



Lava Falls – The heaviest rapid in the Grand Canyon – as seen from Toroweap Overlook. The dotted white line indicates the route down the cinder slope .

Photo Paul Fretheim

CLICK IN LEFT IMAGE TO OPEN A 360° PANO OF THAT LOCATION.

Topo Map: Mount Trumbull; Coordinates: 36° 13' N - 113° 03' W

The Lava Falls Scramble

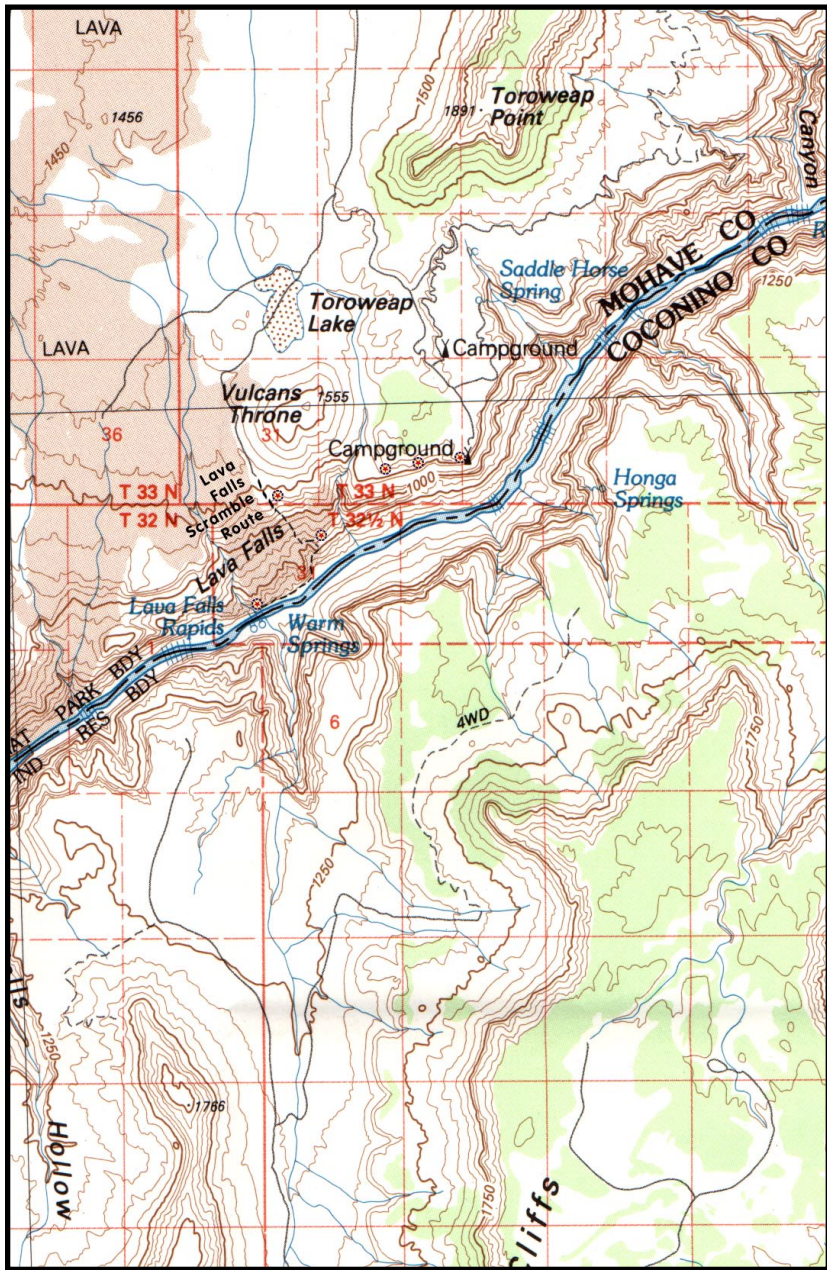
by Paul Fretheim

At Lava Falls the Colorado River drops eighteen meters in only about a hundred meters, forming the heaviest rapid in the Grand Canyon. None of the early expeditions ran Lava Falls in their wooden boats. It would have meant sure disaster. Lava Falls was a rapid that was always portaged around.

Scramble Not Recommended in Summer

When I visited Toroweap for the first time in 1999 I was delighted to discover that Lava Falls, the famous rapid I had heard so much about, was just below the overlook at Toroweap Campground. And was equally pleased to learn that there was a scramble route down the side of the canyon from nearby that led to the falls.

It was an exciting trip. At the start I had been caught in a series of severe thunderstorms on my way out to Toroweap. (see: [The Uinkaret Plateau](#)) I had spent my first full day at Toroweap hiking



along the rim in both directions from the overlook, doing photography work. That night the substitute Ranger came down to the campground to check on things. Clair, the permanent Toroweap Ranger, was on vacation. I was curious to learn as much as I could about the Lava Falls Scramble, but the substitute Ranger had never done the hike, and really could not tell me much except that it was not recommended between late May and late September, due to the extreme heat and intense sun of summer.

On average each year, 371 Americans die from heat-related causes, more than the number killed by earthquakes, tornadoes, hurricanes, lightning and floods combined. (LA times, June 20, 2001)

I live near Death Valley and am used to high temperatures. I figured if I paced myself and took plenty of water along I would be OK. I decided to give it a go.

Early the next morning, at the first hint of dawn, I drove north on the jeep trail over the slickrock out of the Toroweap campground. I had packed my backpack the night before because I knew I was going to make a dash for the river the next morning. I planned to do the scramble as a day hike, but brought all my bivouac gear, just in case. A kilometer or so from camp, I turned left at the sign for the Lava Falls Scramble.

After driving through open chaparral in the semi-darkness for 400 meters or so I came to Toroweap Lake, which is usually dry, but after the storms of the past few days, it looked like the water was nearly a meter deep and the bottom was pretty muddy. It was about 150 meters across. Some people park there and walked around, but the jeep trail continues another kilometer or so around to the south side of Vulcan's Throne, and I wanted to get to the trailhead as quickly as possible, so I decided to drive through the lake. There's nothing like driving a rented car!

The glow of the approaching sunrise was getting brighter on the eastern horizon, but it was still nearly dark as I put the Durango into low range and started out across the muddy pond. The trusty beast, gas guzzler that it is, chugged faithfully through the mud and came out the other side no worse for wear. The rest of the way is just an easy two-track through the open chaparral. As I turned in to



The scramble route proceeds down the loose cinder slope along the left edge of this picture. While the footing there is bad, the most difficult part of the route is between the drop-off you can see above the river at the foot of the slope and the river itself.

Photo Paul Fretheim

[CLICK IN IMAGE TO OPEN A 360° PANO OF THIS LOCATION.](#)

the small parking area at the end of the road, my headlights illuminated a faded, chipped and weather-beaten sign hanging crookedly by one nail from an old grey post that said:

**Lava Falls Scramble Route
Summer Travel Not Recommended
May be Fatal Due to Extreme Heat**

Into an Inferno

The sun was still a long way below the horizon and it was cool outside. I figured if I hiked at a decent pace I would be down to the river before it got too hot, as it wasn't far, less than 2 kilometers.

The trail starts out as a well worn route and drops through a band of rimrock just past the parking lot. Then you hike through a little bowl. At the far side of the bowl the trail begins the long drop down the side of the canyon. After a short stretch along some rocky ledges, the trail fades and becomes a cairn-marked scramble route down a long loose cinder slope of very loosely packed volcanic cinders. The rock ledge at the top of the slope is an excellent place to cache water, and I left about 4 liters of water here for the return trip. The vegetation on the slope below is that of the Mojave Desert, with creosote bushes, barrel cactus and small bayonet yucca growing widely spaced along the route.

I had forgotten to bring my hiking poles, and it turned out to be a major oversight. The loose cinders kept sliding out from under my feet and I would find myself landing on my backside time and time again unless I trudged very slowly, carefully choosing each spot to place my next step. I had not anticipated such slow going when I gauged the amount of water to take along, and had only kept 1.5 liters in my pack, expecting that to be plenty for about a kilometer of downhill hiking.

No Poles Proves Costly

Despite my efforts at placing each step, I kept losing my footing in the loose cinders. At one point, as my feet slipped out from under me, I reached back to catch myself against the slope above and, with all my 100 kilos, plus my 20 kilo pack, throwing me backward, I planted my hand firmly on the thorns of a tightly packed bayonet yucca, deeply embedding 20 or 30 of the spikes into the palm and fingers of my left hand. I was able to pull most of them out, but I didn't bring a needle or safety pin with me, and the small knife blade of my Swiss Army knife just would not dig out a couple of the thorns that broke off in the fleshy part of my palm. The force of breaking my fall had thrust the thorns in so far that I could see some bumps on the back of my hand where a couple of the spikes nearly came all the way through. After pulling out the thorns I was bleeding from a few of the punctures, which I figured was a good thing, as it would wash out the wounds.

I continued to scramble down the slope with blood dripping from the fingertips of my left hand, but as I had never hiked down

to the bottom of the Grand Canyon before, despite the injury to my hand, I was still pretty excited to get to the river and watch boats run the legendary Lava Falls Rapids.

The sun was already over the ridge and I realized that the bad footing was slowing me down so much that I would not reach the river before it got pretty hot. I knew from experience in the Mojave that the overnight low down at the river was probably around 30° C. (85° F.) and that it would be 40° C. (104° F.) before long, which makes for some pretty uncomfortable hiking, and 45° - 50° (113° - 122°) by midday, which is unbearable and downright dangerous.

I continued on down to the big boulders at the bottom of the long loose cinder slope. I was wondering what the last bit to the river would be like, as you could tell from above it had to be pretty steep. It turns out that the last 300 meters is the worst part of the route. After you thread your way through the boulders at the tip-off you drop into a long chute that is full of loose volcanic debris precariously balanced at an angle of about 40 degrees that is ready to slide at the slightest provocation.

The debris ranges in size from the dust particles of volcanic ash to volcanic lava bombs the size of a small house, jaggedly protruding from the rest of the debris at crazy angles.

The entire conglomeration was pretty loose from the recent storms, and I set off little slides here and there as I climbed down the chute. In places the unstable slope was so steep I had to face inward and climb down using hands and feet.

Dry Waterfalls Present Problems

Here and there the underlying basalt bedrock is exposed. During pluvial times there may be running water in this drainage for extended periods, and even now, water flows down this chute intermittently after storms. Where it's exposed the lava bedrock has eroded into smooth, vertical pour-offs that range up to a few meters in height. Here and there the rock is polished obsidian.

Some of the big lava bombs are wedged in the center of the chute as chockstones. At one point you have to crawl under one of the huge black chockstones to reach the lip of the pour-off below.

I am not an experienced rock climber by any means. When I came to the first of the dry waterfalls I wished I had brought a few meters of rope so I could have lowered my pack instead of wearing it as I clambered down the polished rock from handhold to handhold. I knew it could be pretty serious if I was to slip and get injured way out there all by myself. By now my last bottle of water was half empty and I still had a 150 meters to descend before I could reach the river, which is the only source of water on this hike. Turning back was not an option, as I did not have enough water left to safely make it back up the slope in the extreme heat of the full sun.

Rocks Get Too Hot to Touch

It was really starting to get hot. The chute of volcanic debris and dry waterfalls that makes up the lower part of the Lava Falls Scramble Route faces south, and is exposed to the full force of the sun. All the rocks are black and absorb the sun's energy and reradiate it back and forth like a solar oven. The sun was beating down on the rocks and they were starting to get too hot to touch. I am sure they approach 100° C. (212° F.) in the sun in mid afternoon. I wished I had brought gloves, and I would say that they are an indispensable item to doing this scramble safely in the hotter months.

I was starting to get dizzy from the heat, my vision was getting blurred, and I had less than a liter of water left as I reached the bottom of the chute. I dropped off my pack. I felt like I was going to black out. I was starting to have a heat stroke. I stumbled the last little way to the river. I had made it in the nick of time.

I took off my boots and socks and slid down the slippery bank until I was up to my neck in the muddy Colorado. Boy did that cold water feel great! I hung onto some tamarisk saplings to keep from getting washed away in the current and laid there in the rushing water until I was shivering from the cold.

Rafters Help Out

I pulled myself out of the water and sat on the bank watching the swollen muddy torrent rush by. "Whew, I made it," I thought.

It took me 3 hours to make the descent that I expected to take no more than 45 minutes when I started. How was I ever going to get back up again? That black chute, which was the only way up, was

an inferno by day, and could not even be attempted. When the temperatures would be safe for climbing was anybody's guess. As I sat there contemplating my fate, looking at my near empty water bottle, the first of the many groups of rafters I would see that day came floating down the river and rowed to shore and tied up just below where I had been cooling my heels.

"Hello there," I called out.

There were no other boats in sight, and the occupants of the first raft to land were very surprised to hear a human voice from the tamarisk thicket on shore.

"Hi. How the hell did you get here?"

"I climbed down the side of the canyon."

The deeply tanned rafters were painted up with colored sunscreen and looked like Amazon Tribesmen that got on the wrong river somehow. They exchanged looks of disbelief. By now it was 45 degrees Celsius in the shade. They looked pretty wild to me, but I guess I looked pretty wild to them too in my muddy wet clothes.

"You are the first person who was not in another boat we have seen for about a week. You walked down here?"

"Yeah, but I had a hell of a time." I showed them my messed up hand. "Do you have any drinking water you can spare?" I asked hopefully. I had brought a small propane stove and a saucepan, so I could have boiled some river water if I had to, but as it turned out, nearly every boat had a large container for drinking water they kept filled each day with a filter pump and the rafters were really generous and willing to share.

"Sure, give us your water bottle and we'll fill it up for you."

I handed one of the guys a 1.5 liter drinking water bottle. He took it to his boat and got their water barrel out of the nylon mesh they used to hold everything down through the rapids. When he handed it back I drank about a liter of it in one gulp.

"Better let me fill that up for you again. You don't look too good. You must have had a pretty hard time of it getting down here in this heat."



Choosing a route through the rapids. *Photo Paul Fretheim*

The First Boats Run the Rapids

The rafters left their boats tied up to the saplings along the bank and we all walked together up the trail to a spot where you can get a good look at the rapids. They wanted to take a look so they could try and plot the safest way through the rapids. The roar of the waves and tumbling waters is so loud there that we had to shout to be heard. The ground shakes and vibrates with the rumble of the river over the boulders in the bottom of the rapids below. There was tension and excitement in the air as they stood and studied the churning, turbid waters with serious expressions of concern covering their faces.

After shouting back and forth for a few minutes about their plan of attack they turned and headed back for their boats.

I think they wondered if I was OK – mentally, I mean – to be thinking of hiking out of there, and I had similar concerns about them, seeing as they were ready and willing to be hurled over the boulders in that raging red water below.



These “Indians” were ready to rock and roll in the rapids below.

Photo Paul Fretheim

I couldn't wait to watch them try it.

By now it was about 11:00 a. m., the sun was getting high in the sky, and the heat was really getting intense. There was no shade near the rocks that overlook the rapids. There were a couple of creosote bushes, however, so I took my ultralight down sleeping bag out of my backpack and used my bootlaces to hang my sleeping bag up as a sort of awning between the creosote bushes. I rolled out my foam sleeping pad on the hot black basalt and had a pretty comfortable spot set up for watching boats run the rapids. It was too hot to go anywhere, so I got out my camera gear and the book I was reading – Into the Wilderness, by Jon Krakauer – relaxed in the shade, and waited for the boats to come through.

My painted friends got wet, but whooping and hollering all the way, their boats all remained upright and they got through in one piece.



My painted friends begin their wild ride. Note Orca whale model in bow.

Photos Paul Fretheim



So far, so good.



The woman who was manning the oars in this boat was a very experienced rafter from Flagstaff, AZ. *Photos Paul Fretheim*



Her friends in this boat were not so lucky. Everybody fell out when the boat flipped. Thanks to helmets, life jackets and good luck everyone ended up OK.



The raging torrent of the Colorado River plunges over the Lava Falls Rapid.

Photo Paul Fretheim

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Different Kinds of Boats

Several different kinds of boats came down the river. One group of runners came down in wooden dories. The guys to two of the dories decided to portage around the rapid, but one decided to try to run the raging water. He hit a big hole almost immediately. The giant whirlpool turned his boat sideways to the current and the wave at the downstream side of the hole flipped his boat instantly. The dory tumbled over and over all the way down, and barely missed being crushed on the big rock that juts above the water on the right side of the rapid. The boat and oarsman were OK though, and he swam over to his boat and managed to get it to shore before he was washed up against the cliff downstream.

Kayaks were the choice of some boatmen. The kayaks were often tumbled by the roiling waters too, but all the kayakers all man-



Lava Falls is a thrill even on the big boats.

Photo Paul Fretheim

aged to stay with their boats. The rubber rafts came in two general sizes, the smaller boats that were oar powered, and the really big, commercial expedition rafts that were motorized. I saw two of the smaller boats flip, but it looked like you would have to work at it to lose one of the big ones.

Rafters a Mellow Crew

The Lava Falls Scramble in July is a bit of a contradiction. It's the worst time to do the hike because of the heat, but it's the most fun and interesting time to be at the rapids because of all the river runners coming through. I must have seen 40 - 50 boats come through that hot July day.

The rafters are a great group of people. After nearly three weeks in the wilderness, which is how long it takes the non-motorized rafters to get from Lee's Ferry to Lava Falls, everybody was pretty mellow and the hardened shell of 21st century urban life had mostly evaporated by then.

One of the big, motorized rafts even came down with a 3rd grade class from Sedona, AZ on a field trip. The kids were all asking, "Will we finally get wet on this one?" in bored, impatient tones as the group gathered on the rock above the rapid to check it out before taking the plunge. They were all clinging to each other for dear life and screaming, however, when the boat finally went through.

The big motorized boats are driven by experienced crews that have been down the river many times. They don't usually even stop to check the rapid, as they know from experience where to run. They just gun the motor and crash through the heaviest part of the rapid. Even on the big boats, though, Lava Falls is a thrill and everybody gets soaked. It costs about \$3000 per person to make the run down the Colorado with one of the big operators. They are booked years in advance, so I guess a lot of people are able to pay it.

Flagstaff Crew Saves the Day

By mid afternoon my hand was starting to throb and I knew I was going to have to try and find some way to get the remaining splinters out. A group of private rafters from Flagstaff had tied up upriver and walked out to the point where I was reading and watching the rapids. We visited for a while and I learned that they had a nurse and first aid kit along on their expedition. I walked back to their boats with them. After the nurse had me sign a release form she gave me a safety pin and a bottle of iodine and I finally was able to dig the remaining thorns out of my hand and sterilize the wounds.

The Flagstaff group got ready to run the rapids and I walked back out to my observation point. The woman oarsman and the flipped boat pictured on the previous page are from their party. One of the gentlemen in their group had done the Lava Falls Scramble before. He concurred with me that it was a pretty difficult route. He made sure that both my water bottles were full before they left.

Back to the Rim

After the sun dipped behind the rim and the shadows of evening began to fill the canyon I started to think about how I was going to get out of there. I decided that since both my 1.5 liter bottles were full, if took my time I could make it to the top of the black chute that evening, bivouac at the foot of the long cinder slope, and then make



My bivouac site on the Lava Falls Route. The rocks glowed with radiant heat for hours after sundown. It was 40° C. until after midnight.

Photo Paul Fretheim

[CLICK IN IMAGE TO OPEN A 360° PANO OF THIS LOCATION.](#)

a sprint for the rim in the “cool” of the early dawn light. I figured if I pushed really hard for the top I could get to my water cache before the sun came over the rim.

I packed up and began the climb. It was still over 40° C. in the shade, but at least the chute was in shadow. The rocks were just cool enough so I could use hand holds. On all but one of the dry falls I was able to lift my pack up over my head and shove in onto the ledge above the fall and then climb up without the pack. I was sweating a lot and needed to drink all but about a half a liter of my water before I got to my bivouac site.

I camped in a dramatic spot below some huge, angular, crazily balanced black boulders, with the vertical cliffs of the Grand Canyon at Toroweap all around. I finished setting up camp just as darkness fell. I was pretty sure I would be able to sprint up to my water cache

in the morning before the sun got over the rim so I felt pretty relaxed. The next morning I broke camp early and was out to my car in less than 45 minutes. I had just finished my last swallow of water before I got to the cached water below the rim.

The Only Way to Do the Scramble in Summer

To hike the Lava Falls Scramble in July safely you have to follow a carefully planned schedule so as to avoid hiking during the hottest parts of the day. Leave the trailhead at the first light of dawn. Be prepared for a cairn marked route through loose volcanic cinders without much of a trail. Be sure to bring poles, as the footing is bad. Not having my poles slowed me down so much I got caught out in the heat.

Cache water at two spots on the way down. Cache a 1.5 liter water bottle for each person at the top and two 1.5 liter containers for each person at the bottom of the long loose cinder slope. I didn't cache water at the bottom of the slope and I really was at risk coming out because of that oversight.

Get to the river before it gets really hot. Spend the day at the river. Toward evening, slowly make your way back up to the top of the black chute. At the first light of dawn the next morning, break camp and sprint to your water cache jut below the rim before the sun hits the slope. If you follow that schedule you will minimize the risk of getting a heat stroke and dying.

Bring a rope for lowering your packs. You can sleep without sleeping bags, but you need them to rig up for shade during the day. A foam pad is necessary to insulate you from the hot rocks so you can sit and rest. Don't forget gloves, as you will need them if you have to climb at midday when the rocks get too hot to touch with bare hands.

Be sure to bring a water filter and two 1.5 liter bottles all the way to the river. I would have gone crazy trying to purify enough water to keep from being dehydrated by boiling, and it would have been really hard to get the water to cool down enough to drink it. A filter is a must.

The Lava Falls Scramble in July is a really exciting adventure, but don't try it unless you are prepared for extreme heat.