

Table Mountain Star Party, Ellensburg, Washington, July 24-26 2003

A handful of steep dusty miles north of Ellensburg, Washington, and up to 6438 feet, the climb to Table Mountain reaches beyond the wind and sage of the valley. The road I was climbing took me past my place of a little 1996 essay called, *Notes from the Field*, where I had once carried on a dawn-to-sunrise conversation with the red-winged blackbirds in a marsh while debating the merits of a geology PhD. Now the marsh is dry and the blackbirds have gone and the PhD has become harp music instead. An irrigation canal of good-sized proportions, perhaps a dozen feet wide flowed swift, clear, and blue-green mere inches beneath a bridge crossing a little further along. Its invitation was palpable, but the morning was still early and I had things to do, places to go, people to see; it would wait.

Beyond the farms and into the high scrub, bands of wind-blown pines and firs alternated with open fields and what might have been the remnants of spring wildflowers, but probably not, this is the end of July after all, and the news reports were warning that drought conditions now are at levels typical for the end of August. Wildfires are sprouting all over the west. The sky became progressively deeper blue; the clouds to the west and south were high cirrus, indicators of changing weather coming from the west perhaps, but hopefully not. Rain is badly needed, but not while the astronomers and their magnificent toys hold court on Table Mountain this weekend.

Table Mountain, place of legends; I had heard stories about the star parties years ago and its name had appeared on various geologic and topographic maps of the area. It occupies the furthest northeast corner of the Geologic Map of Washington, Southwest Quadrant sheet, nearly but not quite out of view. In the landscape and on the map, it is the northeasterly most outlying stringer of Columbia River Basalts, which erupted from their slashing fissures in the crust off to the southeast near the junction of Washington, Oregon, and Idaho. Table Mountain seemed to be topped by the 14 - 15 million-year-old Wanapum group of basalt flows. As is the case worldwide, areas of a particular rock type or age are given names that reflect their unique geography or earliest inhabitants, in this case, an northwest Indian name.

Many switchbacks and middle ear pops later, the road having become a skinny strip of ragged asphalt, a sudden corner was turned and over the unguarded edge the Ellensburg valley flowed east and west. To the southwest Mount Adams rose. Further west it had to be Mount Rainier, surging out of the blue dusk of its surrounding granitic carapace, white glaciers blinding in the morning sun. A surge of excitement raced through me. I was getting close. Two minutes later I rounded a final switchback and there across a large meadow gleamed the row of mobile homes, campers, and trucks lining east side of the main telescope field. I had arrived!

I had heard that participation would be limited to 700. And one could assume nearly that number of telescopes in the main viewing field, and in the neighboring field. Telescopes of every conceivable size, design, and innovation, plus their attendant

hard and software were on display. How would a newcomer to this extraordinary event find her way in and around to a place of comfort and acceptance? The entire spectacle was nearly overwhelming. I drove in, hoping I would find a niche from which to give back something of what was being shared here.

People of all ages were strolling, shopping, and visiting, talking tools, lenses, and gear, eating, and playing with the kids, while under silvery space blankets the telescopes stood bound and silent. I set up my little tent, pulled the harp into a sliver of shade and went a'wandering. I found old friends from Project AstroBio and was invited for my first sky view; at 11 am it was the sun, seen through a solar telescope dedicated for that purpose. With a special (H-alpha) filter attached, there were large, clear prominences at 11, 4 and 5 o'clock to see, each of which arced away from the sun's gaseous "surface" for millions of miles; this was a first for me! An adjacent similar scope gave us a visible light view of one very circular sunspot umbra with its surrounding circular penumbra, then far out on a limb and rotated nearly out of sight, was the massive sunspot group that a friend had told me about a few days earlier. (Two years ago, during the solar maximum, I found and downloaded dozens of images of the sun; spots, prominences, filtered views, coronal mass ejections, I was a glutton for all things solar). The main telescope field was next and amid a thicket and forest of tripod legs, ladders, camp tables, lounging chairs, and protective carpets on the dusty ground, I was pulled in every direction by what to my uneducated eyes seemed to be every style and size of telescope. I immediately recognized the elegant Meades (I'd had an 8" LX200 for several years till its weight and bulk caused its sale), the clunky-looking but extraordinarily large and effective Dobsonians (and later I heard the story of John Dobson, avatar of telescope viewing for the general public). There were few refractors but one stood high on a tripod, unusual in its historical profile, with an eyepiece that needed a 10 foot ladder for viewing! Under an arched tent a behemoth was waiting, a Dob with a 30 inch mirror, and a tube that must have been more than 12 feet in length. Suddenly the anticipation of night burst bright nova-like behind my eyes and my body goose-bumped all over.

Back where the humans were, I picked up the harp and found a good vendor booth where I was invited to play music. They took my cd's on consignment, and we all quickly agreed that this was a winning combination, the music drawing in curious observers who then became buyers. The afternoon passed in great camaraderie.

I gave my Project AstroBio recruitment pitch talk after dinner, then, as suggested by a new friend, took my harp to the point of land called Lions Rock to play for sunset. This has been a favorite time of evening to play since first doing it at Cabo San Lucas, Baja Mexico, and on many weekend evenings this summer so far, harp music has accompanied sunset at a Seattle public beach. A bagpiper was already at Lions Rock, so we traded songs, taking turns. He played the haunting and beautiful Scottish highland airs; I played from my Celtic repertoire and some pentatonic improvisations, finally playing the sun into the western hills with a full descending glissando. Silence then descended over, around, and beyond the dozen or so of us

on this rocky prominence. To the east the pale lilac advance of the earth's shadow was creeping forward. The earlier high cirrus clouds had solidified to some substantial alto cumulus, though still broken and revealing plenty of cobalt sky. But we wondered about those clouds, with night coming on. The hot orange lights of a new wildfire in the Yakima area could be seen, smoke beginning to spill over into the Ellensburg valley. We wondered about this dry summer and the fire dangers all round.

Back at the site, the next presenter was still working, and speakers would continue till dark. But then things got quiet and intense. On the second night I realized it was not just my imagination. After dusk a sense of anticipation that you could taste, hung in the air. Where was everybody? Making last minute instrument checks? Grabbing a last minute nap before dark? Putting the smallest children to sleep? Dusk turned to dark blue, which turned to black, and with full dark, the stars burst out of the blackness. There was no white light allowed or present at the site, flashlights were covered with red plastic, and tiny red LED lights glittered all over. Navigating through that forest of instruments now complicated by bodies was easy once our dark-adapted eyes were fully dilated. There was light pollution on several horizons from distant cities, Ellensburg, Yakima, Wenatchee, but it was clear and dark overhead. The wildfires we had seen earlier from Lion Rock were raging along the ridgeline across the valley, made frighteningly huge by the telescope views. The Milky Way was a veil of lace; there was so much structure. The passage of time was marked by that most ancient and essential of timepieces, earth's rotation, and thus the stars wheeled in slow majesty over our heads, and were reflected in our adoring eyes.

This rich dark night sky was not a stranger for me; I had spent many hours under its majesty ogling Aurora Borealis with my dad, as a child in the Okanagan valley of BC, then as a young mother learning the constellations and star names in upstate New York. My daughters and I had a ritual on many clear dry fall nights where we took sleeping bags, pillows, a red-covered flashlight, a thermos of cocoa, and a star chart to the open field across the road from our house. We snuggled into the bags, got the sweet cocoa down, and romped through the constellations until we fell asleep. The chill of dew would wake me up some hours later, and I would shepherd my lambs to their beds, afterimages of infinity specked with diamonds set against my retinas.

Here I stayed close to the 30" Dob, which was adjacent to a friend's 16" Dob complete with laptop and software showing us exactly where to find things! The pesky high clouds of earlier in the day and evening were thinning out, finally drifting away completely about 2 hours after full dark. But still I saw galaxies, nebulae, open clusters, double open clusters, globular clusters, aimed the 16" Dob at the center of our galaxy just because I could, but it was just a mass of stars like any other part of the galaxy until I found one open cluster after another just by strolling through it. Then Mars rose. At first through the haze of fire smoke and normal low-atmosphere moisture it glimmered and danced. By the time it was about 30 degrees high, the

clouds were gone but still its edges were blurry and too indistinct to resolve properly. But with the last of the clouds gone, all that silent, still, massive spread of diamond dust laid itself before us, ripe for our imagination and science to explore. I was whisked to one M-object after and other until finally the excitement and exhaustion of the past 19 hours caught up with me and I stumbled back to my tent but not to sleep inside. That was unthinkable. With these eyes so open infinity was reaching inside to change my circuitry, I laid out on my sleeping pad and pillow, tucked and warm inside a space age down sleeping bag, and let my eyelids close down the awesome space on their own.

I woke up with the sky shifted many degrees westward, and a rising waning crescent moon shining like a flashlight into my eyes. Now the tent welcomed and I slept the rest of the night till the hot morning sun drove me out.

That was just the first day!

My training and teaching as a geologist was discovered and I was invited to participate in a morning geode-search with the kids' group. So we walked up to the area of Lions Rock and banged on the basalt looking for the vesicles that would yield to first human eyes in that moment, their little treasure of quartz crystals. We didn't find much that day, though others before us had been more successful. We agreed to try again the next day, this time looking for cristobalite, a polymorph (same chemistry but different atomic structure) of quartz. The hot dry afternoon passed with the harp holding court in the consignment booth, the cd's sold out, and I gave a second talk to fill a suddenly open speaker's spot, this one on astrobiology, especially Europa and Mars and the explorations for possible life there. Dinner was followed by a second sunset concert by harp and pipes and this time, campers from the area not associated with the star party joined us. We were over 20 people on that rock by the time the sun set! This time the visibility was vastly reduced due to the lingering smoke, Adams was still visible but Rainier was barely there. No active fires could be seen this time from our perch. And this time the overhead arch of sky, having shifted from cobalt to robin's egg to turquoise blues in the space of an hour, was clear of any cloud. The evening anticipation built, the dark settled in, and it began all over again.

Saturday's field trip with the children and their parents yielded many clusters of the beautiful, bubble-shaped (botryoidally crystal habit) cristobalite, and some of us squatted in the dusty road drawing cross sections of the geology of the Pacific Northwest. I packed to leave, having a 5:00 pm commitment in Seattle, but spent some time with several children talking about space and stars, rocks and life, and of course, music. I'm looking forward to hearing from some of my new young friends by email. But my experience was not unique; we all shared such a wealth of information and excitement, I feel profoundly enriched by new friendships and this new experience. I am a convert, a believer, a devotee, a groupie...and I am searching for the next star party as I write!

Hot, dry, dusty, deliriously happy, I headed down the mountain toward home, but the first order of business would be a body of fresh water for a quick dunk. Rivers in the valley would be fine but even before that, I found again the fast, clear canal. Off the road to pull up before a cattle gate, into the swimsuit, out of the car, and into the water. All in less than 5 minutes. It was fast flowing, I had to scramble afloat not to drift too far, but it felt fabulous. 2.5 days of mountain dust joined the river sediment and hair dripping, body cooled and refreshed, in another 5 minutes I was back in the car, on the road, heading home. I made my appointment only 20 minutes late, and the rest of the evening was spent in a state of heightened awareness of all beauty.

Later that night, looking at the few faint stars visible from my driveway (and with my eyes not adapted to the dark, like they were on the mountain), I could feel my new friends and their magnificent toys soaking it all up for the last night. That mass of glittering diamonds studding the black infinity was overhead even though I couldn't see them. They hold their surprises in store for us, if and when we can release ourselves from the city's grip.

I am still trying to find a way to get to the next star party, the Oregon Star Party, east of Prineville, Oregon, at the end of August. Just in time for the nearest apparition of Mars in some 60,000 years, give or take a few years. Their web site shows an empty speaker spot at 4 pm on the Friday. Hmmm. Would they like to hear about Astrobiology?