The Geology Assistant

Never volunteer to be a geology assistant! Why? Because the geology assistant carries all the rocks. Slick brochures for "Geology Summer Camp" don't reveal that first-year geology students serve as slave labor to the "real" geologists, who carry the rock hammer! Geology-camp recruiters use beautiful images of mountains, valleys, and scenic vistas, to lure prospective geology assistants into lugging fifty pounds of rocks in their backpacks, collected by the geologist, across miles of hot, dusty terrain.

At least, that's the conclusion I reached by the end of the day, that I served as the geology assistant to Dr. Andrew Snelling. We were on a field trip in the summer of 2002 for the RATE Project (Radioisotopes and the Age of the Earth) to collect rock samples along the Seven-mile Trail, in Yosemite National Park.

We were collecting a sequence of granite samples containing radiohaloes from the top of the Canyon near Glacier Point to the valley floor and from west to east across the Park. Granite samples had been collected from many other locations around the world for the RATE Project, and Yosemite would contribute important data to our effort to document a process we coined, "accelerated decay." The RATE Project concluded from several lines of evidence, including the unique characteristics of radiohaloes in granite, that the age of the earth is thousands, not billions of years old.

Andrew and his wife, Kym, traveled from Australia to Arizona to participate in a Grand Canyon tour and later joined my wife, Jeannette, and me for three days in Yosemite. Our visit occurred during the Fourth of July celebrations in the Park. That's another thing you should never do -- drive in Yosemite Valley on the Fourth of July. The traffic is bumper-to-bumper on the valley floor and moves at a snail's pace.

The four of us stayed at the historic Wawona Hotel near the south entrance to the Park. President Teddy Roosevelt stayed in this same hotel during his visit to meet John Muir, the person most responsible for preserving the region as a national park. The grounds of the hotel were decorated gaily with flags and red and white

bunting. A barbeque with hundreds of people seated at tables on the grounds rendered the old, wooden hotel into the era of the 1800s.

But, our business in the Park was to obtain rock samples. So, our wives drove us to the trailhead at Glacier Point where the four of us viewed one of my favorite panoramas anywhere in the world. There is the drama of a three-thousand foot drop-off to the valley floor directly below; the Yosemite Canyon stretching twenty miles from the west, past Glacier Point, and eastward thirty miles over bare granite to Tuolumne Meadows near the crest of the Sierras; vertical rock walls the length of the Canyon directly across from Glacier Point; waterfalls hundreds of feet high to the left, to the right, and across the valley; and Half Dome, the magnificent, granite monolith, only a short distance across a "Y" in the valley to the right. Quietly, observing the millions of tourists who visit this overlook each year from just inside the railing was a thousand-year-old juniper tree growing from a crack in the rock. This famous, stunted tree, bent in a horizonal position, was made even more famous by a black and white photograph published by Ansel Adams. It died several years ago leaving Glacier Point strangely mute.

We asked our wives to drop us off with the intention to pick us up at the bottom some four hours later. Unfortunately, because of the heavy holiday traffic the normal two-hour drive took six.

But, the intrepid geologists were oblivious to mundane matters of traffic congestion while rocks awaited our investigation. Andrew had the rock hammer, which along with his PhD in geology, a permit from the National Park Service to collect samples, a geological map, and a global positioning satellite (GPS) receiver to locate our position within six feet, made him the leader. My trusty backpack with room to transport, up to fifty pounds of rock, made me the follower. My PhD in atmospheric science carried no weight on the expedition, except possibly, for an early warning of pending inclement weather.

We intended to hike down the south wall of Yosemite Valley and collect fresh, fist-sized, granite samples every hundred yards or so. We were provided with written instructions by the National Park Service as part of our permit, how to avoid alerting other hikers on the trail to our secret mission of "desecrating" public land. Andrew was to keep his rock hammer hidden from the public always; we

were to avoid collecting samples or making hammering sounds that other hikers could see or hear as they walked along the trail; and we were not to leave any traces along the trail that left evidence we had collected samples.

Several years later, when attempting to obtain permission to collect rock samples in Grand Canyon, Dr. Snelling had been denied a permit to collect rock samples. This denial was in response to pressure from anti-young-earth groups and officials at the National Park Service. The reason for the denial was not for inappropriate collecting practices, because young-earth creationists have gone the extra mile to maintain quality, professional sample collecting practices. It was due to simple bias against young-earth creationists using the Park. It took threats of a lawsuit to restore the freedom for creation scientists to have access to the Grand Canyon.

In addition to carrying the rocks, my second assignment as geology assistant was to be the "lookout" for our clandestine operation. I was to keep an eye out for interlopers, up and down the trail, and warn Andrew, if anyone got close enough to hear or see our extraction of rock samples. We felt like cat burglars, sneaking along the trail and through the woods. The purpose of hiding the authorized collection was to not encourage unauthorized collecting by the public. According to public law collection of any object, whether plant, animal, mineral, or artifact, in a national park, is illegal unless authorized by an appropriate federal official.

So, down the trail we bounded. We had seven miles to hike in four hours, including the time for stops along the way to select a sample from an outcrop which was not weathered, covered by vegetation, or too obvious from the trail. We stopped every hundred yards, or so, to consider a collection site. Andrew would use his rock hammer to break off a piece of granite about the size of a clenched fist, place it in a zip lock bag, mark the bag with a sample number, and hand it to me for storage in my backpack.

Then he would use his GPS receiver to locate the latitude, longitude, and elevation of the collection site. And finally, he would document all the specifics of the sample in a notebook, including a description of the site, a photograph of the site, and its position on his geological map. So, you can see why he got paid the big bucks.

We worked our way down the trail, and after taking a short break for lunch, found ourselves eventually walking on less inclined terrain. As the ground became flatter I began to realize my backpack contained a progressively heavier load. I counted the number of plastic bags and was surprised to find over two dozen samples. At about two pounds apiece I was approaching the normal weight carried by a fully equipped marine. And we still had about two miles to go to meet our wives!

Most novice hikers and backpackers think that hiking uphill with a heavy load is harder than hiking down. However, those who've carried heavy loads both ways know what happens to your legs and feet on a downward trek with a heavy pack. Your knees take most of the abuse, followed by your toes being crammed into the front of your boots with each step.

And, finally, your lower legs turn to jelly and begin to quiver uncontrollably if you don't take more and more breaks. On the day after such a strenuous hike, it may take hours to get your legs to function properly again if you haven't exercised for several weeks prior to the hike. Hey, I had prepared for this. I had walked at least a mile the preceding week!

When Andrew and I reached the valley floor and located the place where our wives were to meet us, we found a constant stream of traffic. We had completed our mission but arrived about a half hour late to the rendezvous. As we waited, we became concerned that Jeannette and Kym may have thought they missed us and drove somewhere else to look for us. But, that was not the case at all. It turned out they had gone into the Yosemite Village area and got trapped in the Fourth of July traffic. It was so bad they had no time to shop. You know it's bad when your wife doesn't shop! Once they returned to pick us up, ninety minutes late, they reported heavy traffic throughout the entire valley. Don't go to Yosemite on the Fourth!

The granite samples collected at Yosemite that year contributed to an entirely new understanding of earth history. Radiohalos embedded in the black mica specs of the granite we collected, left telltale features that showed the rocks in Yosemite and around the earth are not billions of years old, but thousands!

This revolutionary finding is a magnificent validation that the Bible is reliable when it says Adam, the first man on earth, lived just a few thousand years ago. An interesting corollary finding, was that the massive exposure of granite in the cliffs, domes, and mountains of Yosemite, cooled from hot molten magma in just a matter of days, not millennia. Can you imagine how earthshaking such a transformation in the view of world history would occur if these conclusions were fully accepted!