline. It soon becomes apparent that all segments of the modern Grand Canyon, be they 70 or 20 or 6 million years old, are part of a young canyon system cut into very ancient rocks.

As you walk the trail, pause frequently to savor the view. The ancient, complicated Grand Canyon story awaits new chapters. What a pleasure to be present as the story unfolds.



NPS/Amy Martin

HUMPBACK CHUB

Swimming back from the brink

The humpback chub knows a little something about surviving in rough waters. Their preferred habitat is rocky, complex, turbulent canyons with deep pools and eddies. Yet even they struggled when faced with drastic change to their environment. Humpback chub have been listed as an endangered species since 1967, and have been protected under the Endangered Species Act since its inception in 1973. Now, thanks to the work of numerous state and federal agencies, including the National Park Service, the fortunes of this curious-looking fish may be improving.

Humpback chub are members of the minnow family and endemic to the Colorado River Basin. The largest remaining population in the world is found in Grand Canyon. Characterized by large fins and a pronounced hump behind the head as adults, the olive-gray fish are uniquely adapted for the river as it had been. Dams changed the equation, holding back spring floods, lowering water temperature, and trapping sediment. Numerous invasive species have also been introduced throughout the basin, making life harder for native fishes.

In recent years, the population of humpback chub was limited to a single spawning area in the warmer waters of the tributary Little Colorado River. In 2009, the National Park Service, working with multiple agencies and an army of dedicated volunteers, began a project to translocate juvenile humpback chub to other tributaries in Grand Canyon. Establishing redundant spawning populations in other tributaries will help ensure the long-term future of the species.

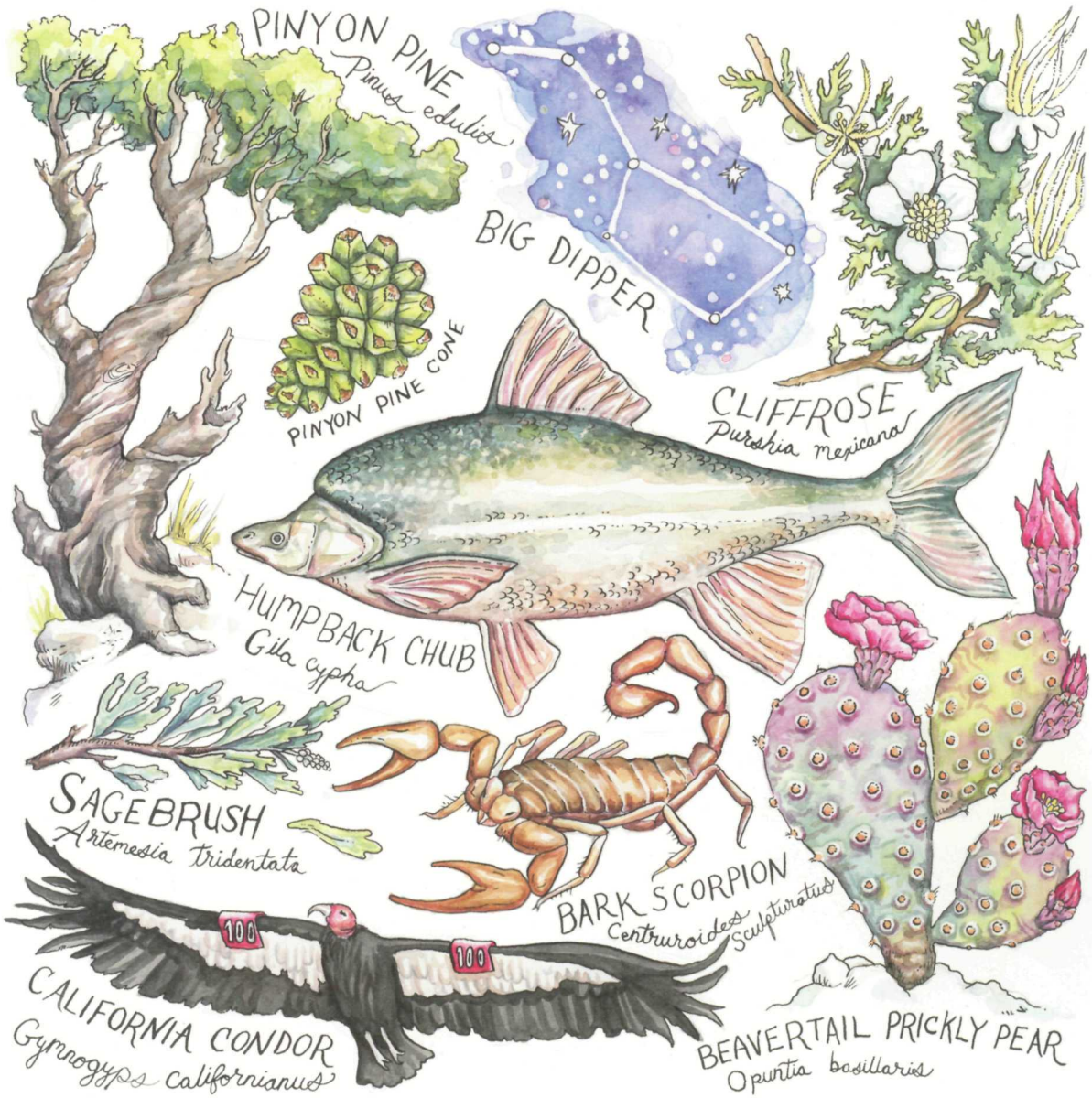
The project began with moving juvenile chub to Shinumo Creek, which meets the Colorado River at River Mile 109. Additional translocations were made to Havasu Creek below Beaver Falls and most recently to Bright Angel Creek. To preserve the chub population in the Little Colorado River, only extremely young chub are captured—ones at such an early life stage they would be subject to high natural mortality rates. Those fish are transported to outside hatcheries such as Bubbling Ponds Fish Hatchery in Cornville, Arizona, for grow-out. Once they are large enough to be less vulnerable to predation, they are released in a Grand Canyon tributary, in part of their historical range.

The results have been positive and contribute to an improved outlook for the status of the humpback chub. Research indicates growing numbers of humpback chub in western Grand Canyon, and in the case of Havasu Creek, a self-sustaining population. Tributaries also provide rearing habitat for young chub. Fish that are larger when they reach the main stem of the Colorado River have a better chance of survival.

The success of the program initiated by the National Park Service was cited in a March 2018 US Fish and Wildlife Service proposal to reclassify humpback chub from endangered to the less severe threatened. The hard work of all agencies involved will continue to protect the fish. Yet at least now they know they are on the right track. This counts as a tremendous and inspiring accomplishment. The water is still rough, but that is nothing new for the humpback chub.

Find out more about native fisheries at go.nps.gov/GC_Fish.

A Naturalist's Scavenger Hunt



Explore the park & see how many you can find!

- [ ] Pinyon pine and cone
- [ ] Prickly pear
- [ ] Cliffrose
- [ ] Sagebrush
- [ ] Big dipper
- [ ] Humpback chub
- [ ] California condor
- [ ] Bark scorpion

See if you can find these bonus wonders!

- [ ] Indian paintbrush
- [ ] Roaring Springs
- [ ] Desert horned lizard
- [ ] Raven
- [ ] Kaibab squirrel
- [ ] Desert bighorn sheep
- [ ] Bat
- [ ] Sphinx moth
- [ ] Aspen tree
- [ ] Elves Chasm gneiss



ARTIST PROFILE

Serena Supplee



MAY YOU FALL, HARD, AT GRAND CANYON

. . . fall deeply, fall in love, linger awhile—
one day, maybe a season or a lifetime.
Let the canyon flood you, make you

groggy, soaked to the brim
with the grand delirium,
and when you have to leave

take it with you: a grander understanding
of this deep place. You need it
and it might need you

to spread the love; there should be enough
for everyone—after all, it is Grand Canyon.
What can we do to keep it grand forever?

—THEA GAVIN
2011 NPS ARTIST-IN-RESIDENCE

Forty years of living and loving the Colorado Plataeu serve as the current of inspiration for Serena Supplee's art. As a river guide and artist, her imagery captures the adventurous spirit of the wild and the palette of the majesty and awe of Grand Canyon.
See more of Serena's work at serenasupplee.com.

Depth Charged
Oil on canvas, 44 x 54 in.
© Serena Supplee

SHARE YOUR DRAWINGS, PAINTINGS, AND STORIES AT #MYGRANDCANYONSTORY.

A Day in the Life of GRAND CANYON NATIONAL PARK

12:01 AM

A shooting star streaks across the sky, catching the eye of a coyote near Lipan Point. No one knows whether she made a wish.



1:22 AM A river guide assisting with a science trip wakes up and pushes the rafts farther out into the Colorado River because the water drops after the daily release from Glen Canyon Dam.

2:06 AM Search and rescue dispatch takes a call from a distressed hiker on the South Kaibab Trail. Staff immediately respond to aid the struggling hiker.

Preventative Search & Rescue
HIKE SMART

2:18 AM

A Delaware North plumber is roused from sleep when he is called out to respond to a broken toilet in a Yavapai Lodge guest room.

3:06 AM

Xanterra mule packers arrive at work to begin grooming mules and packing supplies for Phantom Ranch.



5:34 AM

4 AM The Hikers' Express shuttle bus leaves Bright Angel Lodge on its way to South Kaibab Trailhead.

An excited Boy Scout troop starts a backpacking hike down Bright Angel Trail.

5:58 AM Staff at Canyon Village Deli begin assembling breakfast burritos and bagel sandwiches.



Background photo © Harun Mehmedinovic

Much has been written about the beauty, geology, and history of Grand Canyon. But the canyon does have an untold story—the tales of the people who live and work there. For a national park as immense and remote as Grand Canyon to operate smoothly, it requires an army of dedicated employees and volunteers. They are on hand daily doing their jobs, and that simple act allows millions of visitors each year to experience one of the best of America's natural crown jewels.

© Todd Petre



6:03 AM

Shades of soft purple melt away, and the canyon's terraced formations seem to glow as the first rays of light caress ancient stone. Dawn's color wheel turns, saturating the sky with pink, gold, and bronze hues so astounding they do not yet have a name. The sun has risen at Grand Canyon.

BRIGHT ANGEL BICYCLES & CAFÉ AT MATHER POINT

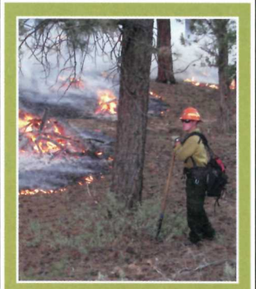
6:08 AM Bright Angel Bicycles & Café serves up the first cappucinos and cinnamon rolls to visitors who were up early to witness the sunrise.

6:47 AM Custodial staff finishes cleaning the restrooms at Yavapai Geology Museum.



7:38 AM An Italian father wakes his sleepy son and carries him to the window of their North Rim cabin so the boy can see deer grazing just outside.

8:00 AM Grand Canyon Visitor Center opens for the day.



9:00 AM Morning briefing begins for the park's emergency services personnel.

9:03 AM Trail crew pushes wheelbarrows of dirt down South Kaibab Trail for maintenance work.

9:17 AM At Desert View Watchtower, a Hopi painter and a Navajo silversmith work on their art and answer questions as part of the Desert View cultural demonstrator series.

9:21 AM An Oregon family pedals along Hermit Road after being carefully outfitted with bikes and helmets from Bright Angel Bicycles.

9:30 AM Volunteer campground hosts begin rounds to ensure visitors are checked out and campfires are extinguished.

9:31 AM An El Tovar Hotel bartender starts the three-hour preparations for a busy day and evening ahead, full of thirsty Grand Canyon guests.



10:04 AM A visitor from Minnesota takes photos of her family as they ride mules to Phantom Ranch. She cannot remember the last time she's seen her moody teenager wearing such a broad smile.

© Mike Buchheit

10:37 AM

Grand Canyon Conservancy Field Institute staff lead a group of new backpackers down Bright Angel Trail to Indian Garden.

11:01 AM Law enforcement rangers respond to people feeding squirrels near Bright Angel Lodge. They provide first aid for a bitten hand and instruct the visitor to get rabies shots as a precaution.

11:16 AM In Desert View Watchtower, a young woman from Canada chats with Grand Canyon Conservancy staff. Amazed to discover the building and many other park structures were designed by Mary Colter, she purchases a book to learn more about the pioneering architect.

NPS/Michael Quinn



12:01 PM

A philanthropy manager from Grand Canyon Conservancy meets with prospective donors over lunch to discuss endowing the park's trail maintenance program.

12:22 PM While strolling along the Rim Trail, a Swedish couple stops to enjoy the playful cawing of a raven seemingly saying, "Come fly with me."

12:41 PM Fee collection staff at South Rim Entrance Station competes to see who can move vehicles through their lane the fastest.

1:13 PM A Canyon Trail Rides mule packer leads visitors on a ride through the North Rim's lush forests to Uncle Jim Point.

1:26 PM Representatives from the park's Traditionally Associated Tribes meet with park staff to give input on a new vision for the Desert View area that will include more tribal participation.

1:30 PM A volunteer on summer break from college begins a guided tour of Tusayan Ruin.

1:43 PM

Custodial staff restocks Grand Canyon Visitor Center bathrooms with a pallet (48 cases) of toilet paper, which will last one week.

2:11 PM Diners finishing a delicious meal on the patio of Grand Canyon Lodge strike up a conversation with the busboy, only to discover they once lived in the same small Idaho town.



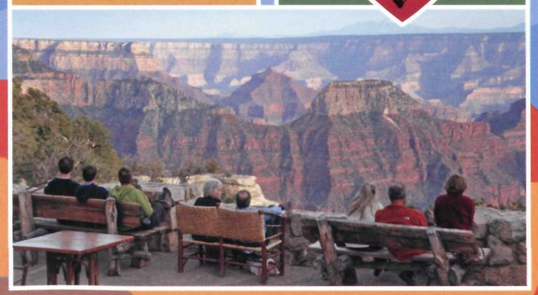
2:38 PM Wildlife staff work to move elk away from human drinking-water sources at South Kaibab Trailhead.

3:07 PM Park rangers and emergency medical technicians administer CPR to revive a visitor who collapsed in the Market Plaza parking lot.

3:25 PM A shaft of sunlight pierces the cloud cover, bathing Brahma Temple in a satiny glow while the surrounding formations are dappled by shadows. An Indiana man watches and wonders whether it is the single most beautiful sight he has ever seen.

3:36 PM A couple from Missouri celebrate their 34th wedding anniversary sitting on the rim, eating ice cream cones from Bright Angel Fountain.





NPS/Michael Quinn





3:42 PM

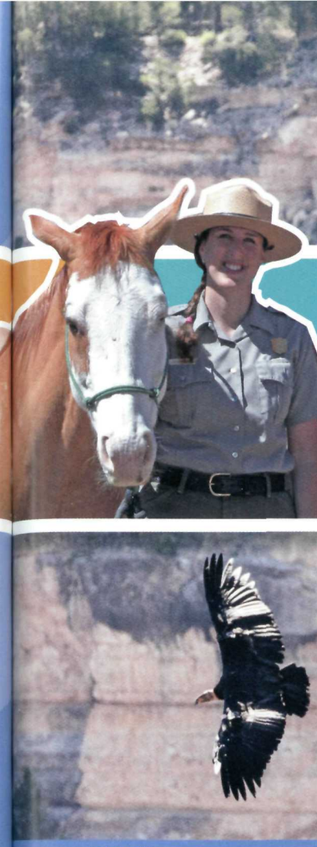
A park ranger and her equestrian partner, Rio, stop to talk to a family about the desert bighorn sheep they can see from the rim. The kids pose for photos with Rio and give him lots of love.

3:51 PM During a program on California condors, two of the impressive birds fly past. The park ranger conducting the program wisely takes credit for the visual aids.

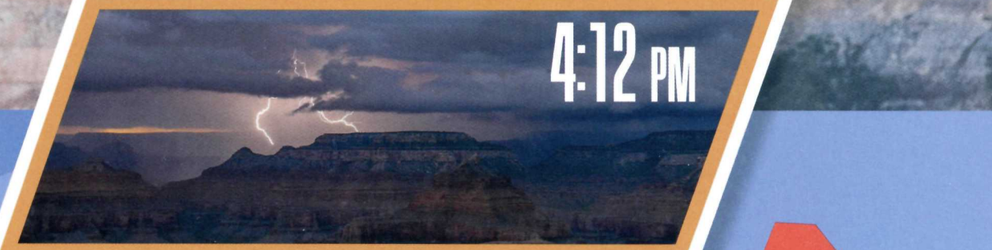
4:00 PM A Phantom Ranch park ranger begins a program about water conservation in the amphitheater.



A sudden monsoon rain drives visitors into Grand Canyon Visitor Center. The movie theater fills, and the line to the information desk backs up the length of the building.



© Erin Ford



4:12 PM

© John Sherman

4:23 PM A park ranger roving the campground at Desert View tells visitors about the sunset talk happening that evening. At one stop he hears a Grand Canyon pink rattlesnake shaking its tail.

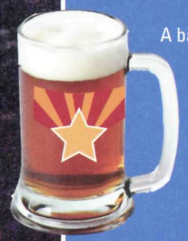


5:48 PM

As quickly as it began, the rain ends. The buildings in the Village nearly empty as everyone hurries to the rim to watch the shifting pattern of sun and clouds, light and shadows reinventing the canyon right before their eyes.



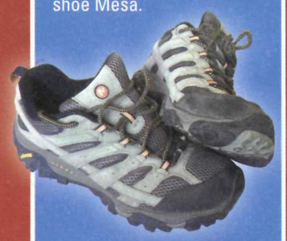
6:07 PM



A bartender at Yavapai Tavern pours another local Arizona beer for a guest.

6:30 PM Employees from different departments of the park gather for a weekly volleyball game.

6:41 PM: Over plates of salmon tostadas at El Tovar Hotel, two old college friends compare aches and pains acquired from their backpacking trip to Horseshoe Mesa.



6:47 PM A river guide serves a cake baked in a Dutch oven to visitors rafting the Colorado River.

7:11 PM Although the sky is mostly clear, a few low-lying clouds linger. They seem to go up in flames as the sun slips below the horizon. Bands of red and orange streak the sky, dancing across the formations below. Spontaneous applause is heard from several viewpoints. The sun has set at Grand Canyon.

7:13 PM With lavish sky and a color-streaked canyon as a backdrop, a young man from Wisconsin proposes to his girlfriend. She tearfully accepts, thus ensuring the couple an impressively romantic engagement story.

8:00 PM A park ranger on the North Rim welcomes visitors to the evening program in the Grand Canyon Lodge auditorium.

8:26 PM Wildlife staff nets bats to determine if white-nose syndrome is in the park.



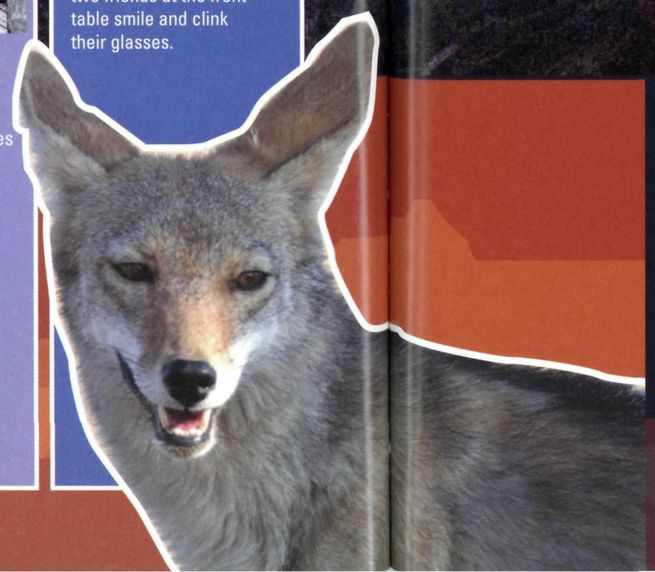
9:11 PM Unable to sleep after an amazing Grand Canyon day, an aspiring 12-year-old poet scribbles in her notebook at Maswik Lodge.

9:39 PM

A family from Phoenix stands at Mather Point gazing skyward and for the very first time sees the Milky Way.

10:06 PM

The musician at Bright Angel Lounge launches into an obscure Bob Dylan tune, and without a word two friends at the front table smile and clink their glasses.



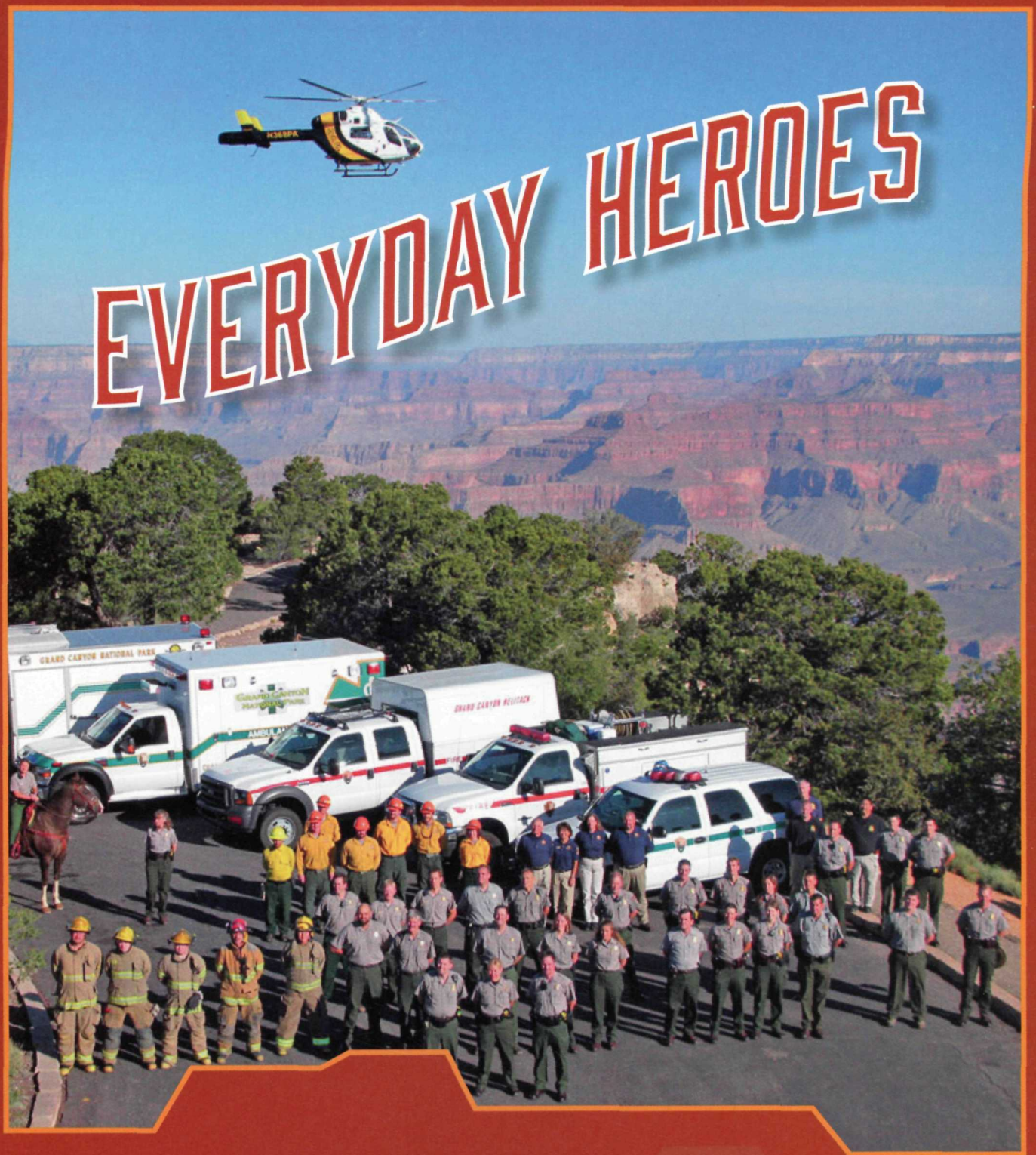
11:59 PM

A coyote lopes across bare stone, pausing near the rim to sniff the breeze wafting out of the canyon. She glances at a slice of moon, yips twice, and trots off.

No one knows what she said.

Photo above © Harun Mehmedinovic

EVERYDAY HEROES

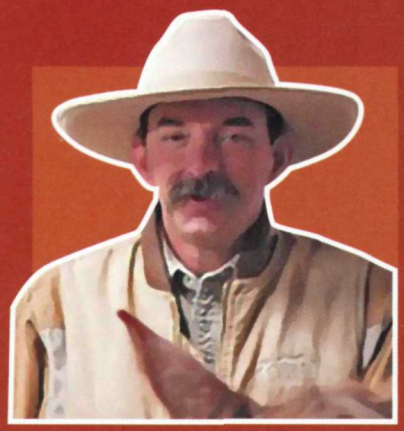


Behind the Scenes... Park & Partner Faces

John Berry

Xanterra Livery Manager

Mules are one of the few things at the canyon that attract as much attention as a sunset. The "long-eared taxis" of Grand Canyon are a story that stirs the imagination. When visitors climb into the saddle, they want not just a ride but to be part of history. It is up to John Berry to see that the adventure is safe and memorable. The job has barely changed in the more than 100 years visitors have been riding mules into this scenic wonder.



Berry manages the mule wranglers, packers, trail crew, blacksmith, and saddlemaker. Besides the two dozen employees, he attends to the health and welfare of the animals. Bred since ancient times, the mule is the offspring of a male donkey and a female horse. They are known to be sure-footed and patient, qualities that make them uniquely suited to canyon travel.

Nearly all early travelers ventured into the canyon astride mules. Presidents and poets, scientists and celebrities, all clip-clopped down the trail listening to the creak of saddles and admiring epic panoramas stretched out before them. Thanks to the work of Berry and his crew, today's visitors can have the same once-in-a-lifetime experience.



Jason Nez

NPS Seasonal Firefighter and Archaeological Technician

When everyone else is relaxing during vacation, Jason Nez and the other firefighters are standing ready. Fire danger is most acute during summer, when temperatures are high and humidity is low. Firefighting crews are often out patrolling the forests and ready when lightning strikes.

Nez also wears another hat. As a scientist, he maintains a special awareness of the surrounding environment. Twice while on fire assignments he has found Clovis points, the thin, fluted projectiles dating back thousands of years to the early Paleo-Indian period.

Another time, while doing excavations along the river, he awoke during the night to strange sounds. He turned on his flashlight to discover a ringtail cat dragging away one of his socks for some unknown reason. The little mammal bared its teeth, and Nez wisely decided to bid *adios* to the sock and go back to sleep.

"Living at the canyon can help a person find a sense of balance in the world. There is time to think about things and reflect on life."

Meghan Smith

NPS Preventive Search and Rescue Ranger

Since 2011, Meghan Smith has developed an intimate relationship with the canyon while also connecting on a personal level with visitors. She encounters them on the trails below the rim amid the considerable challenges of the steep terrain.

Communication and compassion are the keys to her job, as she helps visitors assess their abilities and understand what still lies ahead. Smith is constantly fascinated and surprised by the people she encounters on Grand Canyon trails. She wants everyone to understand that it is harder than it looks. Even those who may be in great shape can face unexpected difficulty. Anyone can hike into Grand Canyon. The important thing is hiking out again.



"Preventive search and rescue rangers hike the upper sections of the trails, providing information and education to visitors who may not know what hiking in the canyon is all about. Our team also responds to medical, search and rescue, and technical rescue incidents via ambulance, aircraft, and on foot to assist those who require further aid."



Vanessa Ceja-Cervantes

NPS Community Outreach and Centennial Coordinator

Much of what goes on with Grand Canyon National Park takes place away from the park. That is where Vanessa Ceja-Cervantes comes in. Her job focuses on developing partnerships with local gateway communities, chambers of commerce, tourism offices, news media, and other entities that market the canyon.

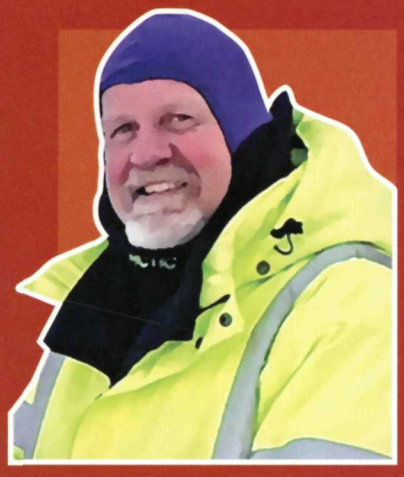
Ceja-Cervantes also helps process film permits, which has brought her in contact with a wide variety of media types, ranging from actors and politicians to the Budweiser Clydesdales. Yet her most memorable encounters are with the everyday visitors—family reunions, siblings reliving childhood roadtrips, and the people who are drawn to the canyon for a variety of reasons.

"Grand Canyon National Park is more than just a scenic landscape. It is a place of residence and worship for America's first people, a collection of geologic records and natural resources, a place of learning and reflection. While experiencing Grand Canyon, visitors gain a deeper understanding of the environment and are able to see how interconnected we are with one another. It's a place that promotes community and understanding. It encourages people to be better and do better."

John McFarland

NPS Maintenance Mechanic

Calling John McFarland just a maintenance mechanic is like calling Grand Canyon just an oversize gorge—it undersells it a bit. McFarland has been employed at the park for more than three decades, most of the time at the North Rim. His job involves operating heavy machinery, repairing buildings, fixing water leaks, assisting park rangers in search and rescues, making signs, and moving trees off the road any hour of the day or night.



As winter caretaker, McFarland works year-round at the North Rim. His days off begin with a 50-mile (80 km) snowmobile ride just to reach Jacob Lake. He spent one entire winter alone at the North Rim as the sole maintenance worker. That is a level of peaceful quiet few people will ever experience. Opening the North Rim every spring requires a lot of preparation. It is good to know the right man is on the job.

"The beauty and solitude of the canyon are out there. One just has to explore to find it. I am a flint knapper, artist, and craftsman. During the winters, I work on my art. On my weekends, I am building a house off the grid near the canyon. Some people say I am the unofficial North Rim historian."

Hannah Littleboy

Grand Canyon Conservancy Retail Store Manager

An appreciation of the natural world is instilled deep within Hannah Littleboy, who grew up at the canyon and graduated from Grand Canyon School. She understands better than most how important it is to preserve and protect this special place.

She began working at age 14 and realized early on that the unexpected is a daily occurrence at the canyon. During a stint as a custodian for the National Park Service, Littleboy had just finished cleaning Park Headquarters' bathrooms and emerged to find a large female elk walking through the front door into the lobby. Perhaps the elk had a question for a park ranger as it wandered through the building. Since the rangers had already departed, we will never know what that question may have been.

Today, Littleboy manages rim-side retail stores. It is not a bad office view to have. Her days get even better as she provides crucial information to visitors regarding day hikes, sunrise and sunset viewing spots, history of the buildings, and even helps them choose just the right souvenir as a memento of their visit to her amazing home.



Tommy Anderson

Paul Revere Shuttle Bus Driver

A retired firefighter with a love of adventure and travel, Tommy Anderson has the kind of commute almost everyone dreams about. He spends his days driving shuttle buses on one of the four routes along the South Rim.



Although providing safe transportation is the main priority of the job, shuttle bus drivers come in contact with the majority of park visitors. Their knowledge of and passion for Grand Canyon is an invaluable resource. They answer questions and provide information on every subject imaginable, including plants and animals that live in the park, sunset viewing spots, ways to best utilize time at the canyon, directions to places of interest, and even help finding lost cars.

"I think the most surprising thing about my job is how well a country boy from southwest Georgia with a heavy southern accent can interact with visitors from all over the world. The different languages can create a problem but can be easily overcome with a smile, laughter, patience, sign language, or even asking other guests for help."



Cale Wisher

NPS Wildlife Intern

Grand Canyon may be one of the wonders of the world, but for Cale Wisher it is also the family business. He grew up here, attending the only K-12 school in a national park, exploring every nook and cranny of the canyon. His father is a retired backcountry ranger, and his mother works as a museum curator. Wildlife intern is Wisher's first job and one he cares about deeply.

His days are often spent in the rim forests and the canyon, which feel like his own backyard. The fieldwork conducted by his crew tracks the population and habits of a variety of animal species in the park. It also offers a glimpse at the wonders of nature, such as when he studied a javelina that was adopted by an elk herd.

"People don't realize the amount of work our scientists put out to preserve and protect this natural place. My crew is small, yet we have so many projects we are undertaking, ranging from ungulates (hoofed mammals) to our herpetofauna (reptiles and amphibians of a particular habitat). Everyone does their part, no matter what. It is our passion, and with that passion comes great responsibility."

Join Us!

Work for the National Park Service, lend your skills as a volunteer, or join the ranks with one of our many park partners. There is something for everyone!

- National Park Service: usajobs.gov
- Volunteer In Parks: volunteer.gov
- Grand Canyon Conservancy: grandcanyon.org/about-us/employment
- Xanterra: grandcanyonlodges.com/who-we-are/careers
- Delaware North: visitgrandcanyon.com/employment
- Bright Angel Bicycles: bikegrandcanyon.com/jobs
- Forever Resorts: grandcanyonforever.com/grand-canyon-jobs

Hey Kids!

Become a junior ranger!

Junior rangers help to preserve and protect Grand Canyon National Park. They learn about nature and history, have fun exploring the park, and tell their friends, families, and schoolmates about their adventures. Junior rangers continue to protect the environment at home and at school.

Pick up a junior ranger book at any park visitor center. Complete the activity requirements in the book and bring it back to a visitor center before you leave the park to earn a free badge.



© John Sherman

Filaments—the air is
hung with lazy curve and sway.
Over the canyon
these evening glints
call: fling yourself into the still—
you will twist
a bit and float
and fall upon
the breath of red layers
releasing the day's warmth, carrying you out—
there—free as canyon light,
drifty as canyon shadow,
catching eventually.

—THEA GAVIN





GRAND CANYON NATIONAL PARK IS EXPECTED
TO REACH FULL DARK SKY PARK STATUS IN 2019.

Half the Park is After Dark—
Experience the Wonder!