The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

The second hike rim-to-rim in the Grand Canyon, on October 1, 2016, required 60,877 steps, according to the pedometer on my smart phone. I wasn't counting, and I forgot to bring the second pedometer, so I have no way of gauging the accuracy of the count, but it's a number to start with, as 6:17 a.m. was a time to start, from the north rim, a place to start, descending on the North Kaibab Trail, a direction to take.

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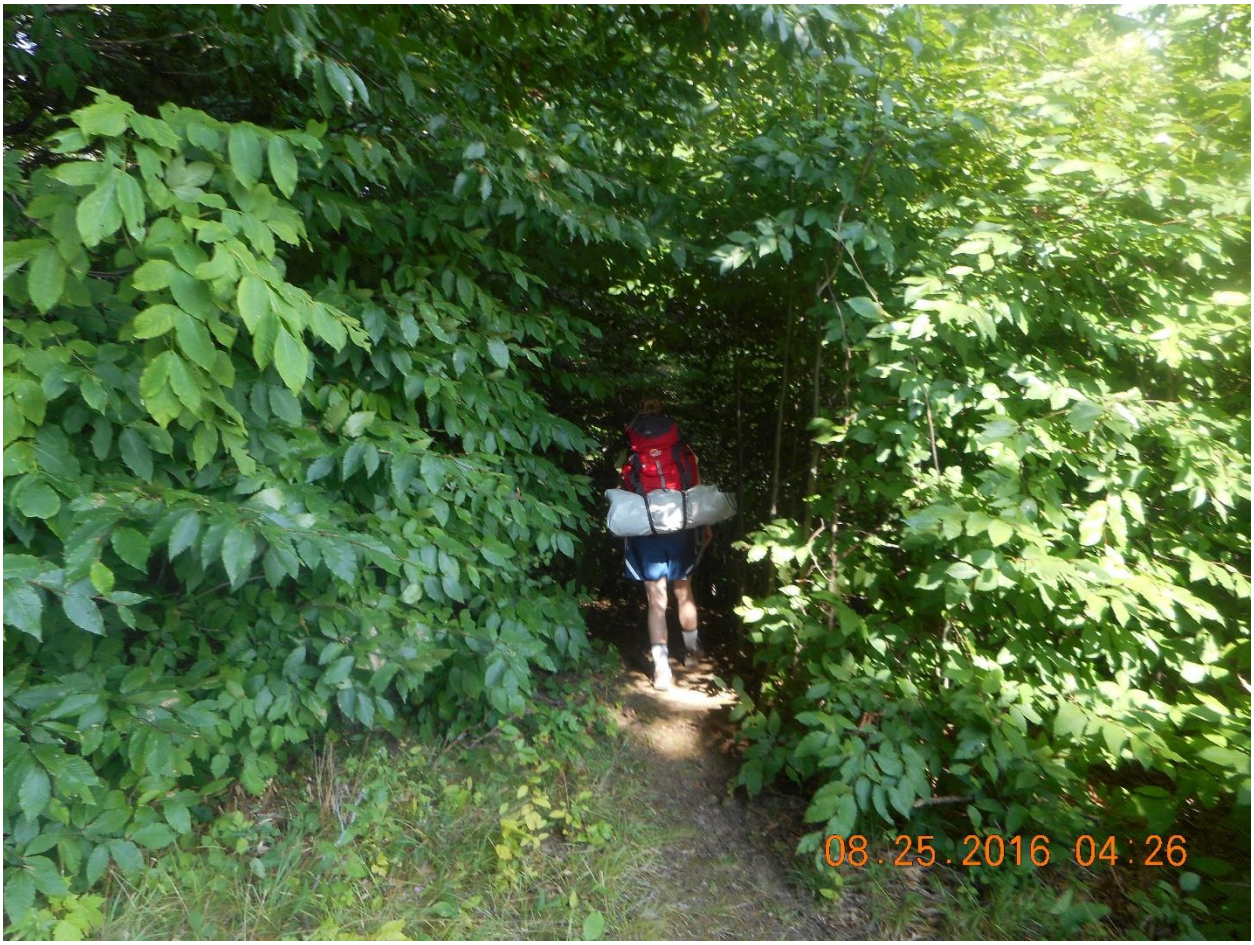
Of course, reasonably intelligent people don't take off on a 60,887-step program without some preparation. I like to think of myself as a relatively intelligent person and therefore spent months preparing. Compared to the preparation, the steps of the day are trivial. I started training for the hike in 2015 about five months ahead of that hike, and, planning to have another hike, I did my best not to lose all of my conditioning. It is easier to start serious training from a certain level of conditioning than from sedentation, and I tried to keep myself at a level where I could pick up a twenty-pound pack and go for at least ten miles, even if not doing that on most hikes during the year. Big hikes came within reach thanks to taking up backpacking in 2004, when I thru-hiked the Finger Lakes Trail. I had information needed to make long hikes work, and the information is, perhaps, even more important than the conditioning. And compared to nearly six hundred miles, twenty-four doesn't sound like such a big deal. Plus, I had all of the necessary stuff: water filters, water bottles, wind-proof jacket, emergency blanket, zipper bags for snacks, non-cotton hiking clothes.

A picture from the Finger Lakes Trail in 2016: photo credit, Eva Perkins



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There is also the difficulty of taking long hikes while also dealing with an almost-full-time job and a chronic illness. It took three weeks to recover from the Grand Canyon Hike of 2015, and I messed up part of the training by overdoing it in August on the Wetherford Trail on Mt. Humphreys, making September a tricky balance of recovering while not deconditioning. I did not mess up my training in 2016, and it only took one week and a massage to recover from the Grand Canyon Hike of 2016, even though this hike was about three miles farther. The 60,877-step program is the last step of a long process. Nevertheless, that last step is a doozy.

Not everyone can make the last step; these marine fossils are of animals who got stuck when the Kaibab limestone solidified. I doubt that more or better training would have helped in their cases.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

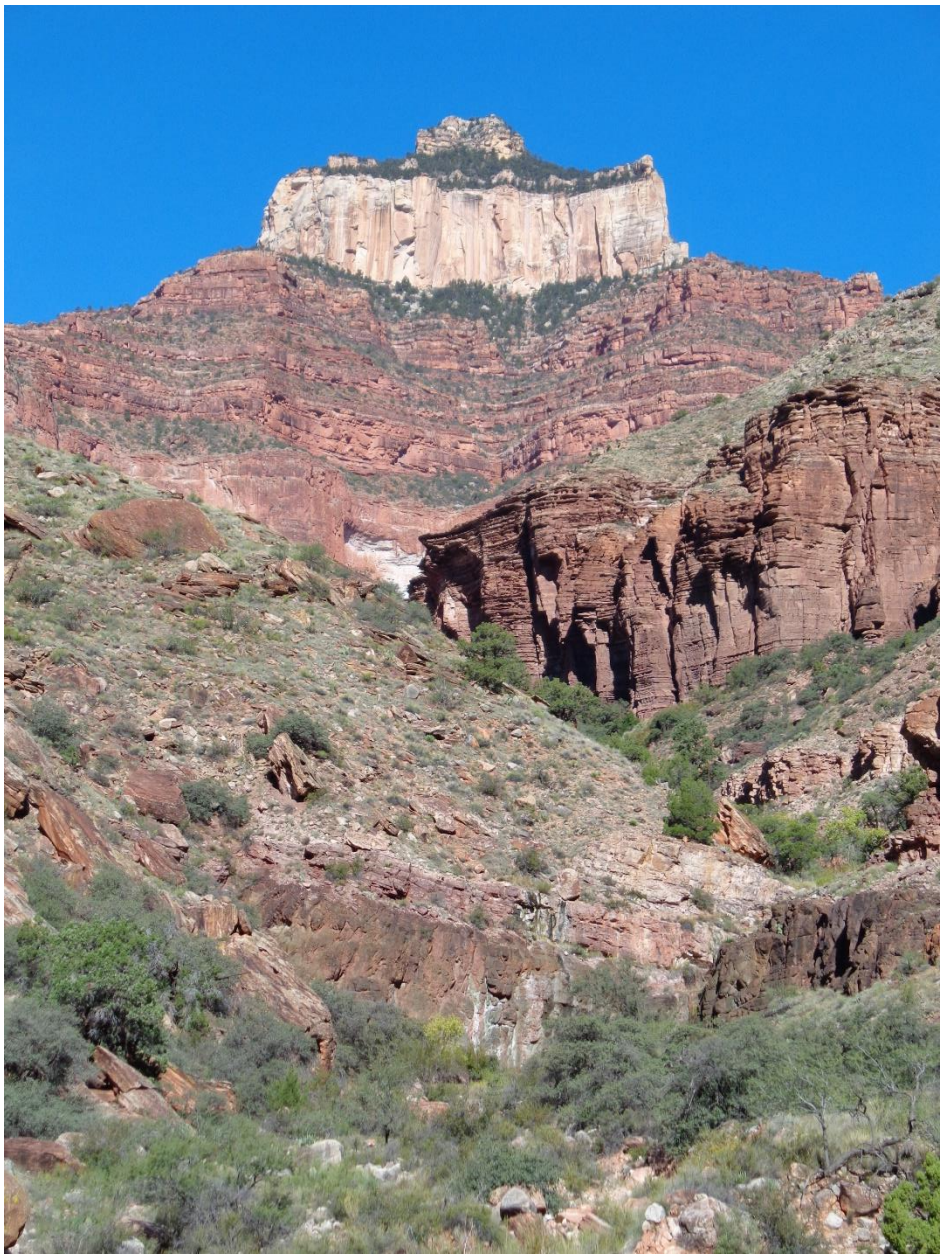
I tried to take different pictures on this trip from those on the previous trip, but the hike down the Bright Angel Canyon is impressive and irresistible. The light was different because I made an earlier start on a later day of the year this time. There were also other hikers because I was in the canyon on the last full weekend before the north rim closed for the season, so it was everyone's last chance to hike the corridor trails before the north rim became inaccessible (legally inaccessible). And apparently, everyone was in the canyon. Sometimes, it seemed like a parade, even if a loosely organized and spacious parade. Fortunately, the canyon is large enough to dwarf hundreds of people, and fortunately, the canyon is large enough to discourage most people from trying to hike across it. The canyon, and the experience of hiking the canyon, would lose a great deal of its appeal if the trails were covered in people as thickly as Times Square for New Year's Eve.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

If I were going to mess up by overtraining, the Weatherford Trail on Mt. Humphreys was a good place to do it. The trail closely approximates the distance and altitude changes of the rim-to-rim trails, but upside down, going up first and then down, and with higher altitudes reached, thanks to going up instead of down. It seemed like a good idea at the time.

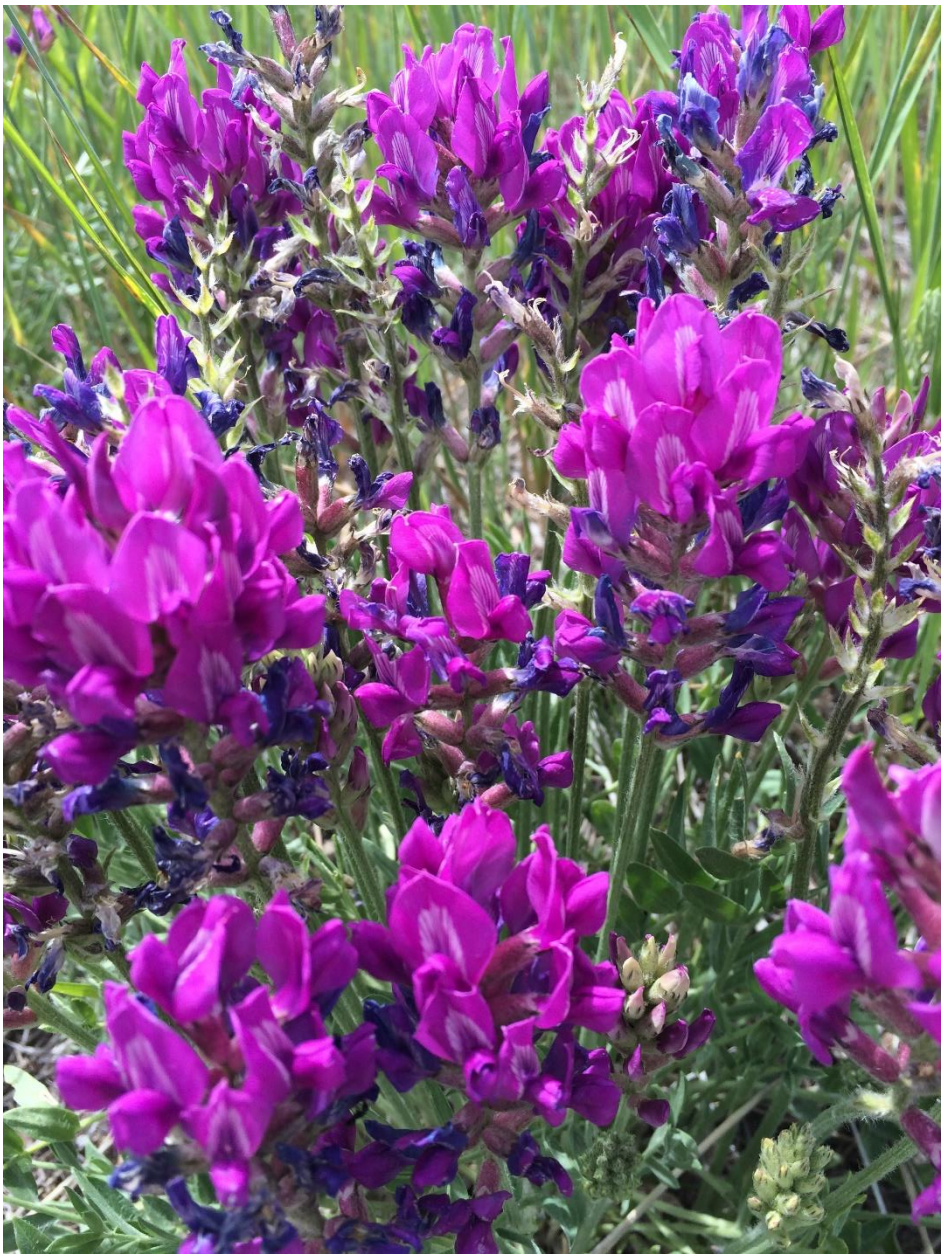
The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

In 2015, I took about a bazillion pictures of this formation, including the white Kaibab limestone on the top, but I couldn't seem to get the shot I wanted. This is the shot I wanted. It was worth another 60,877 steps.



The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

And if I were going to mess up by overtraining, August was a good time to do it. It did give me enough time to turn myself around to make the 2015 hike, and the flowers were in full bloom on the Weatherford Trail thanks to the annual monsoon. These are, so I think, Coulter's Lupines (*Lupines sparsiflorus*).



The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

I saw many more lizards this time through the canyon; the temperatures were about ten Fahrenheit degrees cooler than in 2015, so the lizard activity surprised me because I was expecting more activity with higher temperatures. This looks like perhaps a western fence lizard (*Sceloporus occidentalis*), or maybe a prairie lizard (*Sceloporus consobrinus*); clearly, my herpetological skills needs some work. These, either kind, often have mottled coloring, which doesn't apply here, but the shape is right, and the canyon animals often seem to have different colorings than might be seen elsewhere. This species is common throughout the southwest, but this was the first of its kind that I've encountered, whatever species he is.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

Of course, my all-time favorite lizard is this guy, a mountain (or greater) short-horned lizard (*Phrynosoma hernandesi*). I'm not enthusiastic about sharing trails with aggressive bikers, but without them, I never would have met this lizard. I leapt off a trail on the sunset side of Mt. Elden in Flagstaff during a training hike, to avoid a biker who nearly creamed me, and this guy scampered toward his log to avoid me. Aggressive bikers can ruin everybody's day. One of my favorite things about short-horned lizards is that they are slow enough that I can catch them. I continue to learn the many subtleties of lizard facial expressions; yes, little quadrupeds who are covered in scales can have facial expressions. This guy started out marginally frightened, then went to irritation, and by the time I had my camera out, had moved on to miffed resignation. I had no idea that these kinds of lizards could grow as large as a good-sized baking potato; now I do. Training is both physically and intellectually educational.

The gloves protect my hands from the sun, not from the lizard. I have handled many of these lizards without gloves, with no unpleasant side effects for me. I don't know how this feels to the lizards, but given that some of them seem to like being petted, it must not be too bad.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

Preparation for the hike in the Grand Canyon, and for hiking in general, included intellectual preparation. Here's an irrelevant commercial for Vladimir Nabokov, an astounding writer and thinker and even an amateur lepidopterist to the extent that he has genera, species, and subspecies named for him. Thanks to reading Nabokov, I now notice and pay attention to butterflies more than I would have without having read Nabokov. Once again, information that might seem to be irrelevant to non-readers to be has changed my hiking life for the better. This is a white admiral, *Limenitis arthemis*, on the Weatherford Trail.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

I hiked along the Arizona Trail near Mt. Humphreys for some longer, gentler altitude training.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

I caught two insects in one pictures, an Aphrodite fritillary (*Speyeria aphrodite*) and what is likely a black variant of a tachinid fly (*Adejeania vexatrix*). The fly is enjoying pollen as an adult; as a larvae, it hatched into the body of a caterpillar and ate the caterpillar from the inside out. I have another picture in which the fly is in focus and the butterfly is blurry, but I chose this picture; caterpillaricidal maniacs are better when blurred.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

I did some training for heat in Phoenix, but gave up on that quickly. I can't train for heat. It just makes me feel lousy, and I have to recover from the heat, even though I don't take strenuous hikes in the heat. The only way to deal with the heat is to cover up like a niqabi and chug Thermotabs at a rate of one tablet per ½ liter of water, and a liter of water at least every five miles. This is a commercial for Thermotabs. Nothing better for heat. Except cold-bloodedness: this common chuckwalla (*Sauromalus*) didn't need water or Thermotabs and was basking in the sun while enjoying the view from Camelback Mountain, or at least keeping an on the sky for predators. (Chuckwallas get to have only one name in their scientific designation because they are the only members of their genus.)

For a while near the bottom of the canyon, where the terrain is flatter, and the temperature is hotter, there are significant grasslands. The grasses are huge, over six feet tall, and I did not succeed in taking a decent picture of them on the first attempt, in part because I waited too long, until I was in them. This picture was taken near a small patch of them that was not part of the larger grasslands, as can be seen by the groundcover plants growing under them. In the grasslands, the grasses are thick, as is the shade, and very little grows below them. They are possibly an invasive species, and I have not been able to determine which; possibly invasive because the list of native grasses provided by the National Park Service includes only small grasses. However, careful readers of the previous installment on the Grand Canyon will know that there are good reasons to be skeptical about any information provided by the National Park Service.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

I did a lot of hiking in and on and through and around the granite dells in Prescott. The granite dells are unique in Arizona and provide an excellent variety of training possibilities, including lots of different ways to place my feet, which helped me to strengthen the tiny muscles in my feet that are so easy to exhaust but that have to hold up all day in the Grand Canyon. The granite dells gave my feet the strength they needed to stay in good shape throughout the hike. They were a little bit stiff by the end of the hike, but a little bit stiff after 60,877 steps seems reasonable.

Granite is great, but the Vishnu schist remains my favorite. I spent some time with the fossils on the way down because I'm always trying to expand the possibilities for my own appreciations. It never hurts to be interested in fossils, and I was very interested, but as soon as I got to the basement of the canyon, the Vishnu schist took over all of my attention and interest and appreciation once again. I found that I kept trying to read the pink granite inclusions. They look like the start or end of any number of writing systems. What would the rocks be writing about? Questions like this can keep my mind busy for hours on a hike.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

The banana yucca (*Yucca baccata*) is a common yucca in and around Prescott. It never ceases to amaze me that people will throw water around at irresponsible rates and in irresponsible ways to have ornamental plants that are native to cooler and moister places when these monstrous beauties will grow all over the place without help, provided gardeners just stay out of the way. I'd cover my 'yard' with these, if I had a yard, and if the area around the granite dells weren't already covered in them.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

The bright green Fremont cottonwood trees (*Populus fremontii*) are the first color cue that the Colorado River is within reach, and the first indication for me that it is nearly time for lunch. I eat once during an all-day hike, and for this hike, that was just before crossing from the north side of the river to the south side of the river, about 14 miles into the 24-mile hike. The Phantom Ranch campground is around the bend, with the cottonwood trees, where there is some shade. My boss' daughter works at Phantom Ranch; she is helicoptered in at the beginning of her season and is helicoptered out at the end. I thought of stopping by to say hello, but after 14 miles in the parade, I decided to have lunch alone in the solid shade of the Vishnu schist. During stopping breaks, I always take the opportunity to stretch some of the major hiking muscles, especially calves and the muscles around my hip joints. I see cottonwoods and think about lunch and flexibility. 60,877 steps of any process is bound to have some effect on one's thinking patterns.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

It might be thought that shaking hands with a tarantula (probably an *Aphonopelma behlei*) is a sign of what hiking 60,877 steps might do to one's thinking patterns, perhaps detrimentally, but I make it a point not to discriminate on the basis of species. People spend their entire lives trying for a trip to see and interact with whales and dolphins. Why not tarantulas? This guy was perfectly friendly, and after exploring my finger briefly, he carried on. Nevertheless, I don't think that there's any fortune to be made by creating a tour company that lets people interact with arthropods—one of my many entrepreneurial inspirations gone tragically awry by not aligning my thinking patterns with the majority.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

I have thought of providing reptile safaris in this part of the world. Unfortunately, even in a place with unremitting sun, lizard and other reptile sightings are not predictable enough to schedule tours. This one, probably a common lesser earless lizard (*Holbrookia maculate*—the series of syntactically unparsable adjective in the English name is another good reason to have scientific names) really didn't want to shake hands and moved along quickly during the hunt. Even so, if anyone would like to schedule a reptile tour, I'd be happy to throw something together. It takes a hike to the bottom of the Grand Canyon to visit some of the lizards.

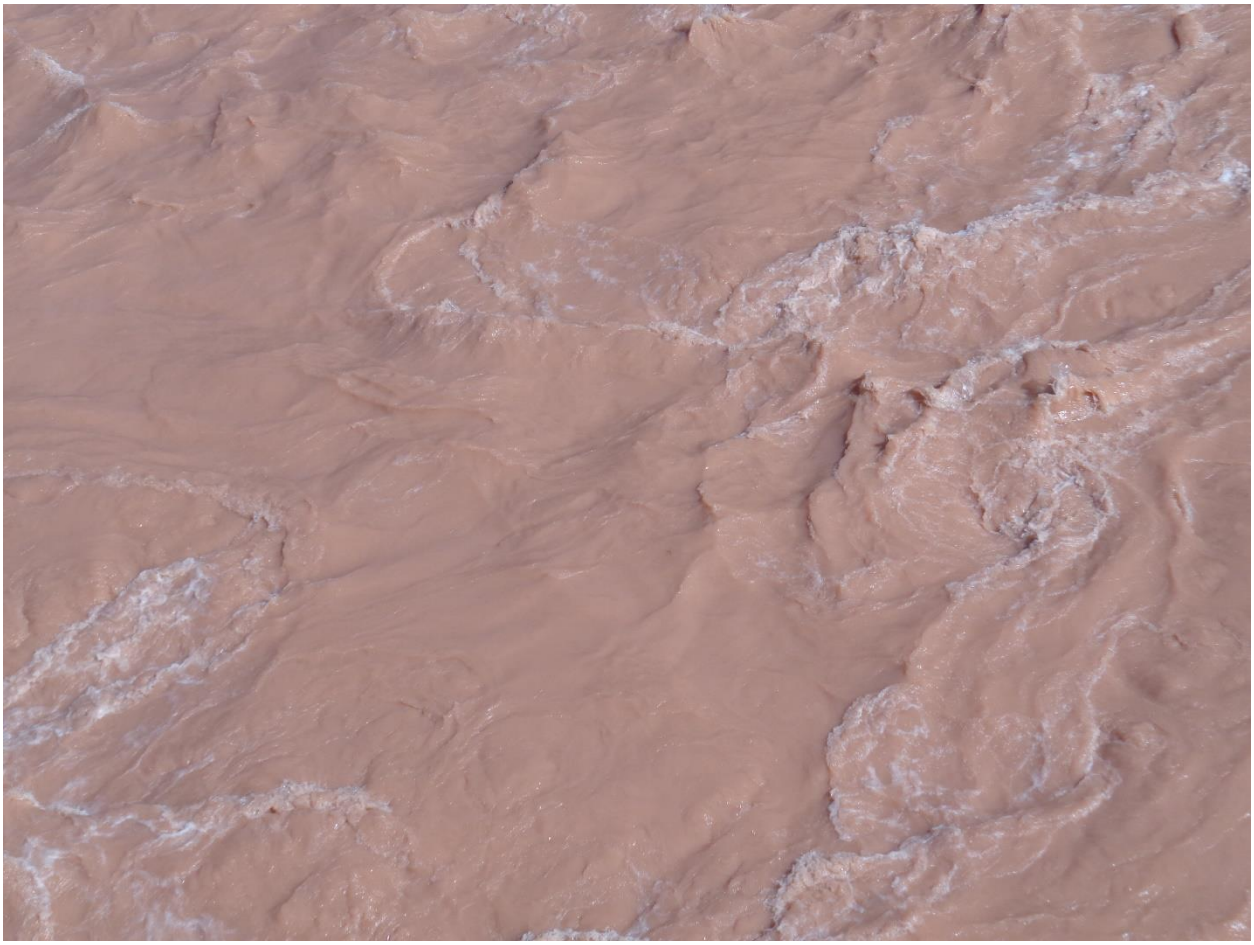
The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

Hiking shoes don't last forever. I had to replace the hiking shoes about a month before the hike in the canyon. It's easy enough to tell when shoes need to be replaced; they become slippery on the rocks, and as the soles deteriorate, the rocks become encroaching individuals rather than just textures on the ground. Mom sent money for my birthday, so I bought shoes. These are the birthday shoes, with a bear track I found on my birthday hike on the Groom Creek Loop Trail. Missed the bear. But I won't refuse a good track.

With all of the information on preparation, hiking the canyon might seem more conceptually difficult than it is. Mostly, it's a lot of walking, 60,877 steps of walking, and following simple directions on rare occasions. There are miles and miles and sometimes mules.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

On the 2016 hike, I spent more time with the river than when on just the Kaibab trails, when I just crossed it and starting ascending. This is the Colorado River, loaded with silt and moving turbulently.



The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

A view of both of the suspension bridges across the Colorado River. The one in the background is the one for the Kaibab trails, and the one in the foreground is the one that connects to the Bright Angel Trail on the South Rim. I had been hoping that the longer trail would be a more gradual ascent, but with all of the relatively level hiking along the river, it had become clear that there was no easy way up the Kaibab Limestone and Toroweap formation and Coconino Sandstone. But that was a lot of interesting hiking away, so I didn't worry too much.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

All of the training that made it reasonable to go into the canyon became useful on the ascent. This is a look back at the relatively level hiking along the river, just before turning south up a ravine on the Bright Angel Trail.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

The Colorado River is a unique experience in the canyon. It is visible from only three vantage points on the south rim, and even when in the canyon, it took approximately a fourteen-mile hike to reach it. On the 2015 excursion, I only crossed the river. The rarity of the experience with the river, and the relative rarity of any experiences of water in Arizona, made my couple of miles with the river among my favorites. This was a quick look back at the river before getting far enough into the ravine not to see it any more.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

The corridor trails in the Grand Canyon were created and maintained originally for mules. The mules are now recreational, but the campgrounds and the no-longer-active-mines in the canyon were constructed with supplies that were carried into the canyon by mules. In order to keep the trails stable under a variety of conditions, the sandy parts of the trail commonly have wooden stairs to prevent inordinate erosion of the sand. The logs also function as dams for mule urine; there are a variety of insects and other invertebrates who make a living on mule waste, both solid and liquid. Unfortunately, they cannot work quickly enough, and portions of the trail that look like this often have a strong stench of ammonia.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

The Bright Angel Trail has shade and a greater variety of terrain than the South Kaibab Trail, which is predominantly along a ridge, leaving hikers exposed to the weather. The Bright Angel Trail follows a ravine, which has a creek in it and thus allows for some grasses, shrubbery, and cottonwood trees that cannot grow along a ridge. The shade also keeps the temperature down a bit and diminishes the solar heat radiation. Although the hike rim-to-rim is about three miles longer on the Bright Angel Trail than on the South Kaibab Trail, the conditions along the trail are generally milder, for heat, for sun, for visual variety.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

This tree is near the Indian Garden Campground. It's hard to believe that in this humorless and insensibly sensitive era that the name of the campground has not been changed, but here it is. I took a solid break at the Indian Garden, chugged some V-8 juice (thus lightening the load while replacing electrolytes and fluid) and stretching some major hiking muscles, especially the gastrocnemius, soleus, and gluteus muscles, all of which are crucially active during ascents.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

At this point in the hike, it can seem like a really long day. It helps to meet the bighorn sheep. Despite the parade-like nature of the hike, I was one of the few people who saw these animals. They charged across the trail in front of me. The people who were ahead of me were far enough ahead to miss them. They seemed to disappear, but when I came up to where they had crossed the trail, I looked around. Bighorn sheep don't disappear. They were settling in to this grassy and brushy area for an evening repast. Even as I was standing next to the trail staring at them, exhausted hikers passed me and did not bother to investigate why I was staring at the distant flora. People who are too tired to look at the bighorn sheep are too tired.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

I knew I'd done a good job of training for this excursion: not only was I stopping to look at bighorn sheep, I was also stopping to take pictures of spiders. This is a jumping spider, probably *Phiddipus johnsoni*, probably a male because females are larger and have a black stripe on their abdomens. These spiders are a one-animal Halloween celebration, being spiders who are orange and black.

But—after enjoying the spider and congratulating myself on the excellent training, I walked right up to this cliff. Congratulations may have been out of order.

The sixty thousand eight hundred seventy-seven step program, Marla Perkins, Ph.D., 2016

The cliff is not as bad as it looks for hiking. Thanks to many switchbacks, there are about three miles of trail between the previous picture at the base of the cliff and the top of the canyon. It takes some time, and it is steep, but it is not necessary to climb vertically. All of the training was useful at this point—I had been on the trail for about ten hours when I reached this part of the trail, and I had passed five thousand feet, which is the altitude at which I live and do most of my hiking, meaning that the most strenuous part of the hike, because of the combination of oxygen thinness and trail steepness, was at the end of the hike.

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After hiking from sunrise to moonrise—twelve hours and three minutes—I reached the top of the South Rim and finished the 60,877-step program.