

2015

A Wild Ride: Down a Beautiful and Stressed Western Waterway

Lisa Densmore Ballard

Follow this and additional works at: <https://digitalcommons.dartmouth.edu/appalachia>



Part of the [Nonfiction Commons](#)

Recommended Citation

Ballard, Lisa Densmore (2015) "A Wild Ride: Down a Beautiful and Stressed Western Waterway,"
Appalachia: Vol. 66: No. 1, Article 4.
Available at: <https://digitalcommons.dartmouth.edu/appalachia/vol66/iss1/4>

This In This Issue is brought to you for free and open access by Dartmouth Digital Commons. It has been accepted for inclusion in Appalachia by an authorized editor of Dartmouth Digital Commons. For more information, please contact dartmouthdigitalcommons@groups.dartmouth.edu.

A Wild Ride

Down a beautiful and stressed Western waterway

Lisa Densmore Ballard



We are three quarters of a mile in the depths of the earth. The great river shrinks into insignificance as it dashes its angry waves against the walls and cliffs that rise to the world above. They are but puny ripples, and we are but pygmies.

—John Wesley Powell, *August 4, 1869*

THE GRAND CANYON ACCOUNTS FOR ONLY 277 MILES OF THE Colorado River's 1,450-mile flow from its source in La Poudre Pass in Colorado to its mouth in the Gulf of California in Mexico, but it's arguably the most infamous, intriguing stretch of water on a river that boasts numerous areas appealing to whitewater rafters and other water-based adventurers, including me.

During the winter of 2012, my close friend and frequent trekking partner Debbie Hannam sent me an invitation to celebrate her upcoming 50th birthday.

"I'm putting together a trip down the Grand Canyon," she said. "You only need to show up in Las Vegas on July 10th."

"I'm in!" I replied without hesitation. Rafting the Grand Canyon had hovered near the top of my substantial bucket list since I started compiling it. Finally the chance had come! It would be unlike any other expedition Debbie and I had done together. For starters, this one was a family-friendly, weeklong excursion on a river in the United States rather than just two of us trekking into a remote mountain region in a third-world country. There were four families on the trip—fourteen of us, parents and teenagers. That said, we were far from a wimpy gaggle of tourists. Our group included two retired members of the British Special Forces, two black belts in martial arts, and one professional athlete. Most of us had extensive experience in the backcountry and some whitewater skills.

We would not be alone. About 29,000 people run the Grand Canyon each year, some privately through a lottery for permits and others through sixteen commercial rafting companies licensed by the National Park Service. Despite the numbers, every trip down the Grand Canyon has an element

A six-day family excursion on the Colorado River through the Grand Canyon offered a close view of still water and—eventually—big rapids. Parker Densmore, son of the author, sits on the bow of the motorized raft called a J-boat. LISA DENSMORE BALLARD

of unpredictability and uniqueness. The professional outfitters vary greatly. The length of trip ranges from three to eighteen days, and the modes of transportation run the gamut from large motorized rafts and oared rafts to paddled rafts and dories. Debbie had booked a six-day trip with Western River Expeditions on a motorized raft, called a J-boat. It held our whole gang, our gear, plus two guides.

“How soft!” I thought when I learned of the setup, but how wrong I was. As I discovered, there is nothing soft about running the Grand Canyon no matter how one does it, just varying degrees of challenging. Unlike most rivers, which are categorized on a scale of 1 to 5, with flat water a “1” and nearly unnavigable whitewater a “5,” the rapids through the Grand Canyon are classified on a scale of 1 to 10. Our guides informed us of this nuance as we pushed off from the gravel beach at Lees Ferry at Mile 0. As it turned out, huge water was but one eye-opener on this adventure.

As the steady current grabbed our raft from the boat launch and pulled it toward rising sandstone walls, I peered excitedly yet anxiously down the broad brown ribbon of water. Patches of green shrubs clung to the skinny shore at the base of the red, striated cliffs.



The raft floats between the Grand Canyon's walls made up of distinct layers of rock. The oldest, Vishnu schist and Zoroaster granite, formed 1.6 billion to 1.8 billion years ago.

LISA DENSMORE BALLARD

I THOUGHT OF JOHN WESLEY POWELL, WHO HAD ALREADY LOST A boat and a third of his supplies by the time he reached this point in his journey, 143 years earlier. Powell, the unimposing geology professor who led ten men on the first documented run of the Grand Canyon, was an unlikely explorer. The son of an immigrant English preacher, he became a captain for the Union during the Civil War, then lost an arm giving the order to “fire” during the Battle of Shiloh. He had no experience with whitewater, but he had a colossal curiosity and determination to investigate the mighty Colorado River. Powell’s trip started on the Green River in Utah and extended down through what is today Grand Canyon National Park. As he drifted into the unknown, he wrote in his diary:

With some feeling of anxiety we enter a new canyon this morning. We have learned to observe closely the nature of the rock. In softer strata we have a quiet river. In harder we find rapids and falls. Below us are the limestones and hard sandstones. . . . This bodes toil and danger.

The canyon walls rose ever higher above us as we passed through Paria Riffle, Three Mile Wash, and Four Mile Wash where we practiced whitewater protocols. This entailed straddling the pontoons that were lashed together to form the raft, grabbing a safety rope in front and behind, and then “sucking rubber”—putting one’s face on the pontoon so that the water sweeps over one’s back. In the canyon, a moderate standing wave would have enough force to yank the largest, strongest man overboard if it caught him in the chest.

Before long, we passed under the Navajo Bridges, the last crossing over the river for automobiles until Hoover Dam, 350 miles to the south. Then things got a little more exciting. At Mile 8, the creeks that flow out of Badger Canyon and Jackass Canyon entered the river in an aquatic version of a four-way intersection. We got our first taste of real whitewater, a Class 4–6 rapid with a 15-foot drop. We got a similar splash another three miles later at the mouth of Soap Creek and then a half-dozen more soakings over the day. The water was a frigid 46 degrees Fahrenheit, yet the air was a scorching 100 degrees in the shade. Running each rapid gave us a succession of welcome refreshment and then bone-chilling shivers, which abruptly stopped as we melted under the summer sun.

The reason the rapids ratings included a range of numbers was that Glen Canyon Dam, built in 1963 and located 15 miles above Lees Ferry at the southern tip of Lake Powell, controls most of the water levels in the canyon. When Lake Powell is full, Glen Canyon Dam can release enough water to flood 40 miles into the Grand Canyon. The main canyon is also susceptible to flash floods from side canyons. There are no dams in the Grand Canyon, although they were once considered for hydropower. The next dam, Hoover Dam, built from 1930 to 1936, forms Lake Mead below the canyon.

Just before lunch, Evan, one of our guides, steered our raft under an overhang in the canyon wall. The gold outline of a miner's pick painted on the roan-colored rock sparkled in a tendril of sunshine.

"Did people prospect for gold in the Grand Canyon?" I asked, assuming one of the prospectors had left the etching.

Evan clarified that the marking dated back to the mid-twentieth century when the government and electric companies were looking for additional dam sites. This was one spot. Luckily, they decided not to build anything. Glen Canyon Dam alone has drastically changed the river.

The building of Glen Canyon Dam opened a floodgate of conservation issues in the Grand Canyon relating to habitat change. Before Glen Canyon Dam, sweeping beaches built up along the river at the base of its rock walls as raging spring floods subsided. The river carried tremendous amounts of sediment year round. Water temperatures varied greatly from near freezing in winter to 85 degrees in summer. It was a decidedly different ecosystem then than it is today.

Meddle With River, Meddle With Fish

Historically, only eight native fish finned the Colorado River's murky waters through the canyon: humpback, roundtail, and bonytail chubs; razorback, flannelmouth, and bluehead suckers; speckled dace; and the Colorado pikeminnow. The Colorado pikeminnow, the roundtail chub, and the bonytail chub are now extirpated. The humpback chub and the razorback sucker are listed as endangered species primarily because of the construction of Glen Canyon Dam.

Glen Canyon Dam traps 90 percent of the sediment that used to flow through the Grand Canyon. (The other 10 percent comes from tributaries inside the canyon.) Many of the canyon's beaches have disappeared. The water has cleared up and stabilized at about 46 degrees. It has turned into

a classic tailwater, the chilly flow released from the bottom of a reservoir formed by a dam. Tailwaters attract anglers looking to hook nonnative trout, but are not conducive to endemic fish. In addition, for many years, water releases designed to generate maximum hydropower increased the rate of erosion inside the canyon. At the urging of various conservation groups such as the Sierra Club and the Grand Canyon Trust, some of this damage is now being undone by allowing more “natural” volumes of water mirroring pre-dam levels to flow into the canyon.

In 1996, scientists released the first of four experimental floods from Lake Powell. They hoped the flows would revive the sandbars and fish habitat. The sandbars fattened up for a while, enough to ensure camping spots and to make these surges an official part of the dam’s operations beginning in 2012. But the controlled floods had little impact on the native fish, which today live primarily below the flood zone. In fact, the controlled surges may have further hindered the ability of surviving chubs and suckers to return to their native range.

In an example of how the more humans meddle in an ecosystem, the more the system can stray from its natural balance, researchers discovered that the artificial flood in 2008 increased the number of blackflies and midges near the dam, which in turn, boosted the nonnative trout that feed on them. The flooding had little impact on the food web of the chubs or suckers further downstream. What’s more, in the areas where they overlap with trout, the trout competed with the native fish for food and sometimes ate the young of the native fish.

My soon-to-be husband, Jack, an avid fly caster, was keenly interested in catching a few fish in the Grand Canyon. After setting up camp on a sandy strand at Mile 9 just below Shinumo Wash, he rigged a rod and waded into the river. After learning about the impact of trout on native fish, I asked him why he released the rainbow trout he caught.

“Habit,” he shrugged. “I just like to catch them. I’m not that crazy about eating them.”

We wandered back to camp where the others had just returned from a short exploration of a nearby grotto. Grace, our other guide, waxed passionately about the history of the surrounding rocks.

Although the exposed rocks on the walls of the Grand Canyon are old, the canyon itself is geologically young. The oldest rocks in the canyon, Vishnu schist, date back to the early Proterozoic period, 1.6 billion to 1.8 billion years ago. The canyon itself was formed mainly by erosion during

the last 6 million years. It's impossible to float through the canyon without noticing the variations in thickness and color in the many layers of rock. The Grand Canyon does not boast the oldest exposed rock in the world (that is in northern Canada), nor is it the deepest canyon (Barranca del Cobre in Mexico and Hells Canyon in Idaho are deeper), but it is famous partly for its sequences of exposed rock that record much of the early geologic history of the continent.

Two of the fathers in our group, Ian and Richard, took an immediate interest in Grace's spontaneous lecture. Both were involved in the mining world, Ian in Africa and South America, and Richard in Afghanistan.

Ian asked whether there was concern about uranium mines near the Grand Canyon.

Grace explained that a lot of mines opened near here during the uranium boom back in the 1950s. Today, the Park Service monitors the amount of radioactivity in the Grand Canyon pretty closely. It wasn't something guides like to talk about. Pollution from the mines is a big concern, sometimes making the Little Colorado River unsafe for swimming.

The next day, we camped at Mile 62 just below the mouth of the Little Colorado River. The Little Colorado River's vibrant turquoise hue, the result of its high alkaline and mineral content, made a colorful contrast to the darker water of the main river.

"No fishing!" barked Evan at Jack. "It's illegal to catch a humpback chub. This is one of the few places where you can find them. They breed in the Little Colorado River."

With my polarized sunglasses, I could see a school of odd-looking fish gathering around the raft. Humpback chubs! Averaging about 18 inches long, their distinctive dorsal humps made them look like Igor of the fish world.

Though it was late afternoon, plenty of daylight remained. We decided to stretch our legs and hike the ledgy route along the Little Colorado River. The water glowed like a river of opals flowing below towering ruby cliffs. Eventually we came to a 15-foot-high boulder wedged into the side of the river. Within moments, half the troop leapt off the top of it into the blue-green stream. After several jumps into the water, we bumped down the oversized riffles and formed a human flotilla. It was a glorious swim. The Little Colorado River was a welcoming 75 degrees. It felt good to get wet after walking along the scorching rocks.

After my dip, I perched on a smaller rock, taking photographs of creamy white mineral deposits along the shoreline. The contrast between the

vibrant aqua water, the red rock, and the white minerals was striking, then I remembered Grace saying sometimes it's unsafe to swim in the Little Colorado River. It seemed impossible that such a remote place could be contaminated. But according to the Grand Canyon Trust, radioactive residues from uranium mines have been accumulating in and around the Grand Canyon since the 1950s. Then, in 1979, a breach in an earthen dam near one mine released 1,100 tons of radioactive mill waste and 90 million gallons of contaminated water into a tributary of the Little Colorado River.

The Nuclear Regulatory Commission acknowledges additional toxic tailings have washed into the region's waterways, too. For example, in 1984, a flash flood washed tons of high-grade uranium ore from Hack Canyon Mine into a tributary of Kanab Creek that flows into the Grand Canyon. Radiation levels remain elevated in a 10-acre area around the Orphan Mine on the South Rim of the canyon and an area visitors frequent to the west, prompting the National Park Service to periodically warn backpackers on the nearby Tonto Trail to avoid using water in two drainages.

Uranium Claims Resurface

During the last seven years, as the price of uranium has risen, thousands of new uranium claims have been filed within the watersheds that drain directly into Grand Canyon National Park and the Colorado River. The Bureau of Land Management has allowed abandoned mines, closed since the 1980s, to be reopened. However, on January 9, 2012, Secretary of the Interior Ken Salazar ordered a 20-year moratorium on new mining claims in the region in response to an enormous outcry by tribal, business, and civic leaders; hunting, fishing, ranching, and conservation groups; water, wildlife, city, and county officials; and nearly 300,000 individuals who formed a coalition in favor of the mining moratorium.

That evening at Mile 62, no one glowed from overexposure to radioactive pollutants. Thoughts of uranium mines faded with the setting sun. As the others gathered around the portable camping tables to eat spaghetti and hear the plan for the next day, I wandered down a faint trail to see where it led. Suddenly Jack popped out from behind a tall bush sending me a few feet into the air.

"Gotcha!" he smiled.

When my heartbeat slowed, I took a closer look at the bush that hid him so well. Its foliage was spindly, as if someone had taken bows of cedar and stretched them.

"I think it's called salt cedar," Jack said.

"Kinda looks like cedar with longer, paler foliage," I replied.

"Its tap root is much longer, too," Jack said. "It's an invasive species that sucks water away from native plants."

Salt cedar, also called tamarisk or *Tamarix*, is native to Eurasia and Africa. It first appeared in the American Southwest at the beginning of the twentieth century where it was used to stabilize riverbanks. Since then, it has become the dominant riparian shrubby tree in the Colorado River basin below 2,000 feet.

Salt cedar has been in the Grand Canyon since 1938, spread by wind-borne seeds. Drought and flood tolerant, it provides welcome shade to river runners, yet has proved detrimental to the ecology of the Grand Canyon. By outcompeting native vegetation and thus decreasing plant diversity, salt cedar has displaced native wildlife. Salt cedar has also altered soil salinity and increased fire danger because its wood readily burns green.

The National Park Service has tried to remove tamarisk by pulling it out, cutting it to stump level, girdling it, spraying it with herbicide, and most recently by introducing leaf beetles (*Diorhabda carinulata*). Native to Southern Russia, Kazakhstan, Iran, Mongolia, and western China, the leaf beetle doesn't kill tamarisk trees immediately; rather, it defoliates the tree over and over again until the plant eventually dies several years later. In areas where the beetle was introduced a decade ago, 75 percent or more of the tamarisk has died. Ecologists are optimistic that the beetle will control tamarisk enough to allow native species such as willows, cottonwoods, and honey mesquite to return.

A Rough Finish

The next two days in the canyon were the wildest and wettest of the trip. We barreled through Unkar Rapid (Class 7) past the largest known prehistoric settlement on the river, then dropped into Nevills Rapid (Class 7), named for Norman Nevills, the first person to offer commercial river trips through the canyon. I prayed for survival as we crashed over Hance Rapid (Class 8) at the start of Granite Gorge. At Mile 132, Dubendorff Rapid (Class 8) nearly swallowed me.

We had just passed through another churner, Bedrock Rapid (Class 8), soaking every inch of me. As I looked through a dry bag for something with which to clean a camera lens, we lurched into Dubendorff Rapid. I quickly grasped a safety rope while Jack grabbed one of my flailing feet. I felt like a rodeo rider whose foot had snagged in a stirrup as I was bucked from a frantic steer. Luckily the drop was short.

The rapids weren't the only violent water this day. At Mile 137, we pulled over on the western side of the river at the confluence with Deer Creek. We scrambled over a few wet boulders to find Deer Creek Falls, a stunning 100-foot waterfall framed by ferns. I waded toward the alluring cascade expecting a refreshing shower. Instead, I found myself struggling to stay upright in the 70 mile-per-hour wind, a powerful downdraft caused by the force of the large volume of falling water. The gale sent bullets of spray toward anyone who dared approach the base of the falls. We tried but quickly retreated at the promise of an oasis further up the creek.

That night, we made camp a mile further downriver on several steps of sand and ledge. Everyone spread out, tucking their tents under the cliffs wherever they could find a flat area. I retired early to my tent, worn out from the bucking river, but I tossed and turned in a restless slumber. In my troubled sleep, crashing sounds in the sky melded with dreams of crashing waves.

"Get up!" shouted Evan, urgently. "Everyone on the rafts!"

It was pouring rain. The crashes in my dreams were real. Rocks rolled down the towering cliffs above our camp, loosed by the precipitation. One narrowly skipped over Ian who fortunately had set up his cot well under an overhang. I pulled on a Gore-Tex shell, jammed my gear into a dry bag and ran to the rafts. As I jogged, awkwardly toting my dry bag, I noticed a stream of water winding its way through our tentsite, the early fingers of a potential flash flood.

As we pushed off, a sizable boulder slammed into the ledge where our cook table had stood the evening before. Water poured down the canyon walls forming impressive waterfalls. Grace pulled a camera from the pocket of her personal flotation device.

"You know it's an unusual day in the canyon when a guide starts taking pictures," she shouted, smiling at me.

I wasn't sure how she *could* take a photograph. Rain pelted us from all sides. Wind lashed at us as strongly as a Class 10 rapid. I held on to a safety line, fearful of the storm and the power of the river, as we barreled along.



At mile 179, a raft runs the rapids at Lava Falls, which John Wesley Powell called “a seething and boiling of the waters.” Rapids in the Grand Canyon are classified from 1 to 10, and this one rates a 10. LISA DENSMORE BALLARD

Then, as quickly as it had hit, the tempest abated. Once again, the Grand Canyon showed its magical side. The sky, cliffs, and the water took on a gray blue hue between the horizontal lines of cottony clouds.

At Mile 157, we stopped at the entrance to Havasu Creek, planning to hike the 3.5 miles to Havasu Falls, but the creek ran full and brown from the storm. We feared a flash flood and returned to the raft. Three miles later, we stopped for lunch on a pile of debris that had likely washed into the river that morning.

“This wasn’t here last week,” Grace said as she examined an impressive boulder bigger than a tractor trailer propped atop a pile of smaller rocks. A distinct line of brown water draining from the pile of debris muddied a third of the river. The sheer strength of Mother Nature to move such an amount of earth humbled us. The Grand Canyon certainly has enough ability to change itself without help from humans.

At Mile 179, we experienced the canyon’s natural forces one more time, running Lava Rapid (Class 10), the last big rapid of the 187-mile journey. We scouted it first, the only rapid the guides requested we scout beforehand. From atop a black basalt pillow, I watched the raging water, turned brown from storm runoff, jostle and kick another raft. The raft nearly buckled

halfway down the run, recovered, then shot straight in the air before bumping and spinning out of control through the angry waves.

I reboarded our raft, selecting a spot near the middle by the gear, the most stable spot to anchor oneself though no place on the raft was going to be remotely stable in the torrent I had just witnessed. As I felt the now familiar tug of the current carry us toward the top of the rapids, I looked at Grace. Her focus was entirely on the water as she grasped a safety line with one hand and the handle of the little outboard engine with the other. Twenty horsepower seemed a measly amount to steer our mega-raft through the danger ahead. A moment later, I was underwater, then out of it, then back under again. I wanted to close my eyes, but wanted to watch as well. Adrenaline coursed so strongly through my body that I couldn't focus on much more than holding on.

It was a wild ride. As the river spit us out, everyone let out a cheer for Grace who had masterfully navigated through the maelstrom. I thought again of John Wesley Powell, who so accurately described Lava Rapid as "a seething and boiling of the waters."

Powell's Grand Canyon experience was different than mine because the river was different then, untouched, but our adventures shared many things in common. Powell found the Grand Canyon a mix of churning hydraulics, searing heat, flash floods, rock-spitting cliffs, and natural marvels. I did, too, but my journey was 100 miles shorter and took a week instead of 99 days. We traveled on large, stable J-boats rather than in wooden dories. Our group was made up of sixteen outdoorsy teenagers and adults rather than ten weathered mountain men and one professor. I had months to study the well-documented route. For him, it was uncharted territory, yet like Powell, during my time in the Grand Canyon, I discovered much and felt every bit the explorer.

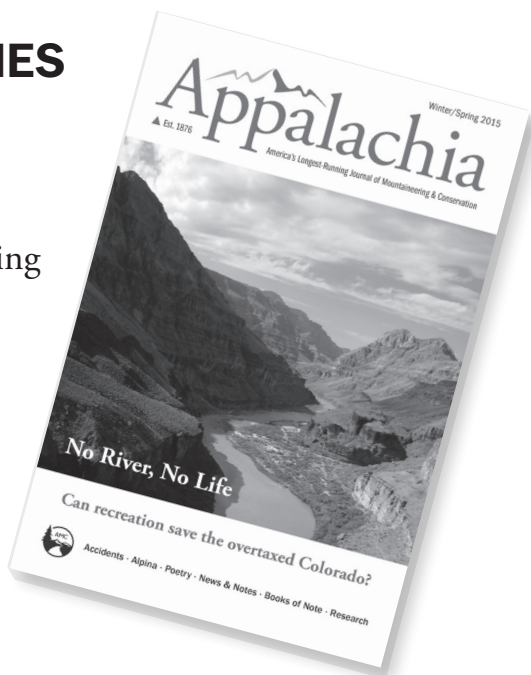
Longtime Appalachian Mountain Club member LISA DENSMORE BALLARD is an award-winning writer, photographer, and filmmaker. She splits her time between Red Lodge, Montana, and Chateaugay Lake, New York, when she's not exploring a wild part of the world. Visit her at LisaDensmore.com.

"I started reading Appalachia for the accident reports, but I kept reading for the great features."—Mohamed Ellozy, subscriber

SUPPORT THE STORIES YOU LOVE!

Start or renew your *Appalachia* subscription today, and keep reading America's longest-running journal of mountaineering and conservation.

Visit **outdoors.org/appalachia** for a special offer: 36% off the journal's cover price. That's three years of *Appalachia* (6 issues) for only \$42. Or choose a one-year subscription (2 issues) for \$18—18% off the cover price.



Inside every issue, you'll find:

- inspired writing on mountain exploration, adventurers, ecology, and conservation
- up-to-date news and notes on international expeditions
- analysis of recent Northeastern mountaineering accidents
- book reviews, poetry, and much more

Subscribe today at **outdoors.org/appalachia** or call 800-372-1758.



Subscription prices valid as of September 2021. Prices and offers subject to change without notice. For the most up-to-date info, visit outdoors.org.