

# Boatman's Quarterly Review

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# RICH TURNER



## boatman's quarterly review

Published quarterly by and for  
GRAND CANYON RIVER GUIDES.

GRAND CANYON RIVER GUIDES  
is a nonprofit organization dedicated to:

**Protecting Grand Canyon**  
**Setting the highest standards for the river profession**  
**Celebrating the unique spirit of the river community**  
**Providing the best possible river experience**

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Our editorial policy, such as it is: provide an open forum. We need articles, poetry, stories, drawings, photos, opinions, suggestions, gripes, comics, etc. Opinions expressed are not necessarily those of Grand Canyon River Guides, Inc.

Written submissions should be less than 1500 words and, if possible, emailed to GCRG. Include postpaid return envelope if you want your submission returned.

Deadlines for submissions are the 1st of February, May, August and November. Thanks!

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Cazo and Daffodil on sidebox, April, 2021  
Margeaux Bestard

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Cover: Rich Turner running a dory through Lava Falls  
circa 1976. John Blaustein Photo

# Prez Blurb

## Water and Stone, How we shape each other

A huge thanks to Al Neill for his service as president this last year and all that was accomplished during his term. The commercial guiding season in the Grand Canyon will have come to an end when this goes to print. I hope this finds everyone enjoying their winter endeavors in good health and with much happiness. I will be soaking in some much needed moisture at home on the North Coast. Think rehydrated prickly pear after a good monsoon.

I have had an awesome time being part of the GCRG Board of Directors and now have the honor of serving as president this term. For those of you who don't know me, I started rowing baggage boats in the Grand Canyon in 1994 and this year started all over again on the bottom rung swamping motor trips (it's never too late to teach an old dog new tricks). We have been putting our heads together here at GCRG with our affiliates

such as Grand Canyon Youth, the Intertribal Centennial Conversations Group, Superintendent Ed Keable, the Grand Canyon Trust and so many more to advocate for the wellness and preservation of the Grand Canyon and its community of people that love it so. I had little idea when I was elected to the board just how many different side canyons that GCRG is working in and keeping tabs on. Our collective voice and opinion matters on all issues ranging from development and uranium mining threats, water flows from the Glen Canyon Dam, inclusion and the fostering of a more diverse guide population, and the evolving riparian zone along the river corridor to name a few.

In this BQR you can read about Rich Turner, a current board member

of the GCPBA, and his long legacy of having fun in the Grand Canyon. He began his affiliation in 1955 as a youth and continues to enjoy it today at all opportunities. I consider him one of the lucky ones to have boated through the Grand Canyon on the high waters of the 1983 flood. It is unlikely, given the current circumstances of climate change and prolonged droughts, that I will have the chance to see this sort of water thundering through the Canyon. It is more likely that I will have the opportunity to use some of my low water boating skills in the years to come. Those years of high water fluctuations in the summer seem a long time ago, and it is fascinating to see a place one knows so well change into something so different.

I am relieved that we are this far along in the pandemic and have largely been able to run safe and healthy river trips for our guests, this even with bigger group sizes currently allowed to go downriver. Since Covid, the overwhelming appreciation expressed by our guests and felt by the crews that get to work and play together has been a lifeline. Never thought I would praise this, but Zoom sure has helped my experience being on the GCRG board as I do not live in Flagstaff and attending meetings via phone conference was not so great. We are looking at another year of the V-GTS, as well as other great events, so stay tuned. I can't help but think the next live, in-person GTS is going to be a party for the history books!

Across the board, the river industry as a whole, experienced a massive turnover in guides. The theme this season seemed to be river companies willing to hire almost anyone that had the basic required qualifications. The 2021 GTS river trip was possibly the smallest to ever launch with just sixteen people...this trip is such an amazing opportunity

for upcoming guides to learn really cool stuff about the Grand Canyon. Participants get to meet and foster relationships with guides from other companies, tribal members, the Park Service, and the scientific community. Plus they get to do super cool, off the beaten path adventures.

**If you are a subscriber to this publication and/or are a guide that worked with a really promising new crew member this year, PLEASE, recommend them to the upcoming April of 2022 GTS river trip! They may not know about this cool opportunity or have yet to become a member of GCRG. Everybody benefits!**

Simply said, we are all in the same boat, no matter what your craft is. Our future looks to bring low water, larger group sizes, smaller beaches, competition with the abundant riparian growth, and the loss of campsites. It is uncertain if we will see future beach building high flows given extremely low lake levels...fostering good relationships, treating each other with dignity, and communicating respectfully will help us all navigate these mid-channel boulders. Like Rich Turner, I plan to keep coming back to the Grand Canyon for as long as possible, and will work as a steward of this most special place in any way possible. Stay informed, keep your eyes open, ears tuned, and by all means voice your opinion. Remember, we are stronger together when trying to get off that rock. Lastly, I would like to thank Peggy Kolar for her long service as our Lees Ferry ranger. Good luck in all your future endeavors and look forward to seeing you downstream. Best Wishes!

*Billie Prosser*

# Farewell

Joy Iris Staveley—December 5, 1947  
–July 22, 2021

Joy Iris Staveley passed away at her home in Flagstaff on July 22, 2021, ending a prolonged fight against cancer and related complications and side effects.

Joy was born in west Los Angeles on December 5, 1947. She graduated from Birmingham High School in Van Nuys and received her Bachelor of Arts Degree in English from Cal State University at Northridge.

She was always studious and adventurous. As a high school sophomore she won a Science Fair project that competed in two regional fairs. She was drawn to flying—her father had been an Air Force Navigator. By age eighteen she had earned private and commercial pilots' licenses, and entered an air race from Long Beach to Las Vegas. She didn't win, but got newspaper mention as the youngest contestant.

Her first job was with a property research company. From there she moved up to Coldwell Banker Escrow. She always took her responsibilities and reputation very seriously. One of her work stories was about sometimes hiding her daily overload in a desk drawer and going to work an hour early to get it done before the office opened. In her fifth year she became one of the company's vice presidents, and Branch Manager of its Beverly Hills office.

In 1978, she tried to book a Grand Canyon river trip with Georgie White. Georgie was fully booked, so Joy contacted Canyoneers, and we had one space left on a trip leaving in a few days. Fate had apparently arranged for us to be on that trip. We were both divorced by then and, by the time the trip ended, we knew we wanted to see each other again—and did. Five weeks after the river trip we were married on Lipan Point at Grand Canyon's South Rim.



Joy in the cockpit.

Joy was excited by the river outfitting business and immediately began learning every aspect of it by filling in when someone fell short or needed help. Before long she was working at three desks. She loved multi-tasking, and had boundless energy. When the river-use controversy of the 1980s began developing, Joy became a key participant.

Through the years she also devoted time and talent to a number of local, regional, and national causes. She served on the Board of the Arizona



Joy at the tiller.

State Compensation Fund. She was Senator Jon Kyl's delegate to the 1995 White House Conference on Small Business. In 1997 she received the Athena Award, which honors Flagstaff's Business Woman Of The Year. She served on the Guardian Advisory Board of the National Federation of Independent Business (NFIB) as their Northern Arizona Area Action Chairwoman. In 2002 she received their Outstanding Service and in 2006, their Small Business Champion of the year award for Arizona. In 2016 she was Coconino County's representative on the Rural Business Development Advisory Board. She chaired the Flagstaff Chamber of Commerce Board and its Government Affairs Committee. She served several years on the State Advisory Board of Arizona's Friends of Small Business, the Advisory Board of Coconino County's Small Business Development Center, and the Northern Arizona Leadership Alliance.

She worked as a precinct representative and was subsequently elected to a two-year term as Chair of the Coconino County Republican Committee. In 2016 she was a delegate to the Republican National Convention in Cleveland. She was one of two public members serving on the Coconino County Criminal Justice Coordinating Council. Until shortly before her passing she was Secretary of the Grand Canyon River Outfitters Association.

Joy loved her family and friends, and her dogs—especially her several German Shepherds. She loved hiking, biking, and "everything Grand Canyon". During her last days, she told her family that she has no regrets, has had a full and wonderful life and only wished she could turn back the clock and start over.

**Gaylord Staveley**

Kim Crumbo & Mark O'Neill —  
Mid-September, 2021

The Grand Canyon boating community—devoted to each other and to the Colorado River—was shocked to learn this fall that we'd lost two of our own.

Former river guides and rangers Mark O'Neill, 67, of Chimacum, Washington, and Kim Crumbo, 74, of Odgen, Utah, didn't return home from a Sept. 13-17 canoe-packing trip in Yellowstone National Park.

Then on September 20, Mark's body and the boat were found on the shore of Shoshone Lake. He'd succumbed to hypothermia. Kim remains missing.

We who guided in the canyon with both men, sharing our intimate knowledge of the place with thousands of visitors, have spent many hours trying to make sense of the loss.

"Damn it," a fellow canyon guide, Jeffe Aronson, wrote me. "We live and love in a world of ghosts."

One way we're coping with grief is to share stories. Both men began guiding in the 1970s, going on to rack up some of the most extensive experience anyone can acquire. In the 1980s, both worked in the canyon as National Park Service river rangers.

Mark had already been a waterman all his life as surfer, lifeguard, skipper—basically "all things water," says his sister, Toni Kelly, a former Green and Colorado River guide and ranger.

Kim Crumbo ("Crumbo" to most) served two tours in Vietnam as a Navy SEAL. By spring 1971, he was home running rivers in Utah, a place, he once told me, he had wondered if he'd live to see again.

When I asked how he'd survived two tours, the second with a platoon known for the highest casualty rates in SEAL history, he shrugged. "I had to become the scariest guy out there."

"He's tough," my fellow Park Service river ranger, RuthAnn Stoner, said of Crumbo. "The toughest person I've ever met."

RuthAnn and river ranger Kim



1981 trip, NPS River Unit: Ruthie Stoner, Julie Jackson, Mark O'Neill, Kim Johnson, Becky Crumbo, Kim Crumbo.

Johnson remember Crumbo's persistence on a Grand Canyon patrol where they found an injured peregrine falcon around River Mile 140. At the time, peregrine falcons were listed as endangered, with less than thirty breeding sites in the canyon. The birds were just emerging from decline throughout Arizona and the West.

Crumbo offered to do as he'd done before—row his boat 26 miles downstream to Havasu Creek, hike out to Havasupai Village and call for a helicopter evacuation. But River Unit Supervisor Curt Sauer was already on inner-canyon patrol with a Park Service helicopter pilot, and when they saw a mirror signal they landed. After a heated back-and-forth, with Crumbo insisting that the falcon—starving, its wing broken—had to be "evacuated now," Crumbo prevailed. The falcon got its ride out, wearing a bandana hood to keep it calm.

Later, Curt helped release the rehabilitated bird back into the wild, calling it a triumph that "wouldn't have happened without Crumbo."

"Crumbo just never gave up," as RuthAnn Stoner tells it. "That same season he was jumping out of helicopters to rescue people off the rocks below Crystal Rapids after one of the big rigs flipped." Rescues like

that were all in a day's work for both brothers.

Mark's outstanding swiftwater rescue skills earned him awards for "courageous and professional" recovery efforts on flooding rivers and in remote forests. After leaving Grand Canyon, he continued his Park Service career in Olympic National Park, where he served twenty years until retiring in 2016.

Crumbo, too, dedicated twenty years to conservation work with the Park Service, then gave another twenty years to wilderness advocacy through the Rewilding Institute, Wildlands Network and other organizations,

retiring in 2019. He also became known for his well-argued essays about climate resilience, the latest titled, "Hope in the Age of Humans."

While many of us have found it unfathomable that a lake could make ghosts of such men, consider the lake—twelve square miles of icy, unpredictable mountain water. At the time Mark and Kim were out on it, an early snowstorm blew in on 45-mph winds, causing Shoshone Lake to surge with waves at least two feet high. Any boater, regardless of experience, would have survived a capsize in Shoshone's 48-degree F water for only twenty to thirty minutes.

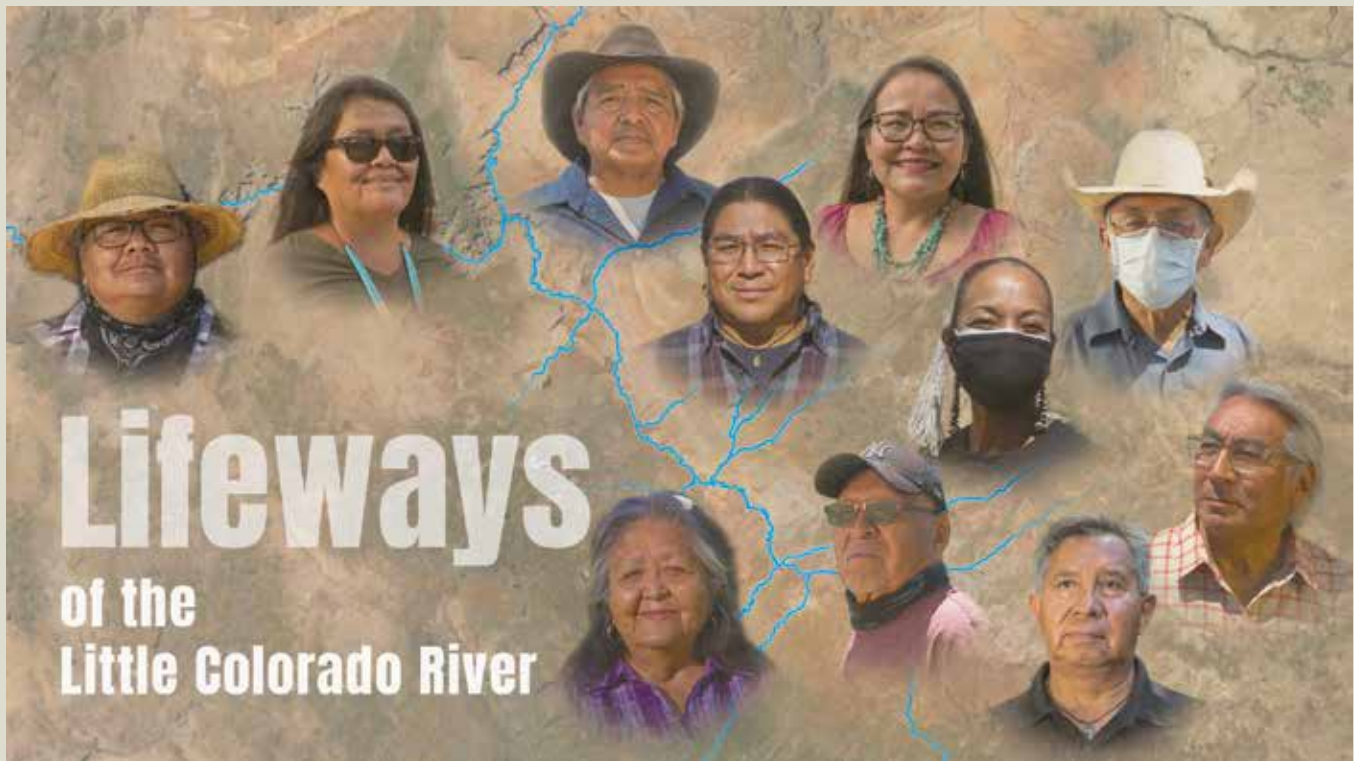
These "two good men," as Curt Sauer describes them, gave their best to their families, the canyon and humanity. "Any stories we tell about them," he says, "are love stories, pure and simple."

### Becca Lawton

*Becca Lawton is a contributor to Writers on the Range, [writersontherange.org](http://writersontherange.org), an independent nonprofit dedicated to spurring lively conversation about the West. A former river guide and ranger, she is writing a memoir about becoming one of the first women guides in Grand Canyon.*

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# NATIVE VOICES SHARE TIES TO LITTLE COLORADO RIVER



For many Indigenous cultures, winter is a time to share knowledge that has been passed down through generations. The animals have gone to hibernate, the land rests, and we tell stories. These are not tales or fables. They are living histories, ceremonies, identities, and sources of connection. Storytelling is a strong bond that teaches the individuals who are listening.

Heading into this winter season, a group of Native voices launched a new multimedia story collection that celebrates the Little Colorado River's life-giving waters.

"Lifeways of the Little Colorado River" features personal narratives, videos, and audio stories from Indigenous shepherders, scientists, artists, farmers, and more. Contributors include Bernadette Adley-SantaMaria (White Mountain

Apache), Lyle Balenquah (Hopi), Dr. Karletta Chief (Navajo), Dr. Herman Cody (Navajo), Jim Enote (Zuni), Radmilla Cody (Navajo), Franklin Martin (Navajo), Ramon Riley (White Mountain Apache), Octavius Seowtewa (Zuni), Bennett Wakayuta (Hualapai), and Delores Wilson-Aguirre (Navajo). Hopi artist Ed Kabotie contributed two original drawings to the digital collection, and Deidra Peaches, a Navajo filmmaker, produced the video series.

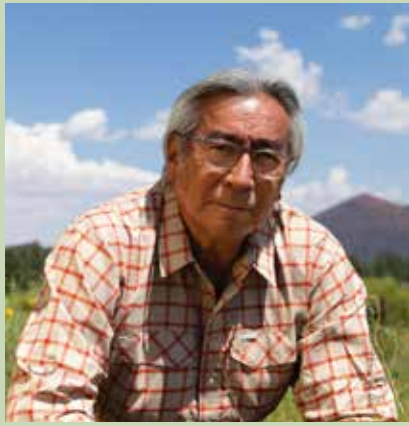
What you hear in Lifeways of the Little Colorado River are the voices of our ancestors. From pilgrimages down the Hopi Salt Trail, to medicinal plants growing along the riverbanks, these first-person stories trace cultural values of the river as it flows 330 miles across ancestral lands to the bottom of the Grand Canyon.

Meet some of the storytellers:



**DELORES WILSON-AGUIRRE**  
NAVAJO

"I remember living near the confluence during the winter, and we'd get a lot of snow. We would boil it, and my mom would wash clothes for us... It's quiet there, and if you stand near the edge, you can hear echoes down in the canyon. My grandma used to tell us those echoes are the holy beings that are living there, so do not disturb them by yelling. You look at the turquoise water. One river is female, the other is male. They come together, it makes life."



**JIM ENOTE ZUNI**

“The world began for the Zuni people at a place called Chimik’yana’kya dey’a, a place that many will know as Ribbon Falls... After many years living in the Grand Canyon, we explored the tributaries of the Colorado River, including the Little Colorado River, finally to the Zuni River. Then we settled in Zuni, where we are now...The Little Colorado River is like an umbilical cord. It connects the Zuni people back to their place of origin.”

Explore the full story collection at: [grandcanyontrust.org/lifeways](http://grandcanyontrust.org/lifeways).

**Sarana Riggs**  
Grand Canyon Trust



**LYLE BALENQUAH  
HOPI**

“Back in our ancestral history, the Little Colorado River was an important area for us to live and farm. If you trace the Little Colorado River to its origins all the way back up into the White Mountains, there are ancestral villages associated with that region...We as tribes, are still fighting to maintain our connections to the Little Colorado River system and what it means to us in this modern day. It’s an important part of who we are and the natural ecosystem of the region.”



**BENNETT WAKAYUTA  
HUALAPAI**

“The Hualapai used that salt [below the Little Colorado River] as one of our main trade items. For us, it was more precious than gold...It was an incredible resource for us, and we began taking the salt to far places. We know of a trail from the Yucatan Peninsula all the way to Deer Creek in the Grand Canyon. We were travelers. We still use that area as one of our pilgrimages. We take young boys there to gather salt at the salt mines, and they give it to elders.”

All photos: Deidra Peaches

## Important Dates 2022

Hey folks—we know that the river season is barely over, but please mark your calendars for these important events and trainings!

**Whale Foundation Wing Ding—**

February 19, 2022

**WFR Re-certification (sponsored by GCRG)—February 18-20, 2022 at O.A.R.S. in Flagstaff**

**Backcountry Food Manager’s**

**Course—A link to the NPS-approved online course will be**

posted on the GCRG website, under Guide Resources, as soon as available.

**Point Positive Workshop Series—**

TBD, but tied to the GTS. Essential training!!

**Guide Training Seminar: March**

**26-27, 2022—We are unsure whether the GTS will be virtual or in-person, but either way it will be awesome, so stay tuned!**

**GTS River trip (upper half)—April 1-7, 2022, Lees Ferry to Phantom Ranch.**

**GTS River trip (lower half)—April 7 - 16, 2022, Phantom Ranch to Pearce Ferry.**

And how can you find out more and stay dialed in as we get closer? Make sure to subscribe to our e-newsletter platform: *Boatman’s Beta*. You can find the link on the right-hand sidebar of the GCRG’s home page, or email to Lynn at [info@gcrg.org](mailto:info@gcrg.org) and we will add you to the email list!

# The Surprise Valley Landslide:

## How Cogswell Butte switched sides along the Colorado River

This is a news release to advise you of a breakthrough in understanding the origin of Surprise Valley, one of the most enigmatic geographic and geologic features in the Grand Canyon. The hypothesis reported upon was developed by Karl Karlstrom and Jesse Robertson.

This isn't a high-science article—that will appear in some science journal—but rather the purpose is to provide you with a big picture overview of what happened at Surprise

Valley. You will find it to be a large dynamic tale that you can use to blow the minds of your clients.

This is the incredible story of how Cogswell Butte, which originally was a mesa situated south of the Colorado River off the south rim of the Grand Canyon, ended up on the north side of the river. Spoiler alert! The butte didn't move. (See Figure 1.)

Those of you who know the canyon recognize on some level that Surprise Valley—the summer inferno in the up-and-over hike between Thun-

der Spring and Deer Creek—is an out-of-character place for the Grand Canyon. Unusual is that the valley is oriented parallel to the Colorado river rather than perpendicular to it. The profile of the western part of the valley is almost perfectly U-shaped rather than V-shaped as are most tributary canyons. Lastly, it is visually obvious that huge parts of the north wall collapsed into the valley.

The Grand Canyon is exceptionally wide west of the Powell Plateau with the Permian cliffs set back a mile or

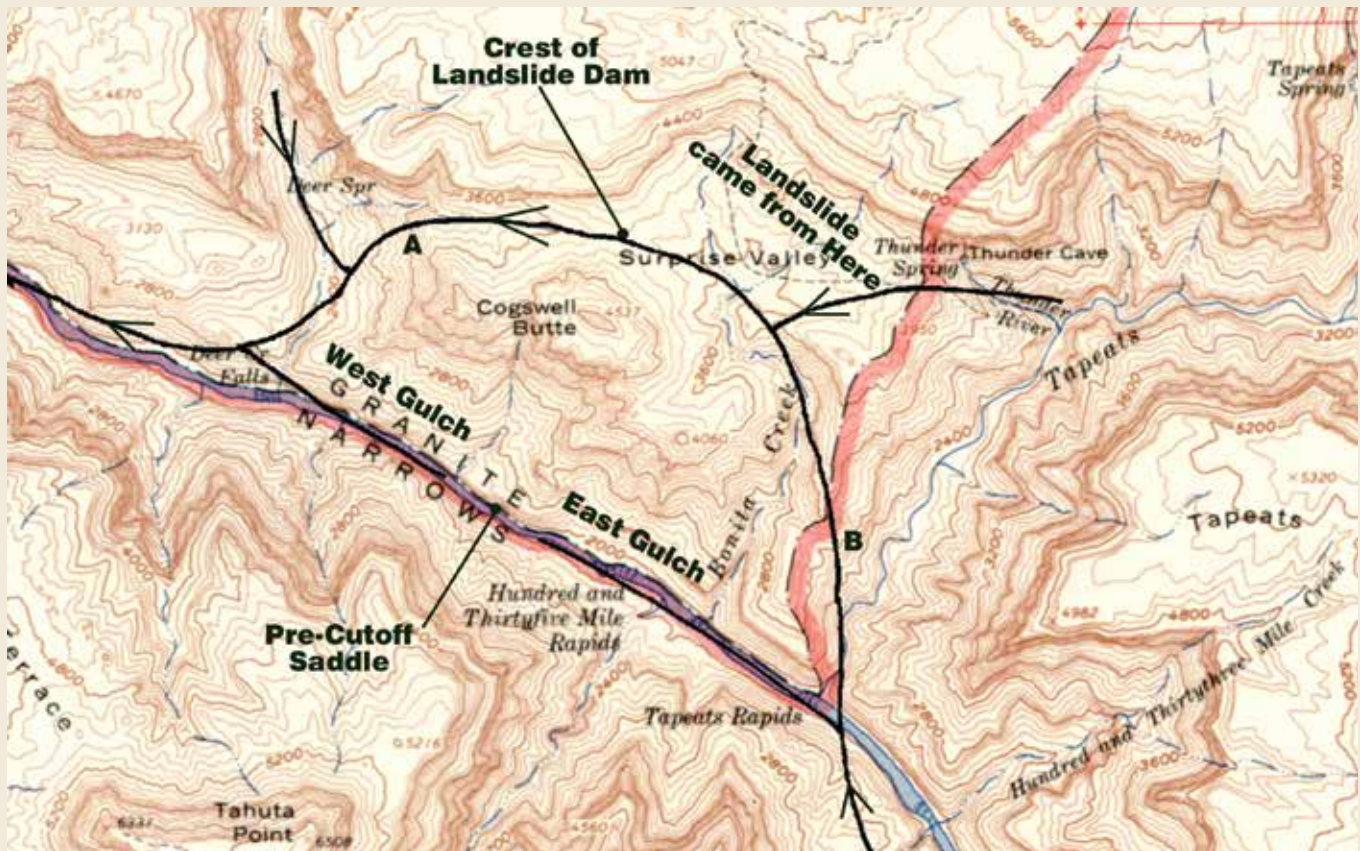


Figure 1. Map showing the former course of the Colorado River in the broad meander loop north of Cogswell Butte before the Surprise Valley landslide occurred. A huge slab of Esplanade Sandstone surfing on top of the landslide docked against Cogswell Butte forming at its westward end the crest of a landslide dam. Landslide debris flowed both down- and upstream within the meander loop at least as far as the letters A and B. Water behind the dam—higher than Hoover Dam—overtopped the Pre-Cutoff Saddle south of Cogswell Butte causing the river to realign south of the butte. Remember as you look at this map that the floor of the Colorado River was 880 feet above its modern position when the canyon was only 4/5ths as deep as it is today.



more from a deep narrow inner gorge walled by the Redwall and older rocks down to river level.

For boaters, the trek up Tapeats Creek to Thunder Spring, the climb up to and across the length of Surprise Valley, and the descent into and down Deer Canyon affords a challenging beat out seven-mile grind with 2,000 feet of elevation gain and loss.

Everyone notices that huge blocks comprised of all the rocks in the 1,500-foot high Redwall cliff including the capping Esplanade Sandstone have fallen halfway down from its north wall into the eastern half of Surprise Valley. (See Figure 2.) That impressive and scenic row of blocks stretches for over a mile. Less obvious, because they are underfoot, is that in front of that row of blocks are other tiers of equally large blocks that have fallen all the way to the valley floor and been partially buried. Obviously, some bigtime geologic event occurred here.

Surprise Valley is drained by Bonita Canyon, which stubs south to the Colorado River in normal fashion. Once you pass westward from the floor of Bonita Canyon on the way to Deer Creek, you proceed through a distinctive large U-shaped valley. Along the way, you gradually ascend to a saddle in the valley floor before dropping into Deer Canyon. As you make your way up to the saddle, you find yourself walking on a continuous layer of red sandstone that is completely out of character with its surroundings. This is a 3/4-mile-long slab of the Esplanade Sandstone and it caps the saddle. It is the same layer that forms the top of the Redwall cliffs to the north, but here it is on the floor of Surprise Valley jammed between Cogswell Butte to the south and the north wall of Surprise Valley.

Tributary canyons to the Colorado River are V-shaped in profile, but this reach of Surprise Valley is U-shaped so it doesn't feel right. The Colorado River occupies the only U-shaped valley anywhere in the vicinity, but the Colorado River Valley is on the other side of Cogswell Butte.



Figure 2. A row of deeply eroded tilted landslide blocks in Surprise Valley where you can match the Redwall Limestone in their faces with the Redwall in the cliff above and behind them. At least one more row of down-dropped blocks is in front of them that is buried under modern alluvium and the older lake deposits that accumulated behind the landslide dam. The dam is out of sight upstream in the valley below the bottom of the photo. The Esplanade Sandstone is the light layered rock that forms the Esplanade Bench at the top of the photo.

Karl Karlstrom became fascinated by both the landslides in Surprise Valley and more particularly the enigmatic profile of the western half of the valley. The place looked like a great master's thesis project area, so he assigned Jesse Robertson to pursue it in hopes that a detailed geologic analysis might help unravel what happened.

On an early visit to reconnoiter it, Karlstrom was looking west at the U-shaped profile between Cogswell Butte and the north canyon wall. He suddenly had one of those rare epiphanies that all scientists live for. He recognized that the profile looked identical to an abandoned river valley, not some typical tributary gulch to the Colorado River. The profile was similar to that along the Colorado River between Kanab Canyon and Lava Falls.

Could Surprise Valley be an abandoned ancient canyon that the

Colorado River once occupied? If so, how did the river end up on the other side of Cogswell Butte?

Assuming that the river did flow through Surprise Valley, then the original course of the river occupied a broad meander loop that looped north of Cogswell Butte where it incised deeply into the Esplanade Bench.

OK, so what about the Surprise Valley Landslide? It is huge, the largest landslide in the Grand Canyon. Could it be possible that the landslide dammed the canyon allowing a lake behind it to spill over the meander loop south of Cogswell Butte where the river then incised a cutoff between what are now the mouths of Tapeats and Deer canyons?

The puzzle of Surprise Valley has vexed geologists and naturalists for the past century. Just about every geologist who ever wandered into the place has been enchanted by the

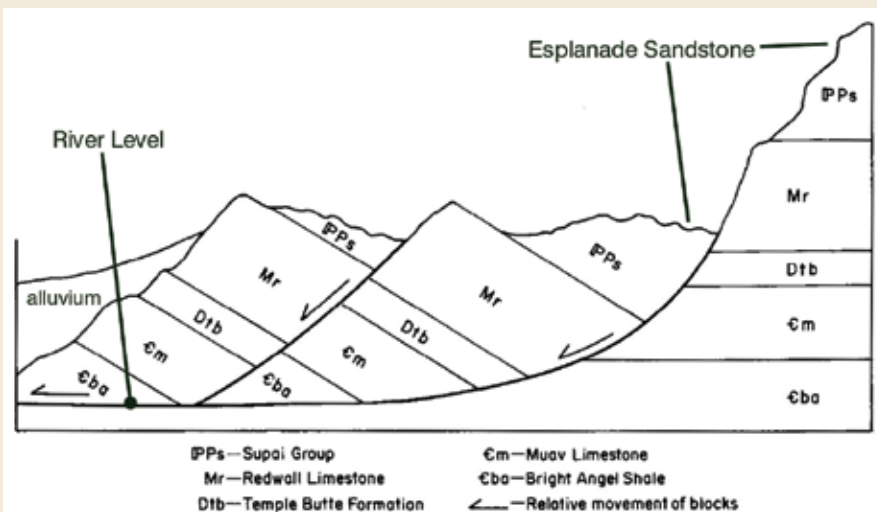


Figure 3. Idealized profile through the type of landslide that occurred in Surprise Valley. Rows of blocks that project in and out of the paper slid down the sled-runner-shaped failure surfaces allowing the blocks to drop and rotate backward against the cliff from where they came. The landslide dam that blocked the Colorado River in Surprise Valley is capped by the Esplanade Sandstone, which is the top layer in the Supai Group labeled on this diagram.

scene and tries to figure out what happened. It seems that half of them have written articles about what they thought happened, yours truly being no exception. I did my master's thesis on the big springs down there in 1967-'68, but kept coming back to study Surprise Valley because none of the explanations flogged by others or me worked.

Karlstrom, knowing my interest, invited me over to The University of New Mexico a few years ago in order to float their findings. I skeptically drank in what he was telling me. Within a half hour it was clear that their findings were big news, not only for Colorado Plateau geology but also for the river community.

What follows is the big picture. The discussions of all the field mapping details, all the tedium behind the dating of the rocks, the comparisons with previous failed models by me and others, etc., can be found in Robertson's thesis. Let's just cut to the essence of the story.

Let's go back two million years when the canyon was 4/5ths as deep as it is today. By then the Colorado River had incised a big meander loop into the Esplanade surface that

looped north of what would become Cogswell Butte. The canyon floor was about 2,000 feet below the top of the Esplanade Sandstone and 880 feet above present river level. The neck of the meander loop lay between what is now the mouths of Tapeats and Deer creeks. Steep headward eroding tributary gulches had eroded into the neck of the loop, the East Gulch draining east, the West Gulch draining west. They were typical steep V-shaped gulches like most short tributaries to the river. A deep saddle formed between them so Cogswell Butte took the form of an outlying mesa off the south rim. The butte probably was still capped by the Esplanade Sandstone but the saddle separating it from the rest of the Esplanade Bench to the south was deeply eroded down to the Muav Limestone.

When Colorado River incision within the meander loop began to unroof the Bright Angel Shale, the U-shaped canyon profile suddenly was destabilized. The problem was that the weak shale didn't have the strength to support the weight of the rocks in the 2,000-foot-high walls of the inner gorge there. Listric

faults developed parallel to the north canyon wall that allowed a 1.2-mile reach of the wall to collapse. Listric faults have a sled-runner profile being vertical in the rocks back from the top of the canyon wall and curving downward to almost horizontal at river level as shown on Figure 3. When the cliff gave way, the blocks slid down the curved surfaces of the faults and rotated backwards toward the cliff. The failure of the cliff may have been materially aided by ground water saturation of the Bright Angel Shale by water derived from the river but also ground water circulation off the Kaibab Plateau to the major springs on the north side of the canyon along that reach.

The collapse was a sudden major catastrophic event. The headwall of the listric fault was between 0.3 and 0.4 mile back from the cliff face. In all 1/2 cubic mile of rock dropped into the canyon. The forces associated with the almost instantaneous descent of such a mass of rock are beyond human comprehension.

The rocks in the eastern half of the side were facing almost directly upstream on the eastern side of the meander loop. Here the detached rocks broke into several rows of blocks like dominos standing on end that fell down and rushed upstream within the meander loop. As they plowed forward, the bases of the dominos being pushed from behind were thrust forward faster than their tops. Those on the leading edge fell the furthest. The mass buried the floor of the Colorado River under what is now Bonita Canyon. We can put our foot on the base of the slide in Bonita Canyon and see the profiles of the back-rotated dominos in its walls. The leading edge of the landslide debris reached at least as far upstream as the letter B on Figure 1.

In contrast, the western half of the slide faced the eastern end of Cogswell Butte so things got particularly messy there. The falling canyon wall sashed up against the north side of the butte which deflected the material downstream into the open

canyon to the west. The brittle limestones from the top of the Redwall to the base of the Muav shattered as they were diverted westward forming a mobile heap of rubble that flowed down the canyon toward Deer Creek. The leading edge of that flow made it as least to the letter A on Figure 1. Both the profile of the buried canyon and disaggregated debris in it are exposed in the east wall of Deer Canyon in the first big reentrant south of Dutton Spring. The leading front of that material moved westward down the river corridor at least a mile and half from its point of origin.

Most spectacular of all is what happened to the Esplanade Sandstone, which was the top layer in the failed section. A virtually coherent slab of it measuring 3/4th mile long, 1/10th mile wide and up to 200 feet thick surfed on the surface of the slide to the center of the Colorado River channel. It rode on a cushion of disaggregating limestone below and simultaneously fell 1,000 feet in the rush. The slab docked in the river corridor against the flank of Cogswell Butte to the south. Its elevated western end instantly became the crest of a landslide dam that now plugged the canyon and remains to this day as the topographic divide between Surprise Valley and Deer Canyon with an elevation of 3,750 feet. Much of the cushion of disaggregated limestone below that slab trailed behind or continued to flow westward down the channel.

The elevation of the buried Colorado River channel under the landslide dam is 2,820 feet based on exposures of it in Bonita Canyon to the east and the west wall of Deer Canyon. That yields a minimal height for the landslide dam of 930 feet. Hoover Dam is 726 feet high for comparison. When the lake formed behind the dam, the water backed up at least to the vicinity of what is now President Harding Rapid in Marble Canyon.

Now here is where things get interesting. As the lake filled, it didn't overtop the landslide dam. Instead,

it spilled over the saddle between Cogswell Butte and the south rim. In order for this to happen, the saddle had to have eroded to the depth of the Muav Limestone. Thus, the Colorado River was shunted across the neck of the meander loop. Cogswell Butte, without moving an inch, found itself on the north side of the river.

In time, the lake filled with sediment before erosion could remove the saddle beneath its new outlet. Red silty sediments that collected behind the landslide dam are preserved in the center of Surprise Valley and are readily observed on the north side of the Thunder River Trail where it crosses Bonita wash.

It is important not to lose sight of the fact that the buried Colorado River paleo canyon was 880 feet less deep than the modern river. The Colorado River had another two million years of downcutting ahead of it. Probably, rather quickly in geologic time, the river eroded the overtopped saddle south of Cogswell Butte and the river reestablished itself with about the same gradient as it has today. In time as the river continued to cut downward, it unroofed the metamorphic basement rocks and proceeded to carve the Granite Narrows. This was accomplished not with waterfalls, but rather the relentless wearing away of the rocks comprising the bed of the river. Surprise Valley was left high and dry.

Tapeats Creek reestablished itself across the eastern part of the landslide debris in the peculiar two-mile dogleg reach that now defines its outlet to the Colorado River. The youth of the lower part of Tapeats Canyon is revealed by the narrow V-shaped profile of the canyon there in contrast to the wide canyon east of Thunder Spring.

The scenario laid out here has the advantage of tying together every observed geographic and slide feature present in the Surprise Valley area into a seamless internally consistent model. The only feature of this hypothesis that has to be taken on faith is the overtopping of the

landslide lake across the saddle south of Cogswell Butte. Not only did that saddle have to exist, the elevation of it had to be below the crest of the landslide dam. Of course, that saddle eroded leaving no evidence that it ever existed other than the fact that without it this hypothesis doesn't work.

If the hypothesis has an Achilles heel, it is the Pre-Cutoff Saddle. That saddle had to be less than 930 feet above river level when the Surprise Valley landslide occurred. This implies that the saddle was at the level of the Muav Limestone some 1,000 feet below the surrounding surface of the Esplanade Bench, so the East and West gulches were deeply eroded into the bench. This depth is not readily explained. There is no east-west trending fault through the saddle to provide weaknesses that erosion could exploit to facilitate headward erosion of the gulches.

In closing, landslide widening of the Grand Canyon by collapses of the lower Paleozoic carbonate section continues to be an ongoing mechanism wherever the Colorado River is actively unroofing the Bright Angel Shale and the shale there possesses low shear strength. Similar large landslides developed west of Surprise Valley between Deer and Fishtail canyons. Those slides are geologically young and look young even to the untrained eye.

Further back in geologic time, the same types of landslides occurred east of Surprise Valley. The Bright Angel Shale occupied a higher elevation to the east owing to uplift of the Kaibab Plateau so the river cut into it well before doing so in the Surprise Valley meander loop. Evidence for those ancient earlier slides has been removed thanks to relentless erosion as the canyon deepened.

It appears that Karlstrom and Robertson are really on to something with their hypothesis.

**Peter Huntoon**

# Norm Nevills

*A 20th Century  
Tom Sawyer*

*They don't make dinner like they  
used to.*

**N**orm Nevills' daughter, my mom Sandy Nevills Reiff, must have laughed and smiled at stories of her dad's pranks, goofing off and tricks, that she heard at a Davies-Nevills family reunion many years ago. As a kid she and my Aunt Joan often were willing participants in similar shenanigans, "whitewashing" and fun adventures with their dad.

Each of us have a favorite family story, event, or person that we can recall. A wise grandparent, brave aunt, funny relative or story that makes us laugh or scratch our heads when we think back to them.

Sadly, I never had the opportunity to meet my grandpa. Most of my Norm Nevills stories have been

passed down over the years through my mom, my Aunt Joan Nevills Staveley, and through family story telling at dinners and get-togethers. Most are not well known or detailed in any river books, but are among my most cherished memories, because they give a sense of who Norm, or young Norman, truly was—an imperfect individual, but also one who had a fun, zany, entertaining, "Tom Sawyer" nature. A common theme is his rebellious, impish behavior—not unlike many of my talented, full-of-life guiding friends today. Hopefully, you will find a fun or humorous story that resonates, to share around the campfire or close to 75 Mile.

**Greg Reiff**

*"What's the use  
of learning to do  
right when it's  
troublesome to do  
right and ain't no  
trouble to do wrong  
and the wages to do  
wrong is just the  
same?"*

*—The Adventures of Huck  
Finn (1883)*

## Ladder Toss

At seven years old and living in his hometown of Chico, California, young Norman often helped his dad on different odd jobs. Norman's dad, Billy, could be a cantankerous, commanding fellow, which sometimes put him at odds with the young, spirited Norman. On one particular day, Norman was helping his dad Billy on a difficult roofing project. Norman became increasingly tired of climbing up and down, up and down, up and down the ladder to fetch—hammers, nails, tar paper—up and down—repeat, repeat, repeat. Finally, he could climb and repeat no more. Norman stepped down, took the ladder off the roof and tossed it on the ground. Most of the neighbors could probably hear the profane, colorful protest of dad Billy—now stranded atop the roof, while Norm walked away,

## An Honest Thief

Norman was taught as a little guy never to lie—his reputation as an honest prankster was cemented by age ten. After a fire was set at a local match factory, police asked Norman whether he had set the fire. “No,” he replied, and they believed him, knowing this small-town boy was absolute in truth as Honest Abe Lincoln. *[Shared by Sandy Nevills Reiff]*

Later that year, Norm, his dad Billy, and mom Moe were visiting friends who lived on a lake. Gazing out a window, Norman saw a man rowing a small boat. It started to rain, and the man rowed his boat to the dock area, tied it off and went inside to wait out the storm.

Seizing on opportunity, Norman went down to the dock, surreptitiously untied the little row boat and began rowing it around the lake—all the while singing and humming while ignoring the pleas and requests of those on shore to return the boat and come out of the quickening rain and thunder.

When the police finally arrived, seeing Norman's very young age, they gave him a stern warning and escorted him over to his much-embarrassed mom. Norman's highly irritated dad replied to the officer, “I am sorry officer, but Norman doesn't have any more goddamned sense than his mother!” *[Shared by Sandy Nevills Reiff]*

## A Big Buzz

Mexican Hat was a beautiful, muddy, one-lane, remote community of seven in the 1940s and thus Norm often used his airplane to run errands or pick up small items and supplies in Bluff, Monticello, and Moab.

Norm thought of his airplane as almost an extension of himself, and when my mom Sandy was very young, she and my Aunt Joanie would sometimes accompany their dad on different flying adventures in and around the Four Corners area.

Norm loved to fly and also loved to play mischievous pranks. One day, Norm took seven-year old daughter Sandy on a flight up to Bluff to pick up the mail. As he flew over the Episcopalian mission they observed the priest, nuns and surrounding Navajo members walking around the mission.

Seeing an opportunity he couldn't pass up, and with a willing passenger who shared her dad's sense of wit and adventure, Norm buzzed the mission while stating, “Shorty, when I tip the wings and open the door you yell out, “Oh Daddy, I'm falling, I'm falling.”

Stunned, the petrified priest and nuns began crossing themselves praying for young Sandy and the plane's safety! As they flew off, Norm said, “We got um a good one Shorty!”

My mom describes the scene with a huge grin, and to this day she shares her dad's same sense of adventure and spirit. *[Shared by Sandy Nevills Reiff]*



“Buckaroo”—Norm, about 1908.

## Mexican Hat's Champ

Norm and friend Press Walker found two old pairs of boxing gloves and set a date to spar. Norm decided to put in some extra practice time first and conned eldest daughter Joan into putting on the spare gloves.

He coached her on how to protect herself and how to dance around her opponent to keep them off balance. As Joan danced around her dad, he suggested that she throw her best punch. Dancing left, and then right, she threw her best “Sunday Punch,” landing right on top of her dad's nose, causing a mad rush of blood...She was never invited to “spar” again. *[Shared by Joan Nevills Staveley]*

## *Teetotaler Takes the Shine*

Once, during a clear, cold Mexican Hat winter, one of Norm's friends from up-country came down for a visit, bringing with him a bottle of home-brew. Although Norm was a heavy smoker, he rarely drank—polishing off the home brew together undoubtedly clouded Norm's thinking.

Sitting out front was an old shed in front of the Nevills house (where the current Valle's Trading Post sits today). Norm wanted to get rid of the shed, and of course figured the best way to do this was to set it on fire! As he lit the shed he climbed atop its roof—dancing and chanting in Navajo, before jumping off just as the roof caved in.

My grandmother came outside to see what all of the commotion and flashes of fire were and said with a sigh "Oh Norman..." A statement she often uttered when he was doing something zany or risky.

Of course, daughters Sandy and Joan laughed with glee, having little conception of how dangerous the feat actually was. [Shared by Sandy Nevills Reiff]



"Mud Surfing"—Norm, about 1945, San Juan River.

## *Adventures in Out-housing*

My grandparents, Norm and Doris, were married in October, 1933, and made a home in Mexican Hat. Norm accepted the lack of indoor plumbing, but my Grandmother Doris came from a genteel house and wasn't as accepting.

Norm dug a hole in the back yard about twenty feet from the kitchen door. It was a two-seater and close to four feet deep. The door opened away from the house toward the San Juan River cliffs. The building itself was wood frame covered by tin sheeting. The roof overhung the structure by about ten inches and had a wooden floor made of extra, scrounged lumber.

Curious five-year-old Sandy had a fascination with the outhouse, especially when it was moved to a new hole. Sandy went "Outback" and inquisitively climbed down through one of the seats into the outhouse hole! After climbing back out, she went into the house covered in muck. When my grandmother Doris saw her, she gasped, horrified, and sputtered, "Oh Sandra...not your new shoes." (This was during World War II when rubber was hard to come by). [Shared by Sandy Nevills Reiff]

## *Chasing Buffalo*

My mom has shared that flying with her dad was always a fun adventure. Once when they were up at Marble Canyon, Norm flew toward the Buffalo Ranch and said, "Shorty, let's go find some buffalo to chase."

Looking high and low and not finding buffalo, they found a herd of antelope, and Norm buzzed them, scattering them all over the countryside. [Shared by Sandy Nevills Reiff]

## *Boom! Rollin' Down the River*

Imagine an enormous explosion and colossal water spout over the river!

Much to the terror of passengers and the boatman's glee, on occasion in the early days of some commercial river trips, family and friends would race up to the Old Navajo Bridge to drop a huge rock into the water. What a way to see a river party off their launch at Lees Ferry!

My mom, Sandy Nevills Reiff, and her sister, my aunt, Joanie Nevills Staveley, shared about these cacophonies of noise and water in 1994, during a chat about their early days on the Old Timers' trip with Richard Quartaroli.

Ever her father's daughter, Sandy made rock trundling a tradition. During my early swamping days, my mom would often find a big rock and push it off the bridge to much the same effect.

As the rock created a big splash and passengers recoiled in fear, the boatman whooped and hollered in amusement. To a high school kid this was all pretty exciting stuff and I knew then and there that I had a fun, zany mother who had followed in her dad's footsteps.

In 1995, at the new Navajo Bridge Dedication, Joanie talked about her dad Norm's carefree ways. Never "normal," Norm made these ordinary days always memorable. Once before a trip he set an old car on fire and tipped it over the old bridge! [Shared by Richard Quartaroli, 2021]

## *Turkey of a Time*

When Sandy was six years old, she and her dad flew up to Blanding, Utah to pick up a Thanksgiving Turkey. The turkey came in a big box forcing Sandy to sit atop of the turkey box. As they flew home, Norm spotted his wife, Doris driving below toward Blanding. Attempting to land on the road to see what Doris might need, he landed on the bumpy dirt road. A huge gust of wind rose up and blew the plane off the road, causing the plane to fall over on its nose. Norm looked back and asked young Sandy, "You o.k., Shorty? What a Thanksgiving adventure!"

Getting out of the plane, Norm laughed hysterically as he spied Sandy's predicament, with her head and neck sticking straight up and out of the plane like a stork captured through the roof's heavy fabric! Yet...when he saw that the propeller was broken, he went from amusement into anger and colorful profanities. Hearing and seeing this, Doris covered Sandy's young ears and said, "Sandra Jane, go wait in the car; your dad and I have somethings to discuss." Looking back Sandy saw her mom having a...stern...pointed conversation with her dad. [Shared by Sandy Nevills Reiff]



"Better Stick to Boating"—Norm, about 1932

## *Run Like Hell, the Bastard's After Us!*

Once when Norman was eight years old, he was playing with one of his younger cousins. They spied a trolley car at the top of a hill, and Norman said, "Let's take out a penny and put it on the rail, as it will cause the trolley to jump it's tracks."

The younger cousin said, "Oh Norman, isn't that dangerous?" Norman replied "Oh no, it's quite fun." Placing the coin on the rails, they watched the trolley slowly crawl down the hill, causing the trolley to roll over the penny, jump the tracks and roll to a stop. The conductor bailed out, and Norman said, "Run like hell, the bastard's after us," at which time the boys scattered in different directions. [Shared by Sandy Nevills Reiff]

## *Whitewashing a Fence or Painting River Cans*

"That looks like fun, Daddy...Daddy, why do the cans say "J?" No answer, just a movement to pick up another blue can of carrot juice. "Daddy, if I was really careful, could I paint one? Please, daddy?" Deep consideration, while painting two more cans. "Well, let's see if you can do this one." This one was tomato juice, and I did it elegantly. I was allowed to do one more, and then Daddy took the paint brush back and did several more, with me begging to do at least one more. Under his breath I swear I heard the word "hooked."

All of a sudden, my world and a few cans spread to an entire river trip of cans—oh what fun! TS = tomato soup; VS = vegetable soup; GR = grapefruit sections; GB = green bean. Now in case you think there was a real code for all of is this, there wasn't, it was made up as you went, and only limited by one's imagination.

The cans, of course, lost their paper labels after the first day and lying on the floor off the boat.

Oddly enough, the job of labeling the cans with red or green paint, remained a fun job even after I grew up, and I did it for our own early Canyoneers river trips. I always feel close to Daddy, and looking back, I know even now how he snookered me once again. [Told by Joan Nevills Staveley]

# River Connections— Flowing Rivers and Monarch Migration

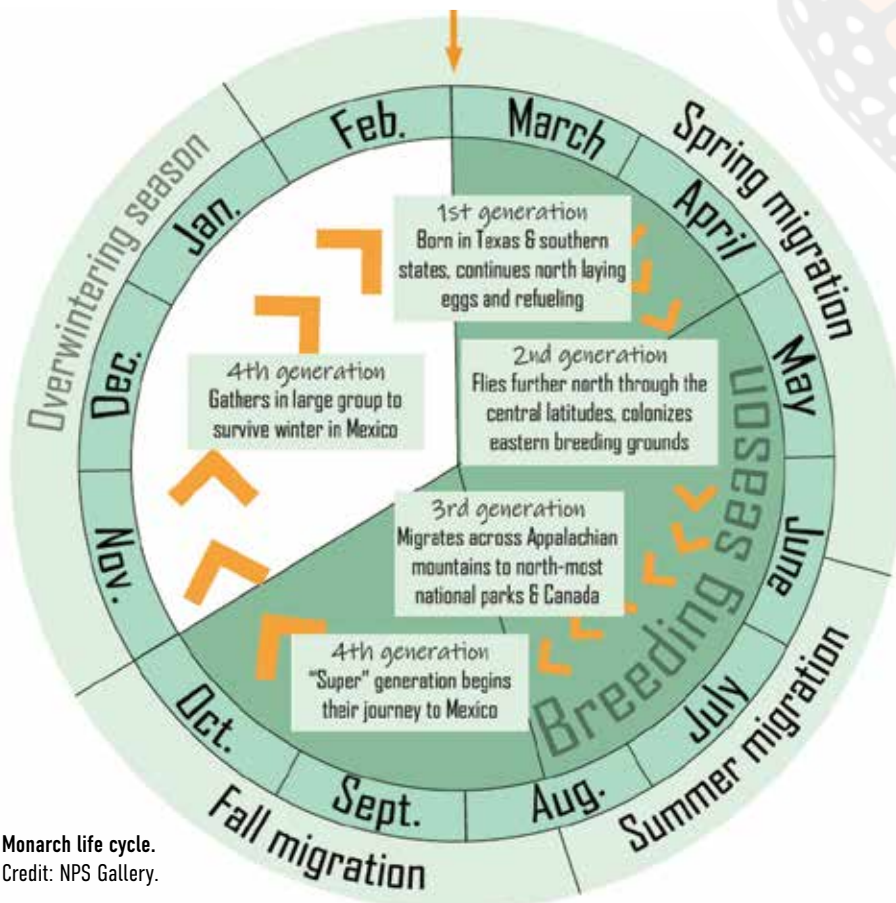
Monarch butterflies (*Danaus plexippus*) are a cultural icon and have a symbolic value as they travel across North America. As temperatures cool in the fall months, monarch butterflies begin migrating south into central/southern California, southern Arizona, and Mexico to overwinter in warmer temperatures. In the Spring, monarchs move north over multiple generations for feeding and breeding. Along the way they seek nectar plants and milkweed (*Asclepias* spp.) plants to sustain their journey and to provide breeding grounds for the next generation of monarchs. In both cases, monarchs follow river corridors (Morris, et al., 2015) in the desert Southwest, as they provide important breeding and nectaring

habitat. Monarchs cross borders without any considerations as they are driven by instinct to move south and seek forests for protection and overwintering sanctuary.

In December of 2020, the USFWS determined that listing monarchs under the Endangered Species Act was warranted but precluded, which means that protection is recommended but other species have a higher priority for conservation/protection. With the eastern population declining by approximately eighty percent and the western population by 99.9 percent, there is a substantial probability of a quasi-extinction over the next twenty years (Semmens, et al., 2016). Monarchs are threatened by the loss of breeding habitat which is thought



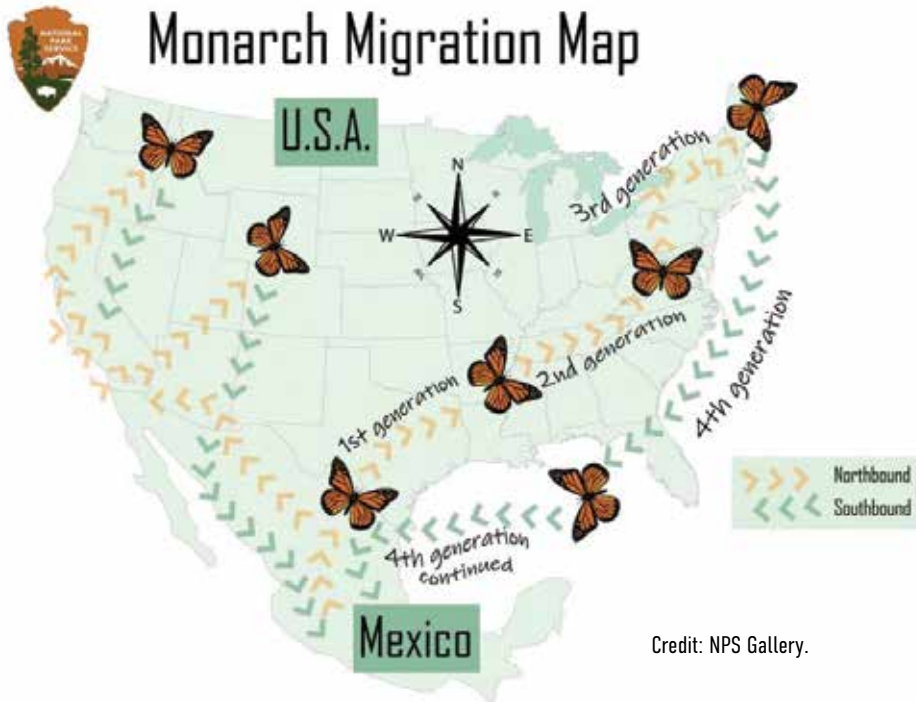
Antonio Ruvalcaba holding a monarch butterfly. Photo: Emily Spencer, NPS.



Monarch life cycle. Credit: NPS Gallery.

to be a main driver of population declines. Milkweed is essential for monarch breeding and its loss is a result of direct and indirect human impacts. The farming industry and the intensive use of glyphosate (e.g. Round-Up) has decreased milkweed abundance in agricultural fields (Pleasants, et al., 2012). Before herbicides were introduced, plowing the fields was the main way of removing weeds. This physical disturbance made perfect growing conditions for milkweed seeds to thrive. However, today the use of herbicides in glyphosate resistant crops has drastically reduced milkweed in ag lands. (Pleasants, et al., 2012). Industry development and urban sprawl are also significant factors in the decline of monarch habitat. Additionally, increased mowing in rural and urban areas along roadsides has decreased milkweed production even more. If managed properly, these roadsides could be transformed into prime pollinator habitat instead of weedy





species requiring spraying and mowing (Kasten, et al., 2016). Other factors such as ozone pollution and increased carbon dioxide levels which cause climate change, are affecting the condition and distribution of milkweed plants (David, et al., 2018).

Monarch butterflies are unique insects that go through multiple generations when migrating. When migrating north, monarchs will go through multiple life cycles, reproducing then dying off after two to six weeks, resulting in an average of four generations. However, when

migrating South, monarchs in the last generation, also called the “super generation” live up to ten months and travel more than 3,000 miles to warmer climates in Mexico, California, or Arizona. To accomplish this phenomenal migration, these monarchs do not breed immediately and instead conserve their energy for the long journey by storing fat in both caterpillar and butterfly life stages. They also time their migration to coincide with optimal habitat conditions which includes nectar flowers for butterflies and milkweed

for caterpillars. Milkweed plants are the only food source for monarch caterpillars and are therefore obligate for breeding, providing all the nourishment the monarch needs to transform the monarch caterpillar into the adult butterfly. Cardenolides in milkweed make monarchs poisonous to most predators, allowing monarchs to thrive. When there is no milkweed, there are no monarchs.

Grand Canyon National Park and Dinosaur National Monument are both part of the Colorado River system that supports a critical monarch butterfly migration flyway and offer host plants that are essential for monarch survival. In general, pollinators need nectar trails consisting of patches of flowering plants to refuel during migration. Certain milkweed species like horsetail milkweed (*Asclepias subverticillata*) and spider milkweed (*A. asperula*) are commonly found at 7,000 feet in elevation like at the Grand Canyon South Rim. Other species such as broadleaf milkweed (*A. latifolia*) are found below 7,000 feet, which includes the inner canyon along the river. At Dinosaur National Monument, milkweed species including showy milkweed (*A. speciosa*) and swamp milkweed (*A. incarnata*) thrive. Massive efforts are currently underway to address the problem of diminishing milkweed and monarch habitat. However, given the scope of this challenge it is essential to work together. No matter where you live, you can get involved with monarch conservation through citizen science.

From July to October 2021, Suzanne El-Haj and Antonio Ruvalcaba served as interns through the Latino Heritage Internship Program (<https://latinoheritageintern.org>), a partnership between Environment for the Americas ([birdday.org](http://birdday.org)) and the National Park Service. Suzanne worked at Grand Canyon National Park as a Biological Science Technician while Antonio worked at Dinosaur



Monarch caterpillar frass (feces) found along the Green River. Photo credit: Sonya Popelka, NPS.

National Monument as a Science Communication and Resource Monitoring intern. Both of their work focused on advancing monarch butterfly conservation efforts through resource stewardship, community science, and education and outreach. The river is a unique environment and both of them were able to experience a journey through public lands by whitewater rafting during their internships.

The waters of the Green, Yampa, and Colorado Rivers connect Grand Canyon National Park and Dinosaur National Monument. Just as the river flows so do the animals that migrate. Specifically, we think monarch butterflies use these river corridors to migrate North and South. Most of the data we have on monarchs today heavily relies on community science efforts and especially on the river community.

## REPORTS FROM THE RIVER

### Down the Colorado River

Before my internship, I never thought I would get the opportunity to raft the famous Colorado River. The



Suzanne with Colorado river and NPS boat behind her during river mission. Photo: Meagan Dreher, NPS.



Antonio stops to survey for monarch evidence in Lodore Canyon. Photo: Sonya Popelka, NPS.

purpose of the river mission was to monitor the effect that Glen Canyon Dam has on the riparian zone of the river. The dam has created fluctuating water levels which allows for growth of plants along the river shore. Some of these plants are invasive and some native, and some of them have a negative impact for boaters wanting to camp on the shores as well as impacts on protection for cultural resource sites. While on the river, I also contributed to my own project, monitoring milkweeds and monarchs.

My river experience started by hiking down to Phantom Ranch and meeting up with the Grand Canyon National Park Vegetation crew. Over the course of ten days, we traveled about 200 miles through the river and stopped every couple hours to work. Our work consisted of clearing vegetation and managing invasive plants via hand pulling, digging, and herbicide application along the shores. The work was labor intensive and conditions in the canyon were extreme. However, to my surprise, I enjoyed every bit of it. Whitewater rafting through the Grand Canyon was an unforgettable experience that I will always cherish. Over the course of the trip there were no milkweed sightings, however there were monarchs present, about 25 monarchs in total were documented.

### Down the Green River

As part of my internship, I was able to participate in a four-day rafting trip down the Green River in Dinosaur National Monument. The goal of the trip was to survey for monarch butterflies during peak fall migration and gain knowledge about corridor usage. We launched at the Gates of Lodore, which was an amazing view which almost felt like going into Jurassic Park. The journey ended at Split Mountain. The trip was eye opening in many aspects, we saw monarchs along their way, indicating a usage of such habitat. The habitat along the river was full of nectaring resources, such as western goldenrod. We searched for eggs and caterpillars throughout the milkweed, only to come up empty handed. However we did see chewing marks and even old egg casings on the milkweed. Milkweed is abundant in this stretch of river, and previous years surveys found all life cycles present. Overall we were able to spot eleven adults during their time on the river. This river trip surveyed only four days out of the year, but communities can come together helping to gather information about monarchs throughout their range in the West year-round. Tagging efforts help us understand movement of adults and provide clues of migration



Monarch resting inside the canyon. Photo: Meagan Dreher, NPS.

patterns. The internships, from two very unique environments, allowed both of us to experience the river and participate in monarch conservation.

### HOW YOU CAN GET INVOLVED

Immediate action is needed to prevent species extinction. This action can be as simple as uploading data onto the Western Monarch Milkweed Mapper (<https://www.monarchmilkweedmapper.org>) (WMMM) database. This is a user-friendly resource because anyone who has access to the website or the phone application, called Monarch SOS, can enter data on monarch or milkweed sightings. Take a photo of either a monarch butterfly or milkweed when you see it. Then upload that data. The website will then identify the type of milkweed you uploaded. Data submitted to WMMM will help researchers determine the distribution, phenology, and conservation needs of monarchs and milkweeds in the West. It will also help individuals learn about monarchs, their host plants, and ongoing conservation efforts for these species.

Another great avenue for monitoring monarchs and milkweeds is the Monarch Joint Venture webpage. Here you can join the Integrated Monarch Monitoring

Program (IMMP) listserv and learn about program updates. Similar to WMMM, this resource is essential in understanding how monarchs interact with their environment and tracking population and habitat as it changes over time.

Additionally, Survey123 is a survey platform that has been growing over the last few years. Advantages of the platform for wildlife include creating, sharing, and analysis of observations, such as for bighorn sheep and monarch butterflies. An example of this platform for pollinator surveys we used is the Utah Pollinator Pursuit. The application allows for the user to report observations on individual monarchs as well as their lifestage and habitat/plant information. Projects like UPP and Southwest Monarch Study encourage the general public to participate in science. The rafting community can contribute to monarch conservation by submitting observations of monarchs using river corridors, an area where data is scarce. Your reports may help answer questions about when, where, and how many monarchs use rivers for migration each year.

### Suzanne El-Haj and Antonio Ruvalcaba

#### About the authors:

Suzanne El-Haj is a first generation Argentinian-Palestinian student in this country. She resided most of her young life in South Texas, in the Rio Grande Valley. It is a region known for its abundance of rare bird species, butterflies, and migratory paths along the Rio Grande River. The river acts as a natural barrier between the United States and Mexico in this region. Just as monarch butterflies use the river to travel, so do the people of this border town region. After graduating with her bachelor's degree in Sustainable Agriculture and Environmental Science, she took the opportunity to intern at Grand Canyon National Park.

Antonio Ruvalcaba is a first generation Mexican-American, who comes from the Central Valley of California. He obtained his bachelor's in Wildlife Conservation and Management from Humboldt State University. Many people think of the Central Valley as mainly agriculture but it actually has wildlife all around. After high school, involvement with the San Joaquin River opened his eyes to the ecological importance

of river systems. His passion for river systems was born one summer, when he worked at camp teaching various water sports on the river. His passion for wildlife grew as he explored the area, leading him to Humboldt State University.

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#### Additional Resources:

- Western Monarch Milkweed Mapper : [www.monarchmilkweedmapper.org](http://www.monarchmilkweedmapper.org)
- Monarch Joint Venture : [www.monarchjointventure.org](http://www.monarchjointventure.org)
- Ay Mariposa Film : [www.aymariposafilm.com](http://www.aymariposafilm.com)
- Southwest Monarch Study : [swmonarchs.org](http://swmonarchs.org)
- Utah Pollinator Pursuit : <https://sites.google.com/view/utahpollinatorpursuit/projects>
- Latino Heritage Internship Program : [latinoheritageintern.org](http://latinoheritageintern.org)

# GUIDE PROFILE

## Bec Kates, Age 24

(my pronouns are they/them)

**Where were you born & where did you grow up?** I grew up in Novato, California but I have been calling Northern Arizona home since 2015.

**Who do you work for currently (and in the past)?** I work for Grand Canyon Youth and Arizona Raft Adventures (AzRA) in the Grand Canyon for the past two seasons.

**How long have you been guiding?** I am still new to the Grand Canyon but I have been guiding for the past six years all over the West. It feels silly saying that, like, six years isn't new. If someone on another river told me they worked there for six years I would think they were a senior guide. Then I go into Grand Canyon and hear people talk about their seasons in decades.

**What kind of boat(s) do you run?** I have paddled and rowed all different kinds of rubber, from ten-foot paddle boats to eighteen-and-a-half-foot oar rigs. I got into swamping and learning about motors last season. I still feel so grateful that AzRA let me row a dory on a trip this year. I may have fallen out once but who even noticed...

**What other rivers have you worked on?** I started on the Arkansas River running day trips in Brown's Canyon then slowly started making my way West throughout the years. I hopped over to the Green River (Deso/Gray), the Colorado River (Cataract), San Juan River, the Rogue River, and then found my way to the Grand Canyon.

**What are your hobbies/passions/dreams?** Wow, maybe it's just the come down from the end of the season but this question is hard to answer. I recently just bought a

motorcycle and am still learning how to feel comfortable on it. Riding it feels as thrilling as boating. I would love to ride it down as far south as I can this winter. My dreams right now are all career-focused, including learning how to weld for art and function. I feel very passionately about community involvement and winter is a better time of year for me to put in that time and energy, whether that is going to Zombie Prom at the Orpheum, volunteering downtown, or showing up for peers and friends when they ask.



**Married/family/pets?** I wanna just give the quick and dirty and answer with "lol." My family still lives in California and I see them once a year, traditionally. My close friends at this point are my chosen family (ugh, that was really cheese-y to write but very true). I have houseplants? I count them in the pet category with all the love, time, and stress put into them.

**School/area of study/degrees?** I was in the Cultural and Regional Studies Department at Prescott College,

specifically looking at the theories of gender and sexuality. When I tell guests on the river that it was my field of study I always get, "how are you gonna get a job in that?" I use my degree every day in how I interact with my community and world. I would love to get a seasonal job with Planned Parenthood in their political sphere for the wintertime. I have no idea if a job like that exists, so if you hear of anything, let me know.

**What made you start guiding?** I took a border studies course my first year at Prescott College where we went down to Big Bend National Park and canoed the Rio Grande. I had been backpacking and camping only a few times before but this was my introduction to rivers. At that point, I realized moving through wilderness landscapes on a boat was how I felt best moving my body. Someone on the trip suggested going to the Arkansas River where he just spent his first season. I had never been in a raft before until the guide training. I didn't know what I was getting myself into but it was such a great decision. A leap of faith!

**What brought you here?** I came to Grand Canyon because a few Prescott College professors had suggested an outdoor education opportunity at Grand Canyon Youth (GCY)! I worked with guides there who spent their season working commercially and at GCY. After talking with those guides I sent my application to Arizona Raft Adventures.

**Who have been your mentors and/or role models?** In the Grand Canyon, there are so many people I look up to as a role models and mentors, even people I've worked with once. Billie Prosser stands out to me as a role model in Grand Canyon. I did my first AzRA trip in 2019 as an assistant.

Billie immediately took me under her guidance, sharing her boat with me while teaching me to row the canyon. This 2021 season, Billie and I got to do a trip again where she showed me how to row a dory. I got to follow her into Hermit and redeemed ourselves from our last run through there together. A few days later she showed me the left line in Lava Falls for the first time.

**What do you do in the winter?**  
Hustle.

**Is this your primary way of earning a living or do you combine it with something else?** Working on the river is my main source of income right now. I sat down with a financial counselor (AKA my friend's mom) and we made a plan on how to save for the year when only working for seven months; such a game-changer. It takes away the excitement of feeling "river rich" halfway through the season but worth it, obviously. I would love to get to a place in life where I spend the river season guiding and then working for myself in the off-season in some sort of trade work.

**What's the most memorable moment in your guiding career?** A highlight I have as a memorable moment in my guiding career was the most glorious, perfect flip in Hermit in August of 2019. I was an assistant on an AzRA trip and at that point had only seen the canyon three other times in December and January, cold and low water. An Oars-Dories guide, Billie Prosser, let me row her eighteen-and-a-half-foot oar boat when I was riding with her. The morning of the exchange I was rowing up to the Boat Beach where we were doing our exchange (weird it wasn't Pipe) when I noticed someone waving shyly at me as six rafts approached him. My partner at the time had hiked in the night before and had been waiting on the beach all morning for me to pass. As I snuck off to spend time with him,

Billie sat on the beach and was bit by an ant. We talk about that moment now being the start to where things went awry. Our hikers brought some bad news for a fellow passenger that he hadn't gotten into a college he had applied to. As we started back downstream it was Billie (with an ant bite), two passengers in the front (father and son who had just received bad news), and myself (who was completely distracted from seeing my partner). I had just rowed through Granite and was approaching Hermit as I turned to Billie and started exclaiming my love for Hermit Rapid. Billie was looking forward to the rapid and straight-faced said, "Well, if anyone is going to flip my boat today it better be me." I was confused why she said that and twenty yards above the rapid I crawled to the back bilge and Billie got on the oars. We were third in the order and watched the other two boats punch through the fifth wave. We couldn't have had a better line, followed the two boats in front of us, hit the fifth wave exactly perpendicular, but the wave crashed right on us. I remembered plopping out the back of the boat as it stood up vertical on the stern, pirouetted, and flipped upstream. Billie and I crawled on top of the boat, looked at each other, and embraced laughing. I don't think Billie talks about it as fondly or epically as I do but it was one of the best days of my life.

**What's the craziest question you've ever been asked about the canyon/river?** "Have you seen my water bottle? It's a blue Nalgene."

**What keeps you here?** What is keeping me here is the individual growth and how strong the community bond is. Holy smokes, there is so much to learn about in the Grand Canyon. I really love the little things like the dragonflies that zip past you or the "last light!" on the canyon walls. There are millions of small moments down there. Experiencing and sharing those moments with others is just

the cherry on top and a fourteen-day trip is a long ass time for that. Meeting guests on day one all shy and apprehensive and seeing them grow and thrive down there is so SO rewarding. Breaking down their ideas of what it means to act like an adult is rewarding. You're gonna tell me watching a sixty-year-old couple roll down corndog hill (below Olo) into the water isn't the most heartwarming thing? It seems like fourteen-day trips give people that time to feel comfortable enough to act child-like. Including myself.

## THE CANYON JOURNEY

We entered the canyon with excitement,  
The great rapids on our mind.  
Enough of this slack water,  
It's the waves we're here to find.

But after a few days of this,  
A quiet change occurred—  
In the awesome beauty of the canyon,  
Our minds began to stir.

For it's the quiet between the rapids,  
The calm between the waves,  
The beauty of the canyon walls,  
The mystery of the caves.

It's the sandy beaches with our tents,  
Quiet warmth among the friends,  
Sharing memories of exciting times,  
Savoring a good day's end.

The beauty is in the journey;  
The voyage is what we share.  
What's important is our trip together;  
This is what's so rare.

A metaphor for life's own journey,  
This float between canyon walls.  
Celebrate the voyage,  
Don't focus on the falls.

For it's the quiet between the rapids,  
The calm beneath blue skies,  
Here we find life's value,  
Here the beauty lies.

**Kevin Kelly**

# Mile 179

The setup is ridiculous. I'm rowing an eighteen-foot rubber raft down the Colorado River through the Grand Canyon. It's insane because just four months ago I'd never rafted a river of any kind in my life. All I see is a horizon line, with water spray jumping above it in random spurts. And somehow from this, I'm supposed to find a route through the biggest rapid in one of the hardest rivers to raft in North America? AS IF. If I weren't 21 years old and completely unstoppable, I wouldn't have had the sheer chutzpah to do this at all.

I remember our scout of the rapid, in the Fall of 1978, where we try to find our line through this utter mess—the line that will somehow get us through the maelstrom into the tail waves at the bottom, and to our salvation. The far right is a total shitstorm. Sure, with our bucket boats (not the self-bailing boats that will come on the scene later), our best bet

is to get totally dumped on in the first huge V-wave so you become part of the river and essentially unflippable for the rest of the rapid. However, you could easily get blasted out of the back of the boat on that run, (I actually witnessed that on a later trip). So, I went looking for alternatives. Luckily, there was one.

Just to the left of the right run through the rapid is a ledge. Normally, you would never choose to drop over this ledge, into a huge recirculating hole...Like, ever! But it turns out there is a run to be had here. It's called (or was called, things have changed since) *the bubble line*.

It's hard to describe the bubble line. To see it, you must be inspecting the surface of the river very, very closely. You need to not pay attention to the disaster that is happening not far from you, but rather the water just in front of your boat. Do you see it? There will be a bubble that "bloops" up in front of your boat, and then

another beyond it, and then another. That's the line. That's the line you need to place your bow on and put all of your trust into the river gods that the bubble line will show you the way. Because it totally does, even while it seems like total suicide.

While scouting the rapid earlier, on a huge rock high above the falls, you think running the ledge would certainly flip your boat. It seems to be an impenetrable wall of water rising at an impossibly steep angle—surely something to avoid at all costs. And now since you have placed all your faith in this inconsequential line of water disturbances, you wonder just how gullible and foolish you are.

But that was then, on land, when I was scouting, and now I'm on the approach and it feels like complete insanity. I'm putting all of my trust in what, exactly? Some bubbles?

It's back in the day, in the late 1970s. We were brashly confident and just going for it no matter what. I

buck up and remember what I've been told. *Look for the bubbles*. The problem is that I can't be off that line even one foot or else I risk flipping the boat. As my boat softly, gently, slowly, drifts toward a precipice, I'm searching like mad for those effing bubbles, and not even sure they even exist.

\* \* \*

The rapid at Mile 179 (or mile 179.2 or 179.4 or 179.7, as found in various sources) on the Colorado River through the Grand Canyon is called Lava Falls. No other rapid figures more prominently in a rafter's mind except, perhaps, Crystal Rapid, which is its own special kind of hell. But even given Crystal's amazing notoriety, Lava has ascended into mythology. Rafters talk about "always being above Lava," because you think about it all the way down the river, and continue to think about it even after you've successfully run it and now you're thinking about the next time. Therefore *you're always above Lava*. It has become an affectation of sorts and even, a sort of affection. Or maybe call it an obsession. Yes, that.

On one trip, I took a bottle of Yukon Jack whisky (100 Proof) all the way down the river to Lava Falls, and after we made it through, at camp that night I took the cap off and threw it into the river. Whatever we didn't drink, I said, was going to be a libation to the river gods. I'm not sure the gods got their share that night. That's just the kind of thing that Lava Falls does to you.

Every trip has their stories. How they ran right and barely made it upright or came up against the huge "cheese grater" rock on the right but miraculously pivoted off the pillow into salvation. Or maybe someone did a far left run at 40,000 CFS that was totally slick and kind of anti-climactic after 179 miles of build-up.

The point is that *we all have our stories of Lava*. And they are tales we love to share with other boaters. Lava Falls is legendary, and it lives on both in our memories and our

imaginations, as something much greater than ourselves—a challenge met and overcome, a legend fought and won.

But it's much more than that.

\* \* \*

Rapids in the Grand Canyon are almost completely defined by the side canyons that dump loads of rock and debris into the river during large rainstorms (an exception may be Hance Rapid, which has a vein of volcanic rock that descends directly into the head of the rapid). I had always believed that Lava Falls was not of this variety, since the presence of an ancient lava dam was pretty apparent, replete with a lava monolith (Vulcan's Anvil) jutting straight out of the riverbed right above the rapid as if it were a part of the movie 2001: *A Space Odyssey*. But according to at least a couple academic studies, I am totally wrong about that.

Prospect Canyon, which feeds into Lava Falls, according to one study, "has the second largest debris fan in Grand Canyon, behind Kwagunt Creek. It has six measured historic debris flows, and one of those flows is the largest in Grand Canyon's recorded human history. River runner Georgie White actually witnessed one of these historic debris flows during a river trip in 1955. Some of Lava's more notable and dangerous features, the Ledge Hole and the V-Waves, formed during a 1957 flood. When Major Powell came through the canyon the debris fan constricted the river by only three percent. Today the river is constricted around fifty percent!"<sup>1</sup>

And as another research article points out, "Once thought to be controlled by the remnants of lava dams of Pleistocene age, Lava Falls Rapid actually was created and is maintained by frequent debris flows from Prospect Canyon. Debris flows in Prospect Canyon are initiated by streamflow pouring over a 325-meter waterfall onto unconsolidated colluvium, a process

called the firehose effect. Floods in Prospect Valley above the waterfall are generated during regional winter storms, localized summer thunderstorms, and occasional tropical cyclones. Winter precipitation has increased in the Grand Canyon region since the early 1960s, and the two most recent debris flows have occurred during winter storms."<sup>2</sup>

Despite the seemingly obvious lava flow dam, then, it appears that the main progenitor of the Lava Falls of today is not actually the lava flows, but the side stream flows of debris, which both constrict the river and dump debris into the streambed. Not at all what I thought, as I rafted what I believed to be a lava-caused cliff.

In the end, I didn't care what caused the complete disaster I felt I was facing. It could be a volcanic dike, debris from a side canyon, or an alien invasion. As I slid toward the lip of what I considered to be a total catastrophe, I just needed to somehow survive it.

\* \* \*

Drifting ever so slowly toward the lip of the cliff, I'm desperate to see the bubbles. *And then I see it*. First one bubble "bloops" to the surface, then beyond it another, and beyond it yet another. A line of bubbles appears, placidly and deceivingly, on the smooth surface of the water leading to the maelstrom. *I found it!* I hop back down in my seat and row to position the nose of my boat right on the top of that line of bubbles, being careful to have no momentum that will carry us to either side of it. A foot or two either way can mean disaster. I wait the final seconds until we drop into the "trough"—an almost river-wide cliff over which the Colorado plunges.

The worst part of any rapid, is the *waiting*.

Finally, it happens. We plummet down into what feels like a bottomless hole, and just as quickly we're flung upward and down river, like a sling-shot. We have hit the

"sweet spot"—the one place along the trough that gives you safe passage. The rest is cake. I row as hard as I can to river left, fighting the river's insistence that I go right. As we hit those huge waves on the right, we are on the left edge and doing fine.

One of the odd things about Lava Falls is that when everything goes

right it can almost be anti-climactic. You've spent most of your time on your trip agonizing over Lava Falls, and then, in a matter of seconds, the hardest part is over.

Then it hits you: "You're always above Lava."

**Edward Out**

**Footnotes:**

1. Griffiths, Peter and Bob Webb. "The Changing Rapids of Grand Canyon: Lava Falls Rapid," *Boatman's Quarterly Review*, 14, no. 1 (Spring 2000): 8-10.
2. Webb, Robert H., Theodore S. Melis, Peter G. Griffiths, John G. Elliott, Thure E. Cerling, Robert J. Poreda, Thomas W. Wise, and James E. Pizzuto, "Lava Falls Rapid In Grand Canyon: Effects of Late Holocene Debris Flows on the Colorado River," *USGS Professional Paper 1591*, p. 1.

## Changing of the Guard and Other News

**A**nother year has flown by—the merest blip in “Grand Canyon time” of course, but consequential in the trajectory of Grand Canyon River Guides nevertheless. We extend our deepest debt of gratitude to GCRG’s outstanding officers (President Al Neill and VP Billie Prosser) and our amazing directors (Riley Burch, Erica Fareio, Mariah Giardina, Jay Healy, Lars Haarr, and Justin Salamon) who steered the ship so capably from September 1, 2020 to September 1, 2021. Among the myriad of issues we tackled over the past year, perhaps the most important was the burning question of what steps we can take to move our community forward towards a more equitable and diverse future.

Together, these fine humans developed and implemented two new programs geared towards diversifying the guide pool in Grand Canyon by eliminating some of the initial hurdles, specifically for individuals who identify as a member of one of the affiliated tribes of Grand Canyon:

- 1) an Indigenous Wilderness First Responder Scholarship which covers the significant cost of an intensive 80-hour medical training curriculum as required by Grand Canyon National Park, and

- 2) an Indigenous Gear Stipend Program to provide gift certificates with pro-deal pricing to individuals just starting a career in river guiding.

After launching these inaugural programs this spring, GCRG has been honored to set up four individuals with the top-notch WFR training they need to work as a guide in the outdoor industry, and we have also helped two more individuals build their gear piles as they embark on their new careers. It has been immensely gratifying to remove some of the barriers by creating new opportunities for the traditional stewards of Grand Canyon. There is much more work to be done, but what a great way to start down that path.

You will see new names on the masthead—Billie Prosser is now at the helm as president of GCRG (we urge you to read her inaugural “Prez Blurb” in this issue!), plus please join me in welcoming our newly elected board members, Shonie Hardeen, Jake Skeen, and Shyanne Yazzie who came into office on September 1st. We are so excited to work with you all, as well as sitting board members, Jay Healy and Erica Farieo. Such a fantastic team to represent our guide community over the next year!

Our only disappointment stems from not being able to have Mariah Giardina fill the VP role—her work as a federal employee conflicts with GCRG’s role as a stakeholder in the Glen Canyon Dam Adaptive Management Program. We wish her all the best in her new management role at Grand Canyon Monitoring and Research Center, and you can bet we’ll be featuring educational articles from Mariah on GCMRC’s fish program in the future! As a recent update, GCRG board member, Riley Burch, has stepped up to the VP role (thank you, Riley!!) and GCRG will be nominating and appointing someone to fill the last year of her directorship tenure, as allowed in GCRG’s bylaws.

Mind you, all of the officers and directors of GCRG are volunteers. They give back in so many ways through their leadership, ideas, and boundless passion for protecting Grand Canyon and the Colorado River experience. GCRG will continue to evolve as an organization because of what these stewards bring to the table, and that in turn, not only benefits the place we love but helps spur positive culture change within our community. Thanks to all!

**Lynn Hamilton**  
**Executive Director**



# BOOK REVIEW

*Snakes of Arizona*, Andrew Holycross and Joseph Mitchell, Editors, ECO Publishing, Rodeo, NM, 860 pages, ISBN 978-1-938850-60-8, \$59.95.

**S***nakes of Arizona*. If you like snakes, this is the book for you. If you don't know much about snakes, this is the book for you. If you hate snakes, this still might be the book for you!

Even though this book covers all of Arizona, there is plenty of information relevant to the Grand Canyon. Many of the species have been documented somewhere within Grand Canyon or on the Rims (I counted twenty from reviewing the distribution maps near the end of the book.)

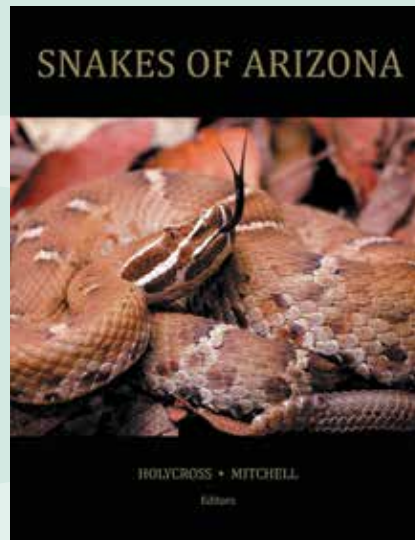
This is a BIG book! It covers a lot of ground and a lot of information. I don't think there is a wasted page. It is a bargain, for what you get. It's laid out well, and you can find the species you are interested in and find out all about them. Plenty of pictures that show the range of colors and patterns of snakes, and useful maps to help you figure out what you might have seen.

The book starts off with a couple of interesting chapters, one on the biotic communities of Arizona, and one on conservation (threats to snake populations). The chapter on biotic communities is a good review for anybody, and important for understanding references to communities in the detailed species accounts that follow. The conservation chapter brings to light the multitude of potential threats across Arizona to snake populations (and individuals).

The species accounts are really the heart of the book. There are 59 species of snake covered in great detail, in 620 pages. Most of the snakes I was interested in had ten to twenty pages for each species. It is arranged by Biological Family. Each

species account includes taxonomy, description, distribution and abundance, habitat, diet and foraging biology, predators and parasites, behavior, reproduction, additional remarks and acknowledgements.

That brings up another important characteristic about this book. It is



authored and edited by people who really care about snakes, and really want to increase their own and the world's knowledge about snakes. The passion they have and the care they exhibit reminds me of how Grand Canyon river guides feel about the Grand Canyon.

I have to admit, the first thing I looked for in the book were the snakes I have seen in the Grand Canyon. To see what the book said about them, to see what the pictures looked like, and to check the distribution maps to see if I had seen one in an area not represented by a museum vouchered specimen.

Western Rattlesnake in Arizona now includes what we used to call Grand Canyon Pinks, Great Basin Rattlesnakes, and Midget Faded Rattlesnakes. What we used to call Hopi Rattlesnakes are now grouped with the Prairie Rattlesnake. This was a great chapter, 23 pages and

sixteen photographs. A lot to unpack, these three subspecies have different descriptions and distributions, with some overlap.

Speckled Rattlesnakes are the snakes we often see below Tuckup, more banded than spotted, and pink, grey or even purplish. Because they are often pinkish, they are often confused with the Grand Canyon pinks from upstream. California Kingsnake, Striped Whipsnake, Diamondback Rattlesnake were all chapters I went to next. Then the Lyresnake. I have only seen one, near mouth of Little Colorado last year and didn't really know what it was. Triangular head and rattlesnake markings, but no rattles and did not coil or vibrate its tail.

I enjoy(ed) reading this book. I am not sure I will ever read every page, but I know if I ever want to know all about any snake in Arizona, this book is all I need to be as well informed as almost any non-herpetologist. And if you care to learn more than that, the book has an incredible 68 pages of references with thousands of entries. This book has made me think about snakes as animals, with a life cycle and a habitat preference, more than just a source of alarm, or something to avoid.

This book is a great reference, but also a great starting place for more documentation. If you look in the distribution maps, some of the species are not well documented in the Grand Canyon. And there are 39 other equally interesting snakes in a bunch of other incredible places in Arizona! I bet there are certain snake species that biologists would be happy to have a clear photograph with a time, date, and location. Citizen Science! The book can be found at [www.ecouniverse.com/product/snakes-of-arizona/](http://www.ecouniverse.com/product/snakes-of-arizona/).

**John O'Brien**

# WE'LL MISS YOU PEGGY

Those of us who spend much time at Lees Ferry have had the opportunity to develop friendships with the NPS employees assigned there. Unfortunately for us though, our friend Peggy Kolar will be spending considerably less time in the vicinity. By the time this article is printed, Peggy will be several weeks into enjoying her retirement from the NPS. I had a chance to learn a little bit more about Ranger Peggy's tenure with the Park Service and thought I'd share a little bit of her history, memories and future plans with y'all!

Peggy grew up in a teeny tiny cattle town on the edge of Los Padres National Forest in California. She knew she wanted to be a Park Ranger since she was about three years old, a dream reinforced by the TV show "Sierra" set in Yosemite National Park that followed the efforts of the NPS to enforce federal law and effect wilderness rescues. Peggy showed up at the South Rim in 1991 and held several jobs with the Fred Harvey Company to help pay for her schooling, the last being a Fire and Safety Officer. During her time at the South Rim, Peggy made friends with several rangers who helped her with her applications and before long she was in the employ of the NPS.

Peggy's entire NPS career has been within the Grand Canyon. Her first assignment was in the backcountry permits office and soon she was picked up to be a dispatcher and work in the South Entrance fee booths. She knew she wanted to get into the fun stuff though (SAR, FIRE, EMS, LE), so she took a seasonal position as a Preventative Search and Rescue Ranger and held that position for the following two years. In order to advance into Law Enforcement, Peggy soon took a permanent position back in dispatch. After a year at dispatch



she was hired on as a Phantom Ranch Ranger. It was there that she began to get involved with the river guiding community and gained some experience as the flight medic on several river evacuations.

Peggy recalls the attitudes from the guiding community during her first season at Lees Ferry, there was a lot of suspicion and distrust. There was a divide between the NPS and the guides. She was looked at as "one of them." Although she won't take the credit, during her tenure, she saw that attitude shift into one of comradery and partnership in working together for the protection and stewardship of this natural resource that we all love.

When I asked Peggy what she will miss most about Lees Ferry she said, "I will most definitely miss the river guides, the evening hangouts on the ramp, and the community where I have established some lifetime friendships. I will miss the river patrols, running the jet boat up and down the river, talking to visitors, and getting to know the regular visitors who

visit Lee's Ferry several times a year, because they love it just as much as I do." When I asked what she won't miss that much from the place she said, "The dramatic increase (518% in 2020) in upriver visitation and the impacts that that has on the stretch and of course, the entitled assholes who don't think the rules apply to them!"

Peggy wants to make it clear that she is not done with the river! Some of her favorite memories are of getting to know the guides while doing ride-alongs. She is ready to experience the river in a different capacity, so if anyone needs a Swamper/Assistant let her know! Peggy is on Facebook and encourages anyone that wants to stay in touch to contact her that way. Lastly she wanted to extend her most heartfelt thanks to all the guides who have been at the ramp when she has had a sticky Law Enforcement contact. "I thank you all for standing by and having my back while you watched the drama unfold. Especially the trip leader who delayed launching until I had the angry drunk guy in handcuffs and placed in the back of the patrol vehicle!"

Thanks Peggy! We'll all make sure to wear our life jackets, even at the ramp!

*Glade Zarn*



Peggy launching the last commercial trip of the year on her last day. Photo credit Billie Prosser.

**C**ongratulations to Peggy Kolar! Peggy has been a part of our lives at Lees Ferry for almost two decades. For us guides, we couldn't have had a better law enforcement ranger. We shouldn't forget that she didn't just check us on the ramp to make sure we were safe and following the regulations, but she also dealt with the public. Her job was not always safe: high-speed car chases, unruly boaters, people fighting, drunk drivers, and hunters shooting at ducks at the ramp. If you have ever been woken up from a shotgun blast at 5:00 am at the ramp, call Peggy. I did!

Peggy was a constant professional. I knew when I saw her at the ramp that she would treat me with respect. With that, I respected her too and so did my fellow boatmen from all companies. She protected the resource which we all love so much, from Glen Canyon to Grand Canyon. We thank you for that, Peggy!

Her life as a law enforcement ranger is now over, but I don't think that Peggy is going to be one who will just sit around, drink coffee, and watch the birds outside the window. Her journey is just beginning! We spoke at the ramp during one of her last details in mid-October and it sounds like she's got some adventures on the horizon. Maybe we could see her on a raft with commercial guests? That would be cool!

Peggy, thank you so much for your service, professionalism, safety, and all-around great attitude. I can speak for most of us boatman, you will be missed! We wish you the best during your future endeavors and adventures. Oh yeah, and lots of Punk Rock concerts!!!

**Nate "Tater" Jordan**

## Back of the Boat— The Whale Foundation News Bulletin

**H**ello All! I hope you're well, and I truly hope that 2022 turns out to be a great year for all of us.

First: *The Wing Ding is coming! February 19th, in Flagstaff.* All the details are at [whalefoundation.org](http://whalefoundation.org). We're excited to get together, see friends, and have some fun, in a safe, pandemic-friendly way.

We know that 2021 was rough for many. With the pandemic still in effect and some tough, traumatic times on the river and in outside life, I don't think I know anyone who wasn't touched in some way.

I want to thank everyone who supported the Whale Foundation this year. Requests for counseling were up five to ten percent over 2020 (which was a record year itself), and we had numerous calls to the helpline for advice and other assistance. These resources make a big difference in people's lives, and we wouldn't be here if it weren't for you.

I also want to thank everyone who helped out in other ways during the year—reaching out to support friends, being there for family and loved ones, and making a difference in our community and the world. What you do matters. Life can turn hard. A helping hand or a kind word can mean a lot when it does.

With that being said, I want to give a quick overview of how the Whale Foundation counseling program works. So if you've got something you'd like to work on, or want to nudge a friend in that direction, here's the beta:

- The Whale Foundation Helpline number is 1-877-449-4253. Call, leave your name and number, and a case manager will get back to you. Usually within a couple of hours.
- Our counseling services are CONFIDENTIAL. The case manager assigns each caller a number, and

that number is the only identifier that comes back to the Whale Foundation. We take care to not know who calls the helpline.

- The case manager will talk with you to learn what you want or need to work on.
- If you live in the Flagstaff area, it's likely the case manager will be able to match you with a counselor we already work with. You see the counselor, and the counselor bills the Whale Foundation. Easy as Hakatai rapid.
- If you live outside Flagstaff, we may have a counselor for you, but it's more likely you'll have to find one yourself. The case manager will likely have some good advice on how to do that and what to look for. Once you have someone, you put them in touch with the Whale Foundation and we'll take care of the paperwork we need—verification of their license and insurance, things like that. Once things are set up, you're good to go. And here at the office, we still only know you by number.
- Of course, this being the real world, difficulties can arise. Sometimes a counselor is hard to find, or arrangements are hard to make. Please know that our case managers and everyone else here at the Whale are dedicated to doing the best we can to make this work well for you. And confidentiality is always a top concern.

I hope this is helpful! As always, feel free to reach out to me with questions, comments, or just a kind word at 928-774-9440, or [whalefoundation@outlook.com](mailto:whalefoundation@outlook.com).

Have fun out there. Hope to see you at the WingDing!

**Sam Jansen**

# NO HIGH FLOW EVENT THIS FALL... MANY DISAPPOINTED

**D**isappointed. That's one word to use about the decision to not conduct an HFE this fall. Others come to mind, but we'll stick with that one for now. Despite all the right ingredients being in place, a select group of stakeholders opted against the numerous benefits an HFE would provide to the Colorado River Ecosystem in favor of avoiding an "adverse effect" to the Basin Fund (the pot of money supplied by power revenues to pay for the Adaptive Management Program (AMP) amongst other things). Not even a series of recent photos presented by Ben Reeder (GCRG's TWG representative) demonstrating how the monsoons have devastated the beaches nor the respected opinion of GCMRC's scientists was enough to outweigh the opinion of certain stakeholders (the Basin States, Bureau of Reclamation, and AZ Game and Fish). Their decision was made (not unanimously) and needless to say, GCRG and several other stakeholders (who are shut out of this process) were more than a bit perturbed so we collectively authored the letter below (led by our compatriot Dr. Larry Stevens of the Grand Canyon Wildlands Council). Looking ahead we want to push for a spring HFE and changes in how the AMP is structured. After all what are we really supposed to be doing here?

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**A Letter to Mr. Wayne Pullan, Glen Canyon Dam Adaptive Management Program Designee for the Honorable Deb Haaland, Secretary of the Interior: 27 October 2021**

We, the undersigned, work through our organizations and governments to ensure the ecological, cultural, and recreational integrity of the Colorado River ecosystem (CRE) as stakeholders in the Glen Canyon Dam Adaptive Management Program (AMP). We greatly appreciate the collaborative, science-based approach of the AMP to management of the Colorado River ecosystem (CRE) influenced by Glen Canyon Dam through Glen and Grand Canyons. We thank the AMP for its recent high flow experiment (HFE) informational report [Final Recommendation Regarding a Fall 2021 High Flow Experiment (HFE) at Glen Canyon Dam, November 2021, dated September 28, 2021] and the informational session provided by Reclamation and the AMP Planning and Implementation (PI) Team, which decided against conducting an autumn 2021 HFE. We also appreciate the discussion held through the Technical Work Group (TWG) on 14 October 2021. However, we wish to express our concern with several issues surrounding this decision process.

1. AMP Tribal, environmental, and recreational stakeholders were not involved in the final decision on the potential for a 2021 HFE. To more fully realize the goals of the 1992 Grand Canyon Protection Act, we call on the AMWG to address the inequalities of stakeholder representation on the PI Team, and to support greater

transparency in its decision-making. Our contributions and perspectives were not represented in this decision, and we feel we have been disenfranchised from this decision process. While we do not necessarily disagree with the PI Team's decision, we wish to be involved, and not excluded from, these important decisions in the future. Consequently and collectively, we request that the AMWG include all AMP stakeholder voices in such decisions, thereby moving towards the kind of consensus that is core to its role in advising the Secretary. If inclusion of our voices can only be achieved through a National Environmental Policy Act process, we request that the Secretary consider including our voices on the PI Team during the AMP's next NEPA- related effort.

2. Depletion of the Basin Fund was one of the primary reasons that the 2021 HFE was denied, yet future funding for the AMP is to come from appropriated funds, thus not draining the Basin Fund. Therefore, this reason for denying an HFE does not appear to be valid. Furthermore, we question the merit of a decision-making process wherein the Basin Fund's fiscal health outweighs the multiple benefits of an HFE on the CRE's ecological, cultural, and recreational resources. Most troubling, the HFE Informational

Report recognizes the poor condition of the Basin Fund now and well into the future, regardless of whether an HFE is conducted or not. We are deeply concerned that this focus on the Basin Fund establishes a rationale and precedent to prohibit HFE's in the future.

3. We have additional concerns about the precedent set by the decision to forego a 2021 HFE. In 2021 the Paria River delivered the second highest amount of sand since recording began, exceeding the sediment trigger for an HFE. The CRE is now primed for an HFE to store that sediment at higher elevations, replenishing the now-depleted shallow shoreline habitats and camping beaches that support native fish and recreational camping, respectively. Sedimentological data provided by the USGS Grand Canyon Monitoring and Research Center supports this conclusion. Furthermore, with low flows likely for the next two or more years, the benefits of a winter 2021 or a springtime 2022 HFE would be long-lasting. Ultimately, we are concerned that the precedent set by the decision to forego an HFE is based primarily on considerations put forth by power generation and water interests, and that the mandates of the 1992 Grand Canyon Protection Act were insufficiently weighed in this decision. We believe that a more balanced approach that gives equal weight to all valued resources can be achieved without undue strain on important water and power resources.

4. We are further concerned that the AMP is insufficiently flexible in its adaptive management capacity: the AMP needs to be able to accommodate unforeseen but advantageous changes that arise. Predictions about how

much snow will fall in the Rocky Mountains this coming winter are highly speculative, but the PI Team decision did not reflect consideration of contingencies. For example, above-normal winter flows should promote consideration of a springtime HFE. If flows are normal or slightly below average, a within-powerplant high flow (such as that conducted in March 2021) might be feasible. But if winter inflows are below normal, then a high flow may be precluded, despite the depleted condition of many Grand Canyon camping beaches. Unfortunately, the PI Team's decision apparently did not consider such options. This issue of administrative flexibility is important in adaptive management, and is in keeping with Dr. Petty's memorandum, encouraging the AMP to include both flow and non-flow management options in its recommendations to the Secretary. Adaptive CRE management demands such flexibility, as opportunities for improving resource stewardship may arise unexpectedly.

5. Lastly, the LTEMP sediment accounting periods have long been recognized as inadequate for the task of adaptive CRE management, a problem that constrains achievement of AMP goals. The present winter and springtime accounting periods preclude sufficient sediment from accruing in the channel to allow for a springtime HFE. This occurs despite the fact that natural historical floods occurred during springtime, and CRE species and processes are adapted to those springtime spates. CRE shorelines and sandbars benefit most from springtime high flows by rejuvenating camping beaches and shoreline habitats just prior to the onset of summer native fish spawning and recreational uses,

respectively. The AMP has been repeatedly briefed by GCMRC and several stakeholders on the need and importance of seasonally appropriate, sediment-triggered HFEs, but the AMWG has not acted adaptively to rectify this error in the LTEMP. Therefore, we request that the AMWG include this subject in its next meeting, and provide adequate time for a discussion to explain, work to resolve, and adaptively rectify this impediment within the LTEMP.

We comment on the above issues to help ensure that the AMP and the Secretary continue to respect, incorporate, and benefit from the perspectives of all of its stakeholders. We intend to continue to work together to ensure consensus on adaptive management issues and help the AMP make the best science-based recommendation to the Secretary.

**SIGNATORIES TO THIS LETTER:**

**Kelly Burke**, Executive Director of Grand Canyon Wildlands Council  
**David Brown**, Grand Canyon River Guides  
**Peter Bungart**, Hualapai Tribe  
**Daniel Bullets**, Southern Paiute Consortium  
**Kevin Dahl**, National Parks Conservation Association  
**Sinjin Eberle**, American Rivers  
**Lynn Hamilton**, Executive Director of Grand Canyon River Guides Association  
**William Persons**, Trout Unlimited, Fly Fishers international (Recreational fishing)  
**Ben Reeder**, Grand Canyon River Guides  
**Matt Rice**, American Rivers  
**Erik Stanfield**, Navajo Nation  
**Jakob Maase**, The Hopi Tribe  
**Larry Stevens**, Grand Canyon Wildlands Council  
**Jim Strogen**, Trout Unlimited, Fly Fishers international (Recreational fishing)

# RICH TURNER

I grew up just outside of Chicago, but right across the street, there was a 500-acre farm. Mr. Tom Naples used to grow fruits and vegetables to sell at his fruit stand along North Avenue, the main drag into Chicago. We earned money by picking tomatoes for a quarter a bushel. My mom's oldest brother had moved to L.A. in the thirties, and my dad would use his three weeks' vacation to drive out for visit. In 1955, when I was nine, we stopped at Grand Canyon, Zion, and Bryce. We traveled out in a 1952 Studebaker, pulling a little one-wheeled trailer behind it. We kids would sleep in the trailer and my parents would sleep in the Studebaker. If it was a good camping area, they'd pitch a tent. When my nine-year-old eyes first sighted the Canyon, I instantly decided that I was not going to live in Chicago when I grew up. I had to be where there were contour lines, I had to feel the open space. I became very involved in Boy Scouts at age ten because my dad was a scoutmaster. Our council had a summer camp in Wisconsin, in one of the sand counties, not very far from Aldo Leopold's farm. I attended and worked there for many years.

I got started with [college] applications late, was accepted at Southern Illinois University, and my very first class (chemistry) was with 600 students, in this big auditorium, taught by a teaching assistant you could hardly see without binoculars. I wasn't thrilled with that. A friend from summer camp drove with me to Carbondale and, on his way back to Chicago, stopped at the little school he went to, Knox College, in Galesburg, Illinois. There he talked to some of his professors about me. I had been at Southern Illinois for like five days when he called and said, "Hey, if you want to come to Knox, I got you a scholarship and loans." My emphatic response was, "You bet!" He drove back, picked me up, and I ended up at Knox College for four years. It's a great, very well-respected school, and I can't believe how I fell into it.

One summer, one of my college friends went to Outward Bound—I was really interested in doing something like that. His response was, "You don't want to go to Outward Bound, you want to go to this new place that just opened a year or two ago called National Outdoor Leadership School [NOLS]. During my junior year I was writing to NOLS, and Paul Petzoldt, who'd started the place, wrote, "Come on out. I know you don't have the money, I'll just give you a scholarship and you can pay us back whenever you get some money." I did a Rocky Mountain course. We were 33 days in the Wind Rivers, hiking, learning climbing techniques, and rappelling—and these were the days when you didn't have harnesses, just nylon webbing, carabiners, and a rope. We would get supplied by pack horses every ten days, so we were up in the Winds [Wind River Range] for 33 days straight, which is one of the best experiences

I've ever had. I wanted to go back and do an instructor course. Back at school my senior year, I graduated, and before I got to the point where I was ready to do the instructor course, I was looking for teaching jobs in Chicago. The day I got hired to teach, I got home after the interview and there was my draft notice.

**Quartaroli:** What year would that have been?

**Turner:** In 1969. Graduated in '68, got drafted in early '69.

**Quartaroli:** First draft lottery?

**Turner:** No, actually. Kind of a funny story, too. I got the draft notice—this is before the lottery—and they told me to report for my pre-induction physical in Chicago at a certain date. That was the beginning of the summer, and I told them, "I'm going to be working at a camp in Wisconsin. Can we do my draft physical up there?" I got a letter back saying yes. They sent me a new date which was after camp would be over. I wrote back saying on that date I'd be back in Galesburg at school and asked to switch again. I ended up switching dates and places like three or four times. Finally, I got a letter that said, "You *will* show up in Chicago, and you *will* show up at this date." It ended up that that was March of '69, and I went through the physical. The lottery started right after that, and my number was 289. I never would have gotten drafted if the lottery had happened earlier.

**Quartaroli:** What was your major in college?

**Turner:** I started off in physics, I wanted to be an astronomer. At the summer camp where I worked, we had this fabulous eight-inch refracting telescope that was given to us by Yerkes Observatory in Wisconsin. I grew up playing with telescopes, teaching astronomy to kids, so I started college as a physics major. Knox, being a small liberal arts college, had these core courses you had to take, and some of them were history, some were math—just ran the gamut. After taking a couple of history courses, I just fell in love with it and changed my major. Of course, then you go to look for a job, there aren't too many want ads in The Chicago Tribune for historians, so teaching seemed the logical thing—plus, after working at camp, I loved working with kids. I decided I would either work in an elementary school or a college.

I ended up going to 'Nam instead of teaching. I spent my year there, most of it, in the [Mekong] delta [with some harrowing experiences]. Vietnam was one of those places where you were either bored to death or scared to death. I mean, 99 percent of the time you're sitting there doing nothing, and then all hell breaks loose. There were a couple of ways you could get out of 'Nam early: one was to join the Washington, D.C., Police Force. And the other was to go to school and get a degree.

**Quartaroli:** You spent a little over a year, maybe?

**Turner:** I spent almost two years in the army, and a little over ten months in Vietnam.

Quartaroli: You're back at Knox College and getting a teaching credential?

Turner: When I was looking for a teaching job, I would have been using a provisional certificate, because I hadn't taken the education courses you need to teach. So, I went back to Knox to take the courses to be fully certified. I ended up being certified in Illinois, but couldn't find a teaching job. After returning from Nam and while I was back at Knox, some friends from summer camp said, "Hey, we've signed up to do a Grand Canyon river trip, do you want to go with us?" They had seen an ad for Martin Litton's Grand Canyon Dories in Smithsonian magazine. It was really kind of Martin's first commercial year, though he'd been running for a long time. This is 1971 and he put together four trips. He was leading all of them. I came out, did the trip, and met Martin. Before this trip, I still had thoughts of going back to NOLS to do the instructor course and work in Wyoming. But after meeting Martin on this trip, I said to myself, "This looks like fun." I asked Martin what I needed to do to work for him. He replied, "What are you doing for the next eighteen days?" I ended up tagging along on the next trip, but I only got to go from Lees Ferry to Phantom. Back in Chicago I still couldn't find a teaching job so my grandfather got me a job working at an aluminum foundry in downtown Chicago where he worked. During that winter of '71 to '72, I wrote to Martin, saying I'd like to come back, finish apprenticing for him, and work during the summer. I got a long letter back from him where he essentially said, "What the hell do you mean 'apprentice'? You already did that. I'll give you a boat." I started thinking, "This man has to be a little crazy." I ended up quitting my job at the foundry in early May. In '71 Martin's warehouse was the garage at the Grand Canyon Motel in Fredonia, Arizona. It was just enough storage space for food and stuff like that. Over that winter, '71 to '72, Martin had talked to Ron Smith at Grand Canyon Expeditions and Ron let us use some space he had in a warehouse. We had about half to two-thirds of it, and a company called Arizona Fuels used the other half to work on their trucks. So, with some money earned at the foundry, I bought a used Corvair and headed for Kanab. If things didn't work, I didn't know how I'd get home. In Kanab, I knew a couple of people from the summer before—Wally Rist, John Blaustein, Jeff Clayton. I hadn't been there more than an hour when Wally Rist came up and said, "Have you got \$20 I can borrow? I'm going to the Buckskin and gonna meet some girls," or whatever. Stupidly, I loaned him the twenty bucks.

Quartaroli: Still waiting to get it back?

Turner: No, actually he did pay me back. Took a little while. Martin was on the first trip that year, the May trip. It was really just one big crew. Curtis Chang was on it. Curtis ended up running Martin's operation on the Snake River in Idaho, and he still looks like he's fourteen—the kid never ages!

Martin had a dory and a

boatman's quarterly review



Climbing on the Uncompahgre Plateau in Colorado (1971). Photo by Art Fredericks




Returning to NOLS headquarters in the Sinks Canyon after 33 days of hiking & climbing in the Wind River Mountains in Wyoming (1967).

Green River raft for the new guys. Another new guy there was John Hurst who taught at Berkeley He had been on a trip, and wanted to work for Martin. "One of you take the dory, and the other one gets the raft." John ended up with the dory, and I ended up with the Green River for my very first trip down. I did okay. I learned a lot watching everybody else. But in those days, not many of us—I say "us"—not many of anybody really knew how to row a dory well. As the years went on, we really learned from each other, by watching and then debriefing at the bottom of a rapid. It was funny, too, because we'd stand there and watch each other's runs. Once we'd all run a rapid, we started talking about what we did. Dane or someone would say, "Well, I went here." We'd look at him and say, "No you didn't. You weren't within twenty feet of that spot!" A learning experience all the way around. A raft is different...A dory isn't harder to row, it's just different, it carries more momentum, I think. You know, with a raft, you take a stroke to turn the boat and it turns and stops. You take another stroke, and it turns and stops. Whereas with a dory, you take a stroke, it hardly moves. You

take another one, it starts. You take another one and it's really moving. Then, if you don't take a stroke or two on the other side, it keeps going. And boy, it's so nice to be in a rigid boat. You hit those waves and that pointy front just slices right through a lot of them.

**Quartaroli:** Did you switch off then, or did you stay on the raft?

**Turner:** That whole first trip I was on the raft and didn't often have passengers. The next trip, we had thirteen apprentices, more than the number of passengers. Gary Call was apprenticing, but he had run rafts for Cross—motorized rigs. I think Mike Davis, Andre Potochnik, Bruce Orek, Tom Gallagher, Dane Mensik, Tuck Weills, Jeff Zuk, and a few others all apprenticed on the same trip. A lot of the times I had a bunch of the apprentices because I was the "experienced" guy. I had been on a passenger trip and rowed a little, and got to row flat stretches in other people's boats for the first part of the trip after that. Then I had rowed a trip in the raft. I remember on my first trip getting to Lava — Martin had this thing, he'd get to Lava and say, "Okay, let's put out lunch." We'd say, "Martin, we can't eat lunch now, we have to run Lava." But we'd end up putting out lunch, even before we'd go look at the rapid. As soon as lunch was set out, Martin would say, "I'm going. Anyone want to go with me?" I thought, "Well, this is Martin Litton, he knows what he's doing, I'll follow him." So I got in the raft, and as ignorant as I was, I put Mike Davis in the back. Not having him in front was pretty dumb. So, Martin pull out and I pulled out. I watched Martin. He pulled a few strokes so I pulled a few strokes; he pulled back, I pulled back. Then he disappears! To this day I'm sure I was in the same spot he hit, and it was right over the falls. As I dropped down into it and started up the other side, the boat stalled, did it's wiggly-wiggly and then shot back under the falls. It stayed straight, went back up, and came back under the falls. It did that like three or four times before we got spit out. Each time we'd go back under the falls, Mike got pounded. When we finally got spit out, he thought we were done with the rapid, that we'd been through all the waves. He didn't know it was the same wave, three or four times. We did however make it through right side up. That was my first run in Lava Falls.

A large photograph showing a person rappelling down a rock face. The person is wearing a dark jacket and a helmet, and is holding onto a rope. The background shows a mountainous landscape.

Rappelling in the Collegiate Range in Colorado (1971). Photo by Art Fredericks



After a firefight in Cambodia (1970).



**Quartaroli:** Yeah, a boatful of water.

**Turner:** Oh, God! I mean, if Mike hadn't been there to bail, I don't think I could have pulled in by Pearce Ferry. Those were all bucket boats, of course. I don't think my swimming pool in Phoenix holds that much water. When we got off that trip, Martin gave me a brand-new dory, no paint, no hardware, no lifeline, just a raw boat. I had four days to get it set up for the next trip.

**Quartaroli:** Was that one of the Briggs boats then?

**Turner:** Yeah.

**Quartaroli:** What was the name of that one?

**Turner:** *Celilo Falls*. That was my boat pretty much the whole time I worked for Martin. I gave it a paint job that everybody hated, but it's the one Martin told me to put on. It was solid Willy's beryl green and had a long gold stripe with a spear hook on the end. *Celilo Falls* was up on the Columbia River. It was this gorgeous waterfall that the Native Americans would build scaffolding out over, and then net salmon as they were swimming up the falls. It got covered by the lake behind the Dalles Dam. This spear that Martin had me do was sort of reminiscent of a spear tip that would be used to catch snag salmon. When I came back the following year, Jeff Clayton had repainted it. He said it was too ugly. So ended up still being a basically green boat, but with white strips and much prettier.

\* \* \*

*Rich Turner was a very early dory boatman for Martin Litton, served on the board of the Grand Canyon Private Boaters Association since the current 2006 River Management Plan, and volunteered with the Grand Canyon Association on some re-vegetation work and conservation with the historic boat project. His career with Litton coincides with Wally Rist, featured in a recent BQR issue, so we thought Rich's interview, which took place at his home in Munds Park, Arizona, in December 2017, would be a good companion piece.*

—Richard Quartaroli

\* \* \*

**Turner:** After the '72 river season, I was going to go to Colorado and look for a teaching job. Bob Hendricks, a principal from Phoenix, did two trips that year: one by himself, and the next trip with one of his troubled students. I don't know how he ever talked the district into paying for a trip for one of his students. The kid and I got along just fine. Bob saw how I handled him, and he offered me a job working at an elementary school Phoenix. My interview was really sitting there with the head of Personnel, while he and Bob talked about the river trip. I think I only said hello and goodbye.

**Quartaroli:** You had already done your interview on the river.

**Turner:** Yeah, pretty much. I was still up in the air; I really didn't want to move to Phoenix. I had no desire to

be in the Southwest—the deserty Southwest. Of course, I knew nothing about it, I just didn't want to be there. But I said I'd do it for a year or two, and then I'll move to a little Colorado mountain town. Besides, it's close enough, it'll be easy to run up to the canyon a lot. That first New Year's Day, I was up here in Flagstaff cross-country skiing in the morning, and went down to Phoenix and was kayaking on the Verde River in the afternoon. I said, "This is pretty cool. I may stay longer." I met Susan teaching, in '75, but we didn't get together until '76. Didn't get married until '80. I brought her down on a trip, and then she ended up doing cooking—never as a paid position, just kind of along... That was the great thing about Martin's trips, was the cooks—not just that we didn't have to do the cooking, but you had somebody who could keep the passengers occupied when we're trying to discuss runs. That was really important early on, when we didn't know a whole lot, and we were really questioning what the best route was. Plus, we used to walk people around House Rock and Crystal. Once we'd run it, rather than have us all walk back up and get the passengers, the cooks would hike them down.

In '72, Kenton Grua and Regan Dale were working for Grand Canyon Expeditions, running motor-rigs. They started hanging out over at the Dory warehouse with us, and I remember Grua asking me all these questions about dories and how they worked. I didn't have a lot to offer, but I could tell that he was really interested in them. The next year, he and Regan were working for Martin. Martin was expanding a lot in those early years.

**Quartaroli:** In '72 he was still doing just the four trips that he was leading?

**Turner:** No, that year, Martin led the first trip, but after that we had two trips on the river simultaneously. Wally Rist was the trip leader of one crew, and Jeff Clayton the trip leader of the other. When I got to the warehouse in '73, it was then in Hurricane, Utah. I know Regan was leading trips then for sure. I ended up on Wally's crew pretty much all the time. I think I only did two trips with Regan, one when we had folks from *National Geographic*. On that trip, the morning after we had run Lava, we went back up to photograph Wally's trip coming through. He was only a day behind us, and the folks from *Geographic* wanted to get more pictures of boats in Lava. As we're sitting there, waiting, way up around the corner we kind of saw a dory, and then it disappeared. It was another hour and a half before any boats showed up. What happened is that the night before, they were camped at National and had pulled all the boats since the water was rising. Clarence wasn't there as they pulled his boat up. It had been untied but nobody bothered to re-tie it. During the night, his boat drifted away. Rudy and a couple other guys jumped in a boat the next morning to chase it down. Fortunately, Rudy caught it not much upstream of Lava. That would have been great publicity for Martin, shots in *National Geographic* of an empty, runaway dory, going through Lava Falls.

At the end of that '72 season, when I started teaching,

I got off the river and had to be in Phoenix the next day. I ended up driving all night from Kanab, sleeping in the car for an hour in the school parking lot, and then going to an orientation meeting. I found a little carriage house in Sunnyslope on the north side of Phoenix to live in. I knew Wally lived in Phoenix, and I'd spent the summer on his crew, so when he got to Phoenix, we decided to room together.

The next season, '73, I had the *Celilo* back and was rowing on Wally's crew. Typically, that was Wally, Gary Call, Mike Davis, Dane Mensik and me. Then we would often have somebody else that Martin had offered a boatman job to.

I rowed the *Mille Crag Bend* and the *Makaha* once each when the *Celilo* was out of commission. I also rowed the *Rainbow Bridge*, one of those big, aluminum double-enders. That boat handled really, really well. I figured puny little me in this big boat was not going to work well, but it did.

On its maiden voyage we got to Badger—Jeff Clayton was rowing it. Jeff is like six-foot-four big guy, lots of leg. If you've seen the *Rainbow*, you know how it's got such rocker that the gunwales come way low at the oarlocks. It doesn't have much freeboard there. Rowing through Badger, Jeff almost flipped because he couldn't get the oars out of the water. His long legs didn't allow enough clearance for the. At two o'clock in the morning he woke me up and saying, "Rich, Rich, you've got to row this boat, I can't row it, I don't fit in it." We ended up taking some sections of broken oars—we always carried wood for repairs—and building two, higher oarlock stands out of them. Those makeshift oarlock stands stayed on that boat for a lot of years.

**Quartaroli:** That was to raise the oarlocks up?

**Turner:** Yeah, to raise the oarlocks up so the oars could clear his legs. The reason I ended up in the *Mille Crag* and *Makaha*, rather than the *Celilo*, was the boat trailer turned over as it hit that last turn coming off the plateau, the one before you get to the long straightaway out in House Rock Valley. It broke the bottom seam along the chine, so it couldn't be used. So I ended up in the *Mille Crag* that trip. Then it happened again, so twice it got essentially dropped off the trailer.

**Quartaroli:** In the same place?

**Turner:** Yeah, pretty much. You know, the road is banked a little bit, and if you have your speed just right...I don't know if the truck was going too fast, or too slow.

\* \* \*

'73, '74, met Ed Abbey. For some reason, Blaustein was always on Regan's trip, but he was coming out with his book *The Hidden Canyon*, with his photographs, and he ended up on one of Wally's trips. I can't remember who was originally going to do the text, but ended up not being able to do it, so John's publisher got Ed Abbey to do it. I met Ed and his then wife Renée, who was just out of college at the U of A, and Renée's parents lived in Phoenix. Whenever they'd visit

her parents, they'd stop by and visit, and we'd go to lunch or whatever. One time when we were at lunch, Ed discovered I had a Land Rover. When I first bought it you could still get parts here, people would still work on them. But the year after I bought it, they stopped importing them, and I had to do all the work myself, getting parts from England. Ed's wasn't running, and he said, "Hey, I don't need this thing anymore. How about if I bring it to Phoenix, and you repair it and sell it for me. Anything over 1,200 bucks is yours." I played with his car, fixed it, and put it up for sale. This was not long after *The Monkey Wrench Gang* came out, and I just pictured the scene with the Jeep being winched over the cliff. I thought, if anybody knew this was Ed Abbey's Land Rover, they wouldn't want to have anything to do with it, figuring it's just beat to shit. We just advertised it and didn't say who it belonged to. When the guy who ended up buying it saw the title, and saw that it really belonged to Ed, I think he'd have paid four times what he paid for it, so that was just a stupid move on my part. I may be the only person whose got an original, first edition of John's book, signed by John and Martin and Ed, all of them. I knew Ed fairly well.

**Quartaroli:** Was it only that one river trip you did with Abbey?

**Turner:** Yeah.

**Quartaroli:** That he wrote his journal for *The Hidden Canyon*?

**Turner:** Yeah. Funny story. I think I've told you this before. We knew the text was going into *The Hidden Canyon*. At the end of every river trip I would call home and let my parents know how I was doing, and to see how they were doing. I called home, said hi to my mom, "How are you doing?" and some of the first words out of her mouth were, "Did you know you're in *Playboy* magazine?" "No, I had no idea. But how did you know I was in *Playboy* magazine?!" Ed had taken the text and tweaked it a little bit and sent it to *Playboy* ["...White Water Ramblers," August 1977]. My mom was in this bridge club, and one of the women's husbands had a *Playboy* subscription. So he ran across the article and showed it to my mom. I don't think she was a regular subscriber.

**Quartaroli:** When Blaustein was here a couple of years ago, he brought the transcript of Abbey's article. It was a previous version, so there were a lot of edits, about when he was writing for the book, and when he was writing for the magazine. The outtakes were pretty hilarious.

**Turner:** Ed would stop by reasonably often when he was in town, but Renée did all the talking. Ed was really a quiet guy. His persona was not what you would ever picture, after reading things like *The Monkey Wrench Gang* and *Desert Solitaire*. That wasn't him. Very, very quiet.

**Quartaroli:** You were mentioned in *The Hidden Canyon*...

**Turner:** Right. Well, I'm the guy that flipped Ed and Renée in Horn Creek. We would almost always stop and look at Horn, but the water level was what it kind of always was, and I don't know why I was out front, but I was, and I just thought, "I'm not gonna stop." Jenny and Jane Whalen,

who was the cook on the trip, and Ed and Renée, were on my boat. As we got through the horns and were dropping down to the first big wave you hit, there's also stuff coming from the side. In the book, Ed said we hit—I forget how he described it, but he was saying we didn't hit it straight, but we did. What happened is, Jenny shied away from the wave, went across the seat. That re-weighted the boat, and that's what really took it over. I couldn't get my boat back upright. Ended up hitting the wall not too terribly hard, because as you know, everything at the bottom tends to go left toward the wall. I was on the bottom of the boat. Ed and Renée were on the upstream side, not the wall side, and I had pulled Jenny up. Jane was going to be between the wall and the boat, and I managed to get her up just before the boat hit the wall, which was fortunate. But we just couldn't right the boat...I had some experience flipping boats back over, but not a lot, wasn't really good at the technique of using the flip lines. Blaustein was the next boat through. This couldn't have worked out better for him. This is his book, and he's coming to the rescue, and Ed got to flip, so there's a chapter in the book, my fifteen minutes of fame. John ended up getting close, giving his oars to a passenger, and jumped on the bottom, and John and I got it over. All got back in the boat and pulled out the Jack Daniels and started warming up again. We would kind of reminisce about the flip every time, whenever we'd meet.

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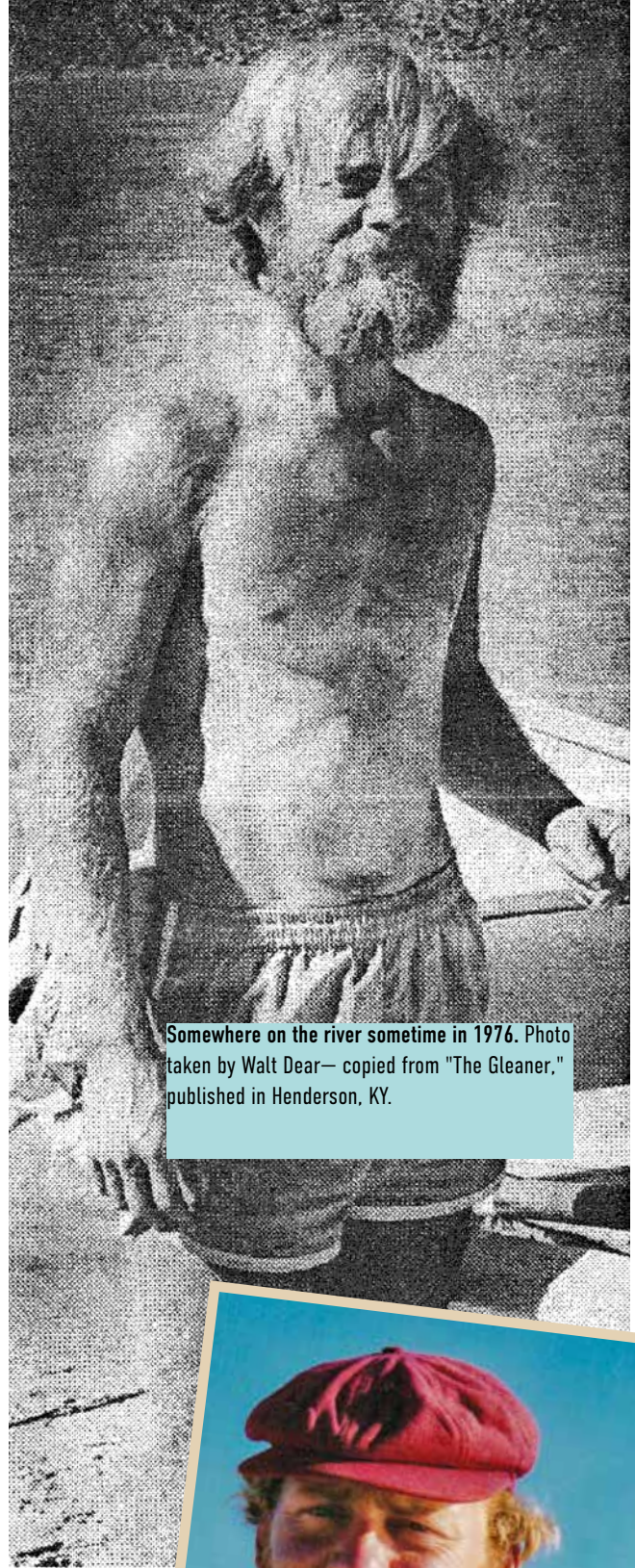
*"Our oarsman is young Rich Turner—musician, philosopher, ornithologist, schoolteacher, rock climber, high diver, veteran oarsman, one of Litton's most experienced hands...Rich suggests that we buckle life jackets. Horn Creek Rapid coming up, he reminds us. He says something about The Great Wave... 'What was that about a great wave?' Renée asks. 'I didn't say "a" great wave,' says Rich. 'I said "The Great Wave." More boatman hype—short for hyperbole? Dorymen love to melodramatize the peril of the rapids. Makes their idyllic jobs seem important, gives the gullible passenger the illusion that he's getting his money's worth..."*

*"The dory drops into the deepest hole yet. I think I can almost see bedrock bottom. The third wave towers above us. Far above. The Great Wave. Heavily our water-loaded boat, askew, climbs up its face. Never makes it. As the wave hits us from the portside our dory turns over with the grave, solemn, inevitable certainty of disaster."*

—Edward Abbey

\* \* \*

**Turner:** Susan and I tagged along on a trip I wasn't scheduled to be on. Rudy had a little ten-foot Maravia, a yellow boat that he had built-in one of his fiberglass drop-in inserts for, and I borrowed it. We had one of the best rides ever. There was a couple from Holland with us, who were big into taking pictures. In those days we'd run on the left



Somewhere on the river sometime in 1976. Photo taken by Walt Dear— copied from "The Gleaner," published in Henderson, KY.



Starting a river trip (1973).

side of Hance. There's a big boulder on the left side, you'd pull in just left of it, catch the eddy on the downstream side of it, go across the river a bit, ferry across, and then down. He's got a picture of me in that little boat, Susan's sitting in the front, and I'm getting ready to just make my pull to catch the eddy below the rock. The photo shows my eyes are closed. I've got a great shot that J.B. took of me—it had to be the trip with Ed, because I did so few with John—of my boat going into Lava, dropping into the wave coming off the black rock. It wasn't high water, but the wave was breaking particularly badly. As we dropped into the hole and hit the wave, my boat didn't ride up, it just plowed right through it. John's got a series where you can see the boat going into it, and the next picture is the boat in it with this empty space where my body was—I'm still in the boat, but my body blocked the wave, so there's an empty space in the shape of my body.

Back to Rudy's ten-foot boat, we were running everything. We had plenty of rescue help if we needed it—got to that fifth wave in Hermit and it exploded underneath us. It left us right up in the air. We were literally airborne, and the boat turned around up in the air, and came down facing upstream, on the back side of the wave. Then we ended up getting surfed across to the right side, into an eddy. That was another jaw-dropper, you know, a "What just happened?!" kind of thing. Our boat now is a fourteen-foot NRS. I'm beginning to think it's a little small. Of the last couple trips through Lava, I've just gotten eaten by the wave off the black rock. It's just breaking back badly, and the boat isn't big enough to go through it.

**Quartaroli:** Any flips in it, though? Or you managed to come through that alright?

**Turner:** Lava twice now. I hadn't flipped in Lava in almost 47 trips, and four summers ago did an endo, hit everything straight. It just shot us right up and over. Last summer, when my friend John and I were doing just a two person, two boat trip, it just was breaking in such a way—either my

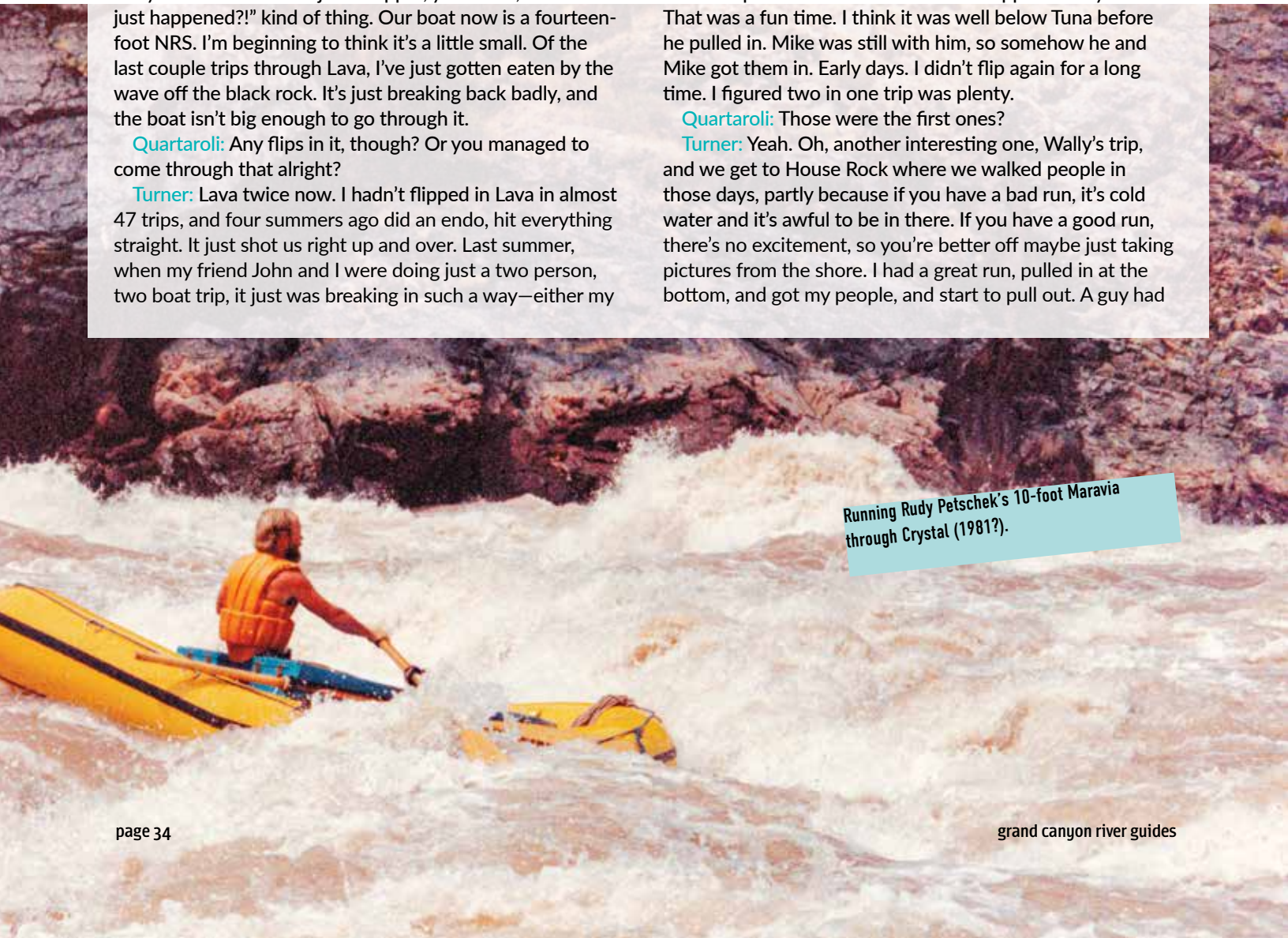
boat wasn't heavy enough, or it was just too darned small—it went over.

**Quartaroli:** What about in the dory? Martin always said if nothing happens, we don't have anything to talk about.

**Turner:** Oh, plenty. Early in '72, I don't remember if it was the first trip I was in the *Celilo* or the second, we got to 25-Mile. It was a little bit of a tight cut, and I didn't get the boat in. I started the cut too late and flipped. That was my first flip. Same trip we get to Crystal and I ended up flipping. It was the bottom hole. I flipped twice on that trip—same guy in the boat both times—never rode with me again, obviously. Mike Davis, at the same time I was flipping in Crystal's bottom hole, Mike was flipping in the top hole. Mike's boat caught up with mine, so we tied his boat to mine. Curtis came and tied my boat to his. We didn't have flip lines in those days—that's before anybody figured out to do that. Curtis is rowing for an eddy with these two boats playing crack-the-whip out behind him. As we got close to one of them, he managed to get his boat in the eddy, but obviously the other boats were going to pull him out. He said, "Jump! Go for it!" I took his line, jumped in, and it was only about three swim strokes to get to shore. Just as I was about to put the rope around a rock, it coiled around my arm and was pulling me out. He ended up going out, I ended up on shore with half the skin ripped off my arm. That was a fun time. I think it was well below Tuna before he pulled in. Mike was still with him, so somehow he and Mike got them in. Early days. I didn't flip again for a long time. I figured two in one trip was plenty.

**Quartaroli:** Those were the first ones?

**Turner:** Yeah. Oh, another interesting one, Wally's trip, and we get to House Rock where we walked people in those days, partly because if you have a bad run, it's cold water and it's awful to be in there. If you have a good run, there's no excitement, so you're better off maybe just taking pictures from the shore. I had a great run, pulled in at the bottom, and got my people, and start to pull out. A guy had



Running Rudy Petschek's 10-foot Maravia through Crystal (1981?).

a camera out, and I said, “You ought to put that away. We can get pretty wet pulling out.” He said, “Nah, nah, I trust you.” Pulling out into the tail waves, it can look flat, but all of a sudden it’ll open up, and I pulled out in a flat just as it opened up, and flipped in the tail waves. Had a great run in the rapid, but flipped in the tail waves. I don’t know how many people have done that, but I think I’m in a small group on that one.

**Quartaroli:** Probably. Did he hang onto his camera anyway?

**Turner:** Oh, yeah, and we actually got it dried out, and it was still workable. '83 [1983] was interesting.

**Quartaroli:** I was going to ask you about high water.

**Turner:** We started on 58,000 [cfs] and obviously it was going up constantly. The park was dropping their messages to us. The biggest thing was what used to be rapids were pretty easy, for the most part. Hardly any of them were difficult. There was always a nice clean run somewhere, except Crystal—even Lava. But the flatwater stretches became just these screaming jet stream kind of currents that would send you off in one direction, then off in another. The trip I was on in '83 had been chartered by Rod Nash, a professor out of UC Santa Barbara. He had done some dory trips with Martin. He had his own dory, and had tagged along on some trips with Martin. We’d all had good runs in Cave Springs, which is no big deal to begin with—pretty much washed out—but at the bottom of Cave Springs this boil just came up under one side of Mitch’s boat and flipped him. Going through the inner gorge, those currents were just very squirrely. You’d end up hitting a wall because you couldn’t get off one of those jet streams taking you there. By the time you could turn and try to pull crosswise against it, you were up against the wall. Didn’t really do any damage, but we worked our butts off in what used to be the flatwater where you used to relax, and you relaxed in the rapids for the most part.

**Turner:** I don’t remember how high it was when we got to Crystal, probably in 80,000 plus range. The biggest thing was we didn’t know where to camp, because you’ve never looked up that high for camps before, so it was always kind of a shot in the dark. You could run so much farther each day. You had to kind of slow down the trip. By the time our trip got to Crystal, they had the ranger stationed there that waved everybody in, except Kenton, of course. We pulled in, and it was a pretty easy run, except it was hard to get your oars to clear the tammies. We ran way over on the right side, through the tamarisk pretty much. But looking at that hole just scared you to death. I don’t think we had any problems anywhere. By the time we were at Lava, it was at its max, about 98,000, almost 100,000 [cfs], whatever it reached. Rod Nash went first, and he got just a little too far left and got nailed. I don’t think I’ve ever seen a boat turn over that quickly. You didn’t even see the flip.

At the end of each trip we had kind of a side pontoon—something like that—like you’d see on the side of a Tour

West boat, round on both ends. We’d pump it up and tie all the boats to that. On our way out to Pearce Ferry, Lake Mead was just so full of driftwood and debris from the high water that my boat, the *Celilo*—which was tied up front—got motored right into a log and punched a big old hole in the side. I had this great trip, but ended up with a hole anyway. Didn’t seem fair.

**Quartaroli:** No. Well, you flipped in the tail waves in House Rock, pulling out of the eddy. Hole in a boat from a log on the lake!

**Turner:** One trip—I’m trying to think of what year—it was early on when I didn’t know what I was doing—we were doing Hance. Just above the boulder we would pull around, there’s a rock that gets exposed a little bit—no big deal—in lower water. I was following too close to Dane Mensik and didn’t see the rock. I hit it, spun my boat, and ended up going around the right side of that boulder—sort of scraped around it—but managed to get into the eddy. Then I had to get out of the eddy behind the rock. Every time I’d go to pull out, somebody was coming around the other way. I think I probably spent twenty minutes in that eddy, trying to get out without hitting anybody else.

**Quartaroli:** How about boat repairs in those early days? You know, you see Martin and P.T. Reilly laying up fiberglass with their bare hands.

**Turner:** Marine Tex. We always cooked on wood in those early days, and had this wood stove that we’d fold up and put in the boat. We called it Mildred—I don’t know why. We had these big old frying pans, and to dry out a boat to patch it—to put the Marine Tex on it—Martin would take a big ol’ frypan, build a fire in it, and put it on the bottom of the boat. At first he put it right on the bottom, which of course would scorch the boat. Then he’d put some rocks on the boat, so the pan wasn’t actually touching the boat and the Marine Tex.

**Quartaroli:** This was drying out the boat to repair it?

**Turner:** To repair it, because once you punch it, the hole gets wet, and then you can’t get stuff to stick to it. So you’ve got to get it dry. Early on, we tried to do all the repairs right there on the river, which ended up being pretty silly, unless it was something too big to ignore. We went to a system where [we’d use] a little Shoe Goo and duct tape, and hope it lasted until you got back to the warehouse where we could do a good patch. But if it was big damage, like tearing out a bow post, which happened once or twice, or tearing the stern off a boat, we’d have to rebuild those. I remember using driftwood a couple times. We all had *some* repair wood, some plywood, some two-by, some one-by. Splinting ribs on the river, we would do that. Drilling holes with a brace and bit. In fact, that’s how I learned to fiberglass.

I think it was maybe '73, the latest '74, those early years we were used to running on 18,000–25,000 [cfs], except on weekends when it would just drop to nothing. Martin would start trips based on weekend water, getting to Upset when it was high enough to run, because in low

water it gets even tighter. Walthenberg's always fun in low water. On one trip though, it was probably '73, we weren't really used to low water. It was pretty much all high except weekends. The river dropped out, but it was probably 6,000 [cfs] or below. We got to Hance, and there were four or five baloneys parked and camped—they couldn't get through—just not at all. We looked for a way and we didn't really see one, but decided we could maybe make it down on the right side. It was a three-boat trip, just Wally, Gary Call and me. We planned this run, and the first half of it went just as planned, but the last half...There was one hole that we said, "You know, if you don't hit that quite right, it's going to take you and spin you, and then who knows where you'll go." It spun every one of us, but we made it, without hitting anything.

Oh! When we looked at Deubendorff, we didn't see a way through it at all. It was fairly late in the day and we were going to camp at Stone Creek. We ended up camping above the rapid, thinking, "Okay, water will come up *some* tomorrow." But we spent the next day waiting for water, and waiting for water, and waiting for water, and it never came up. Along about dusk, we ran it *anyway*—the last boats running pretty much in the dark—and then camped at Stone Creek. That put us a day behind. That was the only time on a Martin trip we pulled out at Diamond Creek, because we were behind schedule and just wouldn't be able to make it. Martin flew over in his wonderful little airplane and dropped us a note, because he was looking for us to see how we were doing. The note said, "Do you want to go on, or do you want to pull out at Diamond Creek? If you want to pull out at Diamond Creek, just run around the beach like a bunch of crazy people. If you want to keep going, just sit on the beach." We ended up getting out at Diamond.

One trip—speaking of Martin's airplane—Martin has flown under Navajo Bridge.

**Quartaroli:** I've heard that.

**Turner:** He did it with Flip Wilson in the plane.

**Quartaroli:** The comedian?

Yeah. We were at Lava and we were doing a slot run. With that run it's just extreme concentration. You've got to get your bubble line just right, and you've got to watch. Anyway, I'm sitting there concentrating like crazy, putting the bubble line right under my butt, and I hear this noise above the sound of the rapid that I couldn't ignore. I looked up, and there was Martin's landing gear probably no more than about twelve feet over my head. We were getting prop wash back. By the time I looked down, I'm dropping into the slot, half sideways, but didn't flip, fortunately. But that was crazy Martin.

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**Turner:** Speaking of Lava Falls, there was a period of almost a whole season, I think, where nobody flipped a dory. I mean, we just had this great string of runs. The next season,

we got to Lava where we had a mailbox—a coffee can with messages passed between trips. There was a note with this cryptic drawing and some boats upside down, and the note said, "The string of pearls is broken." We were standing there looking at the rapid with the water at about 24,000 [cfs], so it was pretty big water. The slot was closing. It's like opening and closing. When it gets big, the falls just tend to stretch wider and connect with that little hole to the right of the slot, that really is part of the falls anyway. "Why don't we wait? The water's still coming up. We're probably going to get 26, 27, and then I think it'll be easier to run the left." And Wally said, "No, no, no, we gotta go." They all got antsy, especially Wally and Dane. Wally went first and Dane went with him. Wally hit the slot and was over (snaps fingers) like that. Dane made it through the slot and flipped in what was the V-Wave at the time. First two boats over. Next two boats, Tony Williams was rowing one and I think Sharky Cornell the other, they both flipped—again, one in the slot, one farther down—made it almost to the black rock before it flipped. Two of us were left, O.C. and me, and I'm thinking, "What the hell am I gonna do?" O.C. looked at me and said, "Do you want to go first?" (laughter) "Sure, what difference does it make?!" We both made it, just by the skin of our teeth.

**Quartaroli:** And you ran the slot?

**Turner:** Ran the slot, just busted through the slot, and essentially threw my oars away and just ran around the boat, high-siding. That's the only thing that got me through. It was not pretty at all, and there were two or three times I probably should have gone over, but didn't. I was thinking, as I was pulling out that I might try the left." Then I thought, "Well, O.C.'s behind me. I don't want him to start following me and then be too late to cut back, because he didn't know what I was doing."

**Quartaroli:** You were running in '83. How long did you run more or less fulltime?

**Turner:** Pretty much from '72, '71, to '86—although '86 wasn't a full summer.

**Quartaroli:** Was that the last time you were in a dory then, running a dory?

**Turner:** Yeah.

**Quartaroli:** Thirty years.

**Turner:** Yeah. Although a couple of years ago, on a private trip, we were camped at Nankoweap, and an AZRA trip pulled in that Brad was on. He's got the *Cataract*. As he was hiking up to the ruins, I was rowing his boat around the eddy and going out in the current. You can go way down, as you know, and still catch the Nankoweap eddy. I was not rowing anything other than flat water, but still, it was fun to sit in a hard boat again and pull on the oars. I would love to build a dory. In fact, Wally had his own boat, the *Tapestry Wall*, which was a Briggs boat that he bought from [Jerry] Briggs. Over the years, it had gotten pretty beat up. When he stopped rowing for Martin, it kind of sat in the yard for a long time, and was not in good shape. When he moved to California, he gave me his boat. But, it really wasn't worth

fixing and I had no place to keep it. So, I did have a dory for a little while.

**Quartaroli:** Nothing ever happened to it after that?

**Turner:** No. It wasn't worth saving. It had the bow post torn out once. We repaired that on the river. I think that was a Crystal flip, rock garden kind of thing, as I recall. I think the transom got torn out once. The bottom got so mushed we actually replaced it one year with three-quarter-inch FinnForm, which is stuff they use for concrete forms. It's very water resistant. It's held together with resin, rather than glues. It's hard to get that to bend to the rocker of the boat. So the bottom was about the only thing left of the boat.

**Quartaroli:** What other river trips? Did you do a dory in Idaho at all?

**Turner:** I did. Went up, again because of the timing when school got out, I had like two weeks before I could get on a trip, and Curtis' trips were only a week long or so, I've forgotten how long they are. I went up and ran one or two trips up there in a dory, which was fun, but there are only a couple of rapids to even think about.

**Quartaroli:** That was on the Main [Salmon]?

**Turner:** No, Hell's Canyon.

**Quartaroli:** On the Snake. Did you do any trips with Rudy?

**Turner:** Uh-huh. I met Rudy in '72. He came down as a passenger with a friend.

**Quartaroli:** So '72 is when you were doing those—you had passed apprenticeship, by your half-trip the year before.

**Turner:** Because I had my six days apprenticing after my passenger trip. I was rowing a dory, so it was midsummer. Also met Gary Ladd at that time. Gary had been with Martin the trip before me in '71, as a passenger. Gary bought his own dory and came along. I'm pretty sure it was '72, it may have been '73. Then he was going to go with a bunch of other friends from Kitt Peak Observatory, where he worked. You know, Gary's the *Arizona Highways* photographer.

**Quartaroli:** Right.

**Turner:** Gary wanted some information on just exactly how to run the rapids, so he invited Wally and me to Tucson to talk about different runs. In exchange he gave us a "cook's tour" of the whole Kitt Peak layout and observatory. I met Gary and Rudy about the same time. I can't remember when Rudy rowed his first trip with us. It was fairly early on, and Rudy was always one of the engineering kind of guys. He was always trying to find a better way to do this, better way to do that. He designed his better dory, designed a double-ender, and built it out of foam core with fiberglass on either side. It was really a very nice boat, the *Colorado*. He built his own mold for it, did all kinds of research on fiberglass, which was the best glass, and how best to lay it up. That mold is still in the warehouse here in Flagstaff, I think. Regan and Duffy built a few boats off Rudy's mold. That film, "Martin's Boat;" that was a boat built off the

mold, I'm pretty sure.

**Quartaroli:** Brad was telling me that Rudy did the oarlock supports, the angled supports. He came up with a system of reinforcing the oarlocks, and then he put a little piece of angle down to the deck to keep them from flexing.

**Turner:** I don't know when that happened. I just remember showing up, and it had happened. I didn't know that was Rudy's idea, but that doesn't surprise me. He and Kenton were both always trying to invent new ways. Kenton was trying to invent a boat that would right itself. He would put this big old side tube in the front of his boat, thinking that it was round and it would be the lowest thing in the water if the boat was upside down, so the boat would tend to then roll over again and right itself. It may or may not have worked, but you couldn't carry any passengers. What good was it?!

My passenger trip was nineteen days because we went to Temple Bar. You couldn't get out at Pearce Ferry at that time. The following year in '72, we could get out at Pearce Ferry, so they were eighteen-day trips. Martin's thing was always, "This isn't a river trip, it's a Grand Canyon trip, and so it's not just the thrill of running the river, it's the beauty of the canyon and the hikes you take." I remember we always hiked up to Thunder River to the falls. One year Jeff Clayton and I said, "We know that Tapeats Creek goes beyond Thunder, let's see where it goes." We didn't know about Tapeats Cave yet. No! It was John Hurst. This was the first trip in '72. We went past the junction of Tapeats and Thunder, and went, oh, probably about four miles up. We got to the place where Tapeats comes in from the left, and then up to where it bubbles up out in front of a cave. We didn't go into the cave but kept going up the canyon, where there's still a small trickle of a stream beyond. We didn't know the way, we were just trying to figure it out. Lots of creek crossings. At one point it looked like we needed to climb a wall. Well, John Hurst is really tall, he would take one step and I'd take three—I don't know why I always ended up hiking with these guys who are about 6'12" with eight feet of that is in their legs. We got to a point where it looked like we needed to climb about twelve or fifteen feet up a wall to get on a bench and keep going up canyon. John scrambled up. I got probably eight feet up, and this little ridge I was standing on just broke out. I just slid right down the face of that and chewed up my arms and my belly. That hurt!

**Quartaroli:** That was the end of your hike, or did you find a way around that?

**Turner:** He was up top, and I found a way just walking through the creek, but it was tough because it was steep-sided and slick. It looked like the bench was easier, but it ended up for me the creek was easier.

**Quartaroli:** Then what happened? You kept going a ways and just ran out of time?

**Turner:** We ran out of time. We'd have kept going even further. There's also a place where when you get keep going, the canyon forks and you have to pick which way to go. We got to the point where it was another wall climb,

and I was a little skittish to get up above. You were rimmed out otherwise. A couple trips later, with Jeff Clayton, we had heard about going into the cave. It's pretty easy because the water doesn't really come out of the cave. There are springs right near the mouth of it, where the main flow of Tapeats starts. But we were told if you go back *into* the cave, you could essentially get back to Thunder River. We each took a flashlight, and we got into the cave. From the description, it sounded like you go into this opening on the left. Well, it's an opening on the right, but we didn't know that. Started into this opening, and at first it was big enough for me to stand up. Jeff is like six-foot-four, six-foot-five, so he's in a crouch. The passage kept getting smaller, and smaller, and smaller until I was almost low crawling. Jeff was just scared to death that he was going to get stuck and not be able to back out. Finally we came out into this nice big space which was about three feet past where we had gone in. (laughter) Scared us both to death, thinking, "Gosh, we're gonna get ourselves lost and die in here." We found this opening on the right, that you could go into. You climb up a bit of a wall, and go back on a bench, and there's the creek—just beautiful. Cold as hell. We started walking in it, because to go anywhere you have to get into the creek. As it hit crotch level, you realized how cold it was. We had gone maybe fifteen, twenty feet down the creek to see what we could see, and Jeff dropped his flashlight. You just see the light going down in this little zigzag pattern, going out, getting washed downstream. With only one flashlight we decided we probably ought to head back.

Before that trip, we had figured that what we needed to do to really get any time to explore, was to go up to the campground at Thunder the night before. Then start from there the next day. After dinner, we started up to go to the Thunder campground, and it was dark. No biggie. I mean, we had hiked it enough, we were sure we could find our way. Once you're above that talus slope, and you start walking where it drops off pretty steeply to the creek, we hear this "buzzzz." We turned on our flashlights and there's a rattlesnake right in the middle of the trail, fortunately telling us he was there. We'd have stepped on him. He crawled off the trail, let us by, and crawled back on the trail.

**Quartaroli:** Oh really?! That's nice.

**Turner:** Yeah. I have had nothing but good experiences with snakes. I wasn't stupid, but I could easily have been bitten. They have warned me and been very kind about letting me go around, or them getting out of the way. We used to move snakes out of camp all the time—put them in a cooking pot to carry them a ways out of camp. Lava Canyon seems to have just a resident population. You see one there pretty much every time. I've got a couple of pictures. On one trip we heard a commotion after lunch—that was always our lunch stop. We looked over, and there was a bit of a grassy area, just past where you would put the kitchen if you were camped there, and here's a bird trying to fly away with a rattlesnake holding onto it. He

couldn't fly far and ended up down. The snake killed it and started to eat it. Then you could get really close, because the snake can't do anything with the bird in its mouth. We've got pictures of the snake trying to swallow this—it was a robin-sized bird. It was amazing. When it first tried to swallow it, it seemed to get jammed in his mouth. We watched him crawl backwards through a willow and pull the bird out of its mouth.

**Quartaroli:** And try it again.

**Turner:** And try it again. We finally left before it swallowed it, because we couldn't spend all day there, obviously.

\* \* \*

**Quartaroli:** What about private trips? The first one I think you mentioned was 1980.

**Turner:** In 1980. That was my honeymoon trip. We got married in March of '80 and did that in early summer. That's when I had my Miwok with a fiberglass frame I built. On the run we were doing in Crystal, you had to break through a wave on the right, and it wasn't terribly big, but you had to get through it, and then you were on a highway to the right side of the hole. I hit that, and it surfed me out. We were headed straight for the hole, hit it straight on, but did a double endo. We went into it, endo'ed once, and both Susan and I fell out. Then the boat went in again upside down, did *another* endo and came out right-side up. So I don't count that as a flip, because it went in right-side up, came out right-side up!

**Quartaroli:** In the same hole?

**Turner:** In the same hole.

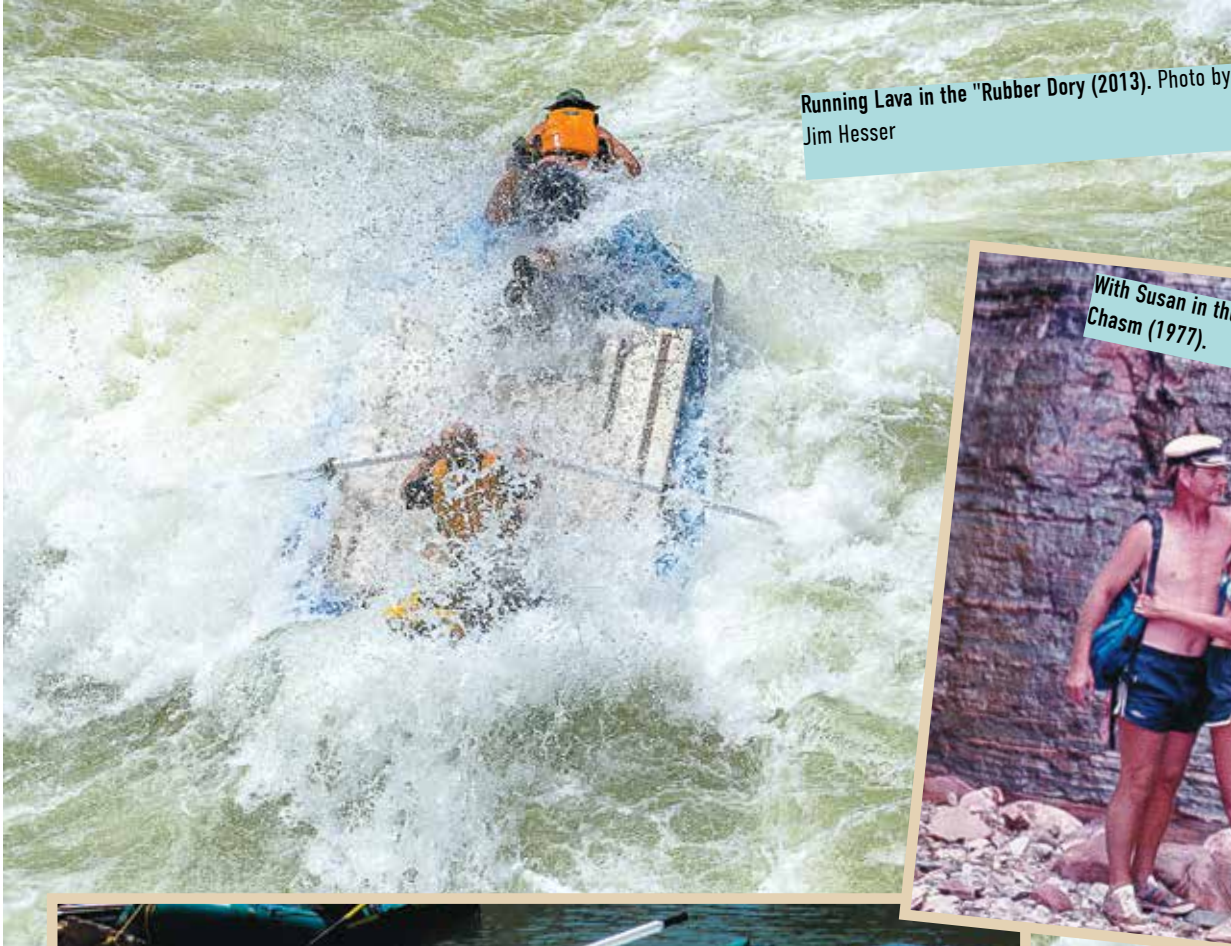
**Quartaroli:** Cool.

**Turner:** Unfortunately, nobody has pictures of that. That would have been a great film. But then we ended up on the shore and the boat was downstream. It ended up in an eddy just below Tuna. A baloney came by, and we hitched a ride and found it.

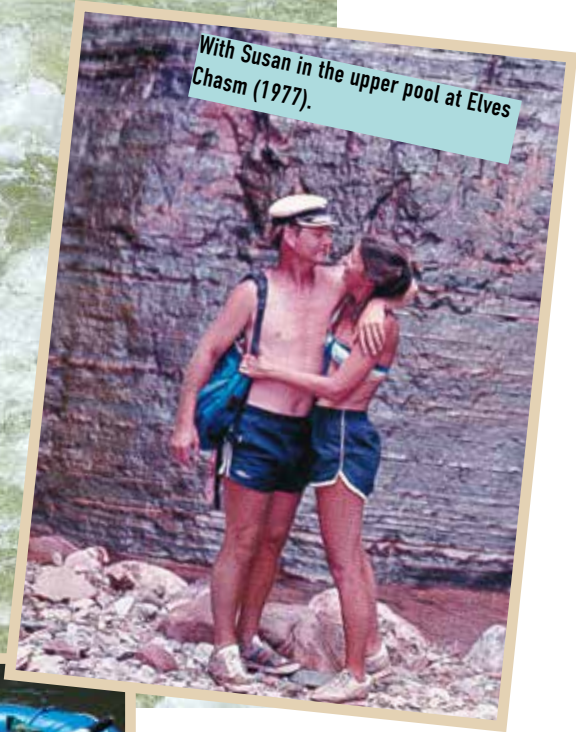
**Quartaroli:** Who else was on the trip with you?

**Turner:** Wally was on that. My friend John. He had borrowed a boat from Peter Bedford, who was a passenger with Martin a couple of times. Peter had his own rafts. The trip before that one—it was a dory trip the year before—we had gotten to Crystal and O.C. was actually rowing a raft. Anyway, we had camped there the night before, and the next morning got up to go down and look at the rapid. O.C. pumped up the raft really tight before we went down to look over the rapid. As we were looking at it, we hear this cannon shot down the river. The raft had blown out a seam, probably about eighteen inches long. We spent the whole next day there, stitching it and patching it. On my private trip in 1980 I told everybody what happened the previous year. "Please don't pump your boats up too tight." As we're standing there watching the rapid, we hear this cannon shot down the river. John had pumped his boat up too tight, and we spent the whole day there patching again.





Running Lava in the "Rubber Dory (2013). Photo by Jim Hesser

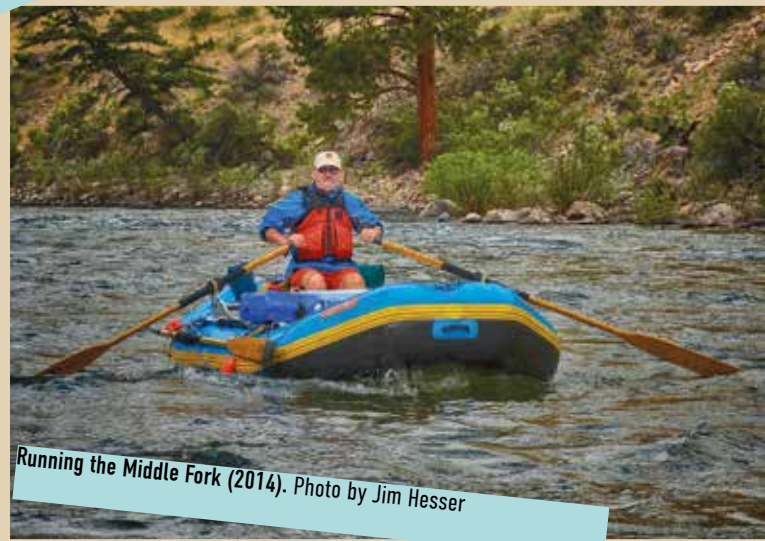


With Susan in the upper pool at Elves Chasm (1977).



Rich's "Rubber Dory." An NRS 14-foot raft with a drop in fiberglass frame, designed like the center section of a Grand Canyon Dory, built in 1980.

Besides John Jaqua, Doug Reiner was on the trip. He had rowed with Wally when he ran his first trip, in a Cataract boat in '69 for Gay Staveley. Doug was a friend of his from high school, who was also a student of Fred Eiseman's... Wally and Doug were both students of Fred's, and Fred got them the job rowing for Gay—Cataract boats. Doug had rowed a Cataract boat, and so Doug wanted to see the canyon again. Doug came with us on this trip, rowing a raft. So was Gary Call. He was in medical school and convinced his professors to give him time off from classes by saying he was going to do some kind of wilderness medical research. That was our first private trip in 1980. Double endo in Crystal. The rest of it went really well.



Running the Middle Fork (2014). Photo by Jim Hesser

I did another private trip in '85, when I was still working for Martin pretty much. And then it was kind of a dry spell. I think our next private was '94. Then it was about every two or three years. Since the 2006 management plan, we're getting on the river a whole lot more, partly because of the bigger allocation. I think in the last ten years I've probably done eight trips. The one-trip-a-year rule hurts a bit, but I understand why it's there.

**Quartaroli:** Would you do more than one trip a year if you had the opportunity?

**Turner:** If I could, yeah. I love private trips, I love going with my friends, but you know them. I miss the aspect of commercial trips where you got to meet new people, get to show them the canyon, and let them discover it with your guidance. That was always a real joy, a really important part of the trip.

**Quartaroli:** That's for sure. Do you want to get into a little bit about the Private Boaters Association? You've been involved with them for a while now, and you're on the board.

**Turner:** I hardly knew about it. Wally ended up getting involved with it fairly early on, and then Wally became president. Wally—we've been best friends, we're almost like brothers—would come out early for the board meeting, and we would pick someplace to go play for a bit before the meeting. We've been to White Pockets, we've been out to Toroweap. We've been out to where the Escalade was going to go. I ended up becoming a member, but not on the board. I would play for a day while they were having the board meeting, and then, for the general meeting, I would show up and hear what was going on. Got to meet some of the people and got asked to join the board, so I did. It's interesting. It was easy to get members when we had a challenge, like trying to get more usage. Obviously, we always want more usage, but we reach a point where it's got to be fair and balanced between commercial and private, and where we're not harming the canyon because we're *overusing* it—all those kinds of issues. It's a little tougher now to get people to join, because we're not fighting anything. I think it helped when we were fighting the Escalade, now that that's gone, at least for the time being. We have a few members who are members for life. We have some who joined because the [equipment] outfitters give a discount to members. People will join for that, and then drop the following year. I like the fact that we have close contact with the park—or did. The superintendent has always come to our meetings, filled us in. We get to exchange ideas. We've usually had the head of law enforcement, and Steve Sullivan, who runs the lottery, comes and gives us an *incredible* breakdown of statistics on how many people are going, how many trips don't go. Right now, because of work we've done with Steve, this past year we had a 98.2 percent of trips going, which is just unbelievable.

**Quartaroli:** What was it prior? Had it been 90 percent, or?

**Turner:** It was pretty high. Three years ago it was 96, which I thought was pretty darned good.

\* \* \*

**Quartaroli:** One of the questions that we usually like to highlight is "Why Grand Canyon, why Colorado River?" You were saying if you *could* do more than one trip a year now as a private boater...

**Turner:** Why Grand Canyon? It's the place where river running was born for me. It's coming home all the time. I've rowed boats on lakes at summer camp. We had done canoe trips on some small rivers in Wisconsin. I knew which oar to pull on, but I had never done real whitewater. That was where river running and I first met. Other rivers that I've done are fun, and they're beautiful places. It's hard to beat the piney woods of the Middle Fork and the hot springs that it has, but it's still not the canyon. The canyon is longer, you get to experience it for a longer period of time—a two-week, three-week trip—as opposed to a week or less on most rivers. How can you beat the scenery? No matter how many times you go down there, new places—I'd never been to the Tabernacle 'til last summer.

Grand Canyon is home. And still, every time I go there, I think back and I can picture it vividly as a nine-year-old, standing on the rim, looking at this place in awe and amazement. In a sense it's like my first experience every time I go, because I can still picture it. I love running the river, but I love the hiking. I love the challenge the river puts in front of you. Even though I get to Crystal and Lava and my stomach is churning, and I say, "Why am I here?! I knew this was here..." Still, you can't beat the adrenaline rush at the bottom.



Object Trouvé Spoon Compilation, November 2021  
Margeaux Bestard

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Grand Canyon River Guides proudly presents the very long list of major contributors who supported our organization in numerous ways during this last fiscal year (July 1, 2020 through June 30, 2021). Due to space considerations, this list does not reflect the five-year memberships or contributions under \$100 (including general contributions and Circle of Friends), of which there were many. Your support helps us to move forward and maintain a healthy and vital organization that is better equipped to protect and preserve the Grand Canyon and the Colorado River experience.

We apologize in advance to anyone we may have missed in the lists below. Please let us know. And thanks again, not only to those acknowledged here, but to each and every one of you who support our efforts and believe in GCRG. We appreciate that support more than we can express. Thanks to you all!

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# Financials

## Grand Canyon River Guides, Inc. Statement of Activities Fiscal Year ending 6/30/21

## Grand Canyon River Guides, Inc. Balanch Sheet at 6/30/21

### Revenue

Contributions	\$ 105,994
Membership dues	39,737
Investment income (\$35,160 unrealized)	38,301
Foundation grants	14,000
Noncash contributions	7,200
GTS income	4,825
Endowment gifts	3,755
First aid class income	3,564
Government grants	2,991
Sales of merchandise (net of cost)	1,997

**Total Revenue** \$ 222,364

### Expenses

Salaries, benefits, & taxes	\$ 54,081
Outside contractors	38,555
Printing (mostly BQR)	19,434
Rent (includes \$7,200 donated rent)	12,000
Postage (mostly BQR)	10,399
Outside services & outfitters	9,890
Insurance	5,004
Telecom & utilities	4,097
Office expenses & supplies	2,718
Investment fees	1,906
Scholarships	1,790
Honorariums	1,600
Equipment & venue rental	1,378
Professional fees	1,340
Merchant & service fees	1,059
Repairs & maintenance	857
Depreciation	584
Advertising & promotion	500
Sponsorship	300
Other	260

**Total Expenses** \$ 167,752

**Net Income** \$ 54,612

### Assets

Cash in checking/savings	\$ 128,315
Accounts receivable	1,950
Postage & security deposits	838
Fixed assets (at cost)	59,424
Less accumulated depreciation	(57,221)
Investments: Endowment Fund	102,197
Investments: Reserve Fund	71,635

**Total Assets** \$ 307,138

### Liabilities & Equity

Accounts payable	\$ 0
Payroll tax liabilities	1,109
Unrestricted net assets	203,554
Permanently restricted net assets	102,475
Temporary restricted net assets	0

**Total Liabilities & Equity** \$ 307,138

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## boatman's quarterly review

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Fighting Tolio, July 2021  
Margeaux Bestard