

Ormand Family Activity

June 2010: Northern Arizona

Charity has now graduated from High School, and after much soul-searching, has decided to take advantage of her AIMS scholarship at an Arizona university and get as far away from the heat as she can - Northern Arizona University! This week was her Freshman Orientation appointment, so while we are delivering her there for that, we will see some things along I-17 on the way and in the Flagstaff area. These include:

- Montezuma's Castle, the famous cliff dwelling that graced so many painted glasses and decorative plates of the last century
- Montezuma's Well, an interesting sinkhole nearby in the Camp Verde area
- Tuzigoot, another large Pueblo Indian ruin in the Cottonwood/Jerome area
- Dead Horse Ranch State Park, just because the Verde River is accessible there
- Out Of Africa, a safari-theme animal park also in the Camp Verde area
- Sunset Volcano, an example of the many volcanic cones in Northern Arizona, and its lava fields
- Wupatki, a large and historically significant Pueblo Indian ruin
- Lowell Observatory, where the "planet" Pluto was discovered
- Walnut Canyon, another cliff dwelling Indian ruin complex

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Lots of Indian ruins! I think this will hold us for a while. But we also toured the NAU campus on Tuesday morning, and got a good look at Charity's environment for the next four years. The impression I get is that NAU is not as colorful or historic or, well, ad-hoc as the University of Arizona, but they seem to be a whole lot more serious about the mission of undergraduate education. UA is (unfortunately) fixated on being a research university, while NAU is enthusiastically a teaching school.

Montezuma's Castle

We leave Tucson at 8:30am on Sunday Morning after packing up, loading the van, and making a picnic lunch. We stop at a truck stop just south of Phoenix for some sodas - it seems that drug stores and convenience stores in the city just don't have the variety of chilled drinks that a truck stop will have. Emerging from the north side of Phoenix, Charity takes over and drives the rest of the way to Camp Verde, off the exit, through two confusing traffic circles outside the Indian Casino there, and into the Montezuma's Castle parking lot, just in time for lunch.



But before we eat it, we go into the Visitor Center to use our Golden Eagle park pass (this is the last month it's good) and discover that admission is free today! Mom gets her national parks passport book stamped (a primary objective for this trip). And Faith contemplates

becoming a Junior Park Ranger.

Here it is. One of the most enduring icons of the State of Arizona. With an iconic Arizona family.



Five stories tall,
home to 35 to 50
Indians in its day,
developed to a high
level of comfort and
useability... and then
mysteriously
abandoned.





The reason for the village, and a happy sight for any Zonie - flowing water. In this case, Beaver Creek.

The visit to the Castle doesn't take very long, perhaps a half-hour walk around the loop, and we've had our lunch, so we're ready to proceed to the next site.

Montezuma's Well

Which we all think is the most interesting spectacle of the day's visits. Maybe part of that is the incongruity of a large blue body of water in an arid landscape, or just the geologic novelty.



The water is blue because it's 50 feet deep! Charity wants to go swimming in it. There is a path along the rim with a branch that descends into the bowl to the "swallet", the "drain" for the well. Placards tell the usual story of the millions of years for gradual geologic forces to make a cave whose roof collapsed to form the depression. I didn't see any mention of the source of the water, but it flows in at a pretty good rate. We didn't see any water motion at the "swallet", despite the mass of roots and scum floating at the opening.

The Well is not just a depression in the ground, it has a rim or bowl that rises from the surrounding plain. On the inside of the rim, and on the top, the ancient Indians had constructed a complex of cliff and Pueblo dwellings.



The path leads back over the top of the rim and outside the bowl, where we find the exit for the "swallet". The flow is strong, and the water is refreshingly cool.

The ancient Indians had constructed a channel to direct the water to their fields. Which I thought was odd, because Beaver Creek was flowing at the foot of the Well, perhaps thirty feet from the canal. But I suppose Beaver Creek was not a reliable source of water, despite appearances, and the flow from the Well was. I don't think the Indians introduced the poison ivy which Charity and Faith are blissfully ignoring.



Tuzigoot

We continue on our Indian Ruin-theme adventure by driving back to McGuireville, over I-17, and past Cornville out in the Arizona rural areas, to the north side of Cottonwood. On the banks of the Verde River is Tuzigoot (which actually is derived from the Apache Indian phrase for "crooked water", referring to the bend of the Verde).



Outside the Visitor Center (free admission today), Faith attempts the usual "trick perspective photography" thing for the Pueblo on the hilltop.

Part of Tuzigoot has been restored so visitors can get a feel for what it might have been like. I don't think the Indians peeked over their walls like this.





On the roof, you can see the Verde Valley all the way down to Cottonwood, and Jerome up on the side of the Mingus Mountains. You can also see tourists posing for photos. There were actually a fair number of tourists visiting the sites today.

At Montezuma's Castle, there was a narrated diorama that included a mother grasping anxiously for a small child playing on the edge of the cliff dwelling. We were speculating on how many children may have been killed by falling from roofs or canyon dwellings. Here, we recreate such an event, and the parent appreciating the justice that naughtiness receives.





We note that the various dwellings are all constructed differently, with the materials at hand. At the Castle, it seemed to be adobe; at the Well and here, it was stones set in thick mortar. The rooms are small and stack up to the level of the tower; this gives the impression that the dwelling is multi-story, where in fact it is all one level, and just follows the elevation of the hill on which it is built.

The ruins tail off along the ridge of the hill, toward the Verde River visible below. To the left is a valley, apparently marshy, considering all the vegetation, and off to the far left outside the picture, at the foot of the cliffs, we can see springs. To the right is a field which we read was tailings from the smelter at Cottonwood, and the slurry was piped in huge wooden pipes down from the distant smelter and dumped here. A segment of this pipe with its iron wire hoops is just outside the Visitor Center.





Tuzigoot is another quick visit. As we leave to the north, we get this parting picture of what the Indians of 1000 years ago might have seen.

Dead Horse Ranch State Park

Near the bridge where the road to Tuzigoot crosses the Verde River is a city park and a state park. Interested in a closer look at the Verde, we look through the city park. No obvious access; "Riverfront Park" appears to be more for baseball than anything else. The state park is interesting in its own right: [Dead Horse Ranch State Park](#). I was under the impression that pretty much all the state parks were closed due to the financial problems the State of Arizona is dealing with right now, so we were pleasantly surprised to find Dead Horse Ranch was open. Inside is a pleasant drive through some campgrounds and past some fishing lagoons, and at one point near the entrance, there is a access to the river. We spend a couple of hours playing with a real running river in Arizona!

Two river nymphs. Ultimately, Faith's explorations get the better of her, and she is wet to the waist before we leave.



Interestingly, the river doesn't seem to be much of a river. Unless we've made a mistake somewhere, this isn't any bigger than Beaver Creek. At the abovementioned bridge, there was a turnoff with several cars of people starting or ending their day of tubing on a fairly broad Verde

River, so at least some parts accumulate more water than we're seeing here.

But it's pleasant, all the same. When we're done, we wash the mud and sand off our feet, put our shoes back on, and drive back to our Cottonwood hotel so Faith can change into some dry clothes for dinner.

Out Of Africa

The next morning, we get up early as we can for a visit to an Arizona attraction: [Out Of Africa](#), a safari-theme animal park.



This Arizona park is uniquely Arizonan because it is low-budget. In California and Colorado and Florida, they have drive-through animal parks characterized by a sense of permanence or infrastructure. Arizona parks have a feel of youngness or temporariness, with ramshackle wooden buildings and chain-link fencing and vehicles in varying states of repair. For all that, this park is clean and safe, the people are friendly and clearly enjoy and understand what they're doing, and the experience is peerless. The "down-home" feel is just sauce; perhaps a sophisticated Los Angeles visitor wouldn't appreciate it, but this native-born Zonie sure does!

There are three aspects to the Out Of Africa experience:

- The "zoo", consisting of animals in pens, and just like a regular zoo, maybe you will see them, or maybe you won't
- The "safari ride", where a bus-like vehicle tours the area where the animals are free to roam
- Special shows, including the Tiger Splash

The "zoo" part notably featured a rhinoceros, named "Boom Boom". He's quite old for a rhino, about 40 years, and sensitive to the heat, so Home Depot donated a misting system to help keep him cool. Or he lies in his muddy puddle, like here.





White wolves

Macaws. As good as I've seen in any zoo anywhere.



A prairie dog habitat. We were wondering about this little guy. One of the caretakers came along and told us he had been beaten up and expelled from the community by the others. So he lives here by himself, recovering from his injuries, and will likely never rejoin the others.

Lots of lions. When we left for the day, we could hear the lions roaring from the zoo area.



They take good care of the animals. There are ramadas and dens and (fresh) drinking water bowls and (not so fresh) wading pools as appropriate.

A lioness. All the cats were sleeping lazily. Just like our small ones.



Lots of tigers, too.

Including a white tiger, which appears to be a genetic anomaly. White tigers are not as competitive as the orange ones, since the camouflage effect is not as good.



There were a couple of leopards, too. We didn't see the jaguars, or a couple of other animals whose pens were located strangely inaccessible to viewers, but overall, we did pretty good at seeing animals.

After we were there about an hour, they started running trams from the zoo part to the front part of the park. There were several stops along the zoo part, but we never saw them actually stop at any but the one where the restrooms, lunch shacks, and special shows were. The tram drivers



were into it, too, pointing out animals and giving advice on what to do next. They all had their tip jars out, too. Some, like the safari guide, were really worth a tip. But the tram - you wouldn't see something clunky like this in a California theme park. Ugly, but functional.



mesquite trees.

Here's a picture of down in the safari area taken with my company-anniversary binocular-camera. The date is a bit off. You get the impression of driving around a broad flat plain in the tour vehicle, but the reality is, it's about two or three acres of dusty paths between creosote bushes and

A herd of zebras (they're actually black animals with white stripes) who have learned to block the vehicle because the driver then has to throw out some goodies to get them to move. Apparently, zebras can bite pretty hard, as we were told to keep our hands inside.



The universal treat for all the animals were these orange "cookies". This is the dominant male of the herd.

Several species of antelope. Antelope have *horns*, which they keep (or not) all their lives, versus *antlers* which fall off and grow back every year.



There were only two animals that the tourists could feed with the carrots we were given when we boarded - the giraffe (who stayed in the stable, and the driver was obliged to back the bus up to the stable) and this dromedary. Camels have two humps. Camels also don't "spit", we were told;

rather, if someone upsets them enough, they basically vomit on the person.

African cattle with huge horns that, we are told, have honeycomb internal structure, so they are much lighter than they appear.





Sable antelope are very aggressive, and have instinctively worked out a strategy of impaling attacking lions on their horns. This female has one horn broken short, from trying to stab a lion through the chain link fence. I guess their aggressiveness keeps them inside the pen. Don't know why the

dromedary was in the pen.

And male ostriches were in the pen, because all they know to do is attack. This female with the thin feathers over her scabby looking back was quite eager to take "cookies" from the hands of our guide, Courtney. Interestingly, all the animals in the park have names, and she knows them all... and they usually come when called!





BIG antelope, cow size, weighs in around a ton. Supposedly they retain their antelopey jumping capability, though I don't know I believe the guide when she says these animals can jump up to *eight feet*.

There are two parts to the "safari area", one in which we can tour, and another where the "naughty" animals are put. I don't quite know what a giraffe does to be naughty.





But we were told about sable antelope. I guess he must be spectacularly naughty to be put away from the other sable antelope!

After the safari, we came back to the main attractions area in the zoo part for lunch and the special shows. The food was good and reasonably priced.

It was a hot day. We went through a couple orders of shaved ice and lemon slushes. We agreed that this would be a great place for an [Eegee's](#) franchise.



with a desert tortoise.

On two occasions, the handlers brought in some animals to a little corral area. First they would do a little talk about the animals, take questions, then allow people - particularly the children - to come in and touch the animals. This Water Monitor lizard was very popular. He shared the corral

Later, she invited about ten people to come in and help lift this African Python out of the cage.



The best show was "Tiger Splash". In an arena area, they had a grassy yard with a shallow pool, and two tigers waiting. While we sat waiting for the show to start, this tiger was chilling.

And came out to walk around a bit. Then her companion would go in the water.

Tigers are water animals! Then the humans came into the pen. These tigers are not trained, and they didn't do tricks; rather, the staff have been around them and are familiar to them. So the "show" was just letting the



tigers play with big inflatable "cat toys" on sticks. The objective apparently was to get the tigers to jump for a toy and land in the water. The tigers didn't seem to want to do that; it only happened two or three times.



Once a tiger captured a toy, it hung onto it until offered a trade of raw beef, horse, or chicken. The tigers are well fed (every two or three days), so they aren't really "dangerous" - except for being too playful.

After the Tiger Splash, we walked around a bit until the next show - the Wildlife Walkabout. One of the Tiger Splash staff came up with some buckets of food and got the animals to do things for them, while doing a little talk and taking questions. He was throwing chunks of meat to this tiger, who was interested as long as the meat fell on the platform and was easy to get.



Two sister grizzly bears, who weren't too interested in the beef, lettuce, oranges, tomatoes, and carrots the caretaker threw over the fence, but did enjoy the frozen hamburger.

But the best part was the hyenas. They would come up to the fence and moo like a cow with pleasure of having their fur scratched. Jeff the caretaker would throw chunks of meat just outside the fence, which of course the hyenas would see. When he reached to pick them up - *that's* when the hyenas would make their characteristic "laughing" sound, as a warning or protest of having "their" food taken away. Apparently, hyenas are not dogs, but their own separate "kind".



The Out Of Africa park was a great experience, which I would recommend for my fellow Arizonans, even if it is almost a four-hour drive from Tucson. A bit too far to join their annual pass members club.

Sunset Volcano

We went the rest of the way to Flagstaff after leaving the Out Of Africa park, to a hotel on Route 66 that claimed to have a heated indoor pool. Well, it was a pool, and it was indoor, but two out of three isn't good enough to enjoy a swimming pool. Oh, well. The next day we find out that Orientation doesn't start til 12:30, but they put on campus tours for prospective students and families, so we take the tour even though we are a bit more than prospective at this point. Very nice tour, ends in getting (free) lunch at the Student Union. Then, we leave Charity and the rest of us head up Highway 89 to Sunset Volcano.



Sunset volcano gets its name from the pastel colors at the top of the cone. Faith used the binocular camera to get a picture of a lonely tree growing in the cinders on the slope.

The most interesting part of the Sunset Volcano park (next to getting another passport stamp) is the lava fields lying beneath the volcano cone itself.



A deep crevice where hardened lava was pushed up by fluid lava flowing underneath until it broke open - called a "squeeze up".

This chunk of scoria has the marks from sliding over something else from when it was still soft - about 1000 years ago when Sunset Volcano last erupted. I saw no mention in the literature or the Visitor Center that there was any potential for volcanism in northern Arizona any more.



A hornito, kind of a junior volcano formed from hardened lava but acting as a vent for fluid lava underneath to spurt out of.

Lava crust, from where the outside cooled and hardened and the soft inside flowed away or was displaced with gas, forming a tube. Not far from here is a large lava tube that used to be part of a guided tour. My family went on that tour when I was a little kid, and in that very lava tube cave, the guide ranger was saying, "don't climb on the rocks, for they are wet, and you can slip, fall, and break your arm". Just as I was climbing on the rocks; they were wet, I slipped, fell, and broke my arm. Part of the adventure of growing up, except I haven't apparently gotten less stupid as I've gotten older.



The cave is now closed up, and they don't have guided tours like that anymore. However, Charity is hearing from upperclassmen during her Orientation that there are other lava tubes in the Flagstaff area. Hopefully she will be smarter and more careful than I was.



The whole of northern Arizona is a complex of volcanoes and cinder cones, like these in the distance.

Wupatki

The visit to Sunset Volcano takes a bit more than an hour, and we continue north on the park road to the Wupatki ruins.



Which are spectacular. There are similar ruins all over the place here, but we only have time for the main attraction.

Again, the construction is whatever is at hand, and here, it is plates or slabs of red sandstone. Note the iron plates and bars to keep the structure from decaying further; kind of, how little must we do to preserve it without changing or improving it. I guess Taos Pueblo is unique



in that the Indians have stayed and kept it up. Maybe the Hopi or Zuni tribes still occupy Pueblo style buildings, but their ancestors didn't stay here. In fact, when the Park Service came in for the Wupatki Monument, they had to evict Navajo sheepherding families. The Hopi and Zuni and Havasupai claim to have had connection with Wupatki.



The story in the little tour book is that this door and room beyond was rebuilt by Basque sheepherders. The Indian doors are T-shaped, but this is a typical European square door. I have no idea why *Basques* were in the area, particularly with competition from the Navajo, but stranger things have happened in our world. On the other side of the ruins is another chamber that was "restored" by the Park Service (back in the day when the philosophy included "restoration"), and a Park Ranger and his wife lived there! The philosophy has since changed; they moved out, and the structure was "un-restored".

In a depression beneath another group of ruins is this circular

structure that the Park in the past designated as a kiva.



Of course, it isn't a kiva; it lacks the subterranean architectural structures and the ceremonial features associated with kivas. Looks to me more like a dance floor or fire ring or council area.





Wupatki has other unique features, like this ball court. I hadn't heard of ball courts outside a central American or Mexican context, but here it is.

Supposedly, ball courts like this were important for regional connections, including religious purposes and trade. The Park Service "restored" this one. Now all they need is to hold reconstructed ball games in it.



An interesting thing: In the visitors centers for all these Indian ruin places, in their little museums, they depict the Indians as all dressed alike, with only breech-cloths. So the women are topless. But elsewhere, depictions *and photographs* of their Hopi descendents have women in full clothes. Now, maybe they have good (archaeological) reason for presenting this image, but they don't present the case, so as far as I can tell, this could be just another case of "chronological snobbery", in that the Indians who built these amazing architectural piles were otherwise stone-age savages just recently evolved from apes.

It's all in the dominant narrative, you know.



Another amazing feature of this site - there is apparently a cave beneath, that connects to the outside and therefore "breathes" through this "Blowhole".

Even now, it is blowing cool air in Faith's face. Of course, the Indians had their superstitious spiritual interpretation of a hole in the ground that "breathes" cool air.



At this point, we've seen Wupatki, and they are about to close (in fact, the building is already locked, so I have to leave the borrowed guide book in the foyer). Plus, Day One of Orientation is due to break for dinner soon, and we want to get back in time.



But we stop at one more site on the way back to 89 - the Citadel Ruins. The top of the hill is entirely sheathed with Pueblo buildings. But we don't have time to hike up the trail for a closer look.

Instead, we stand in the little Pueblo rooms by the path near the parking lot.



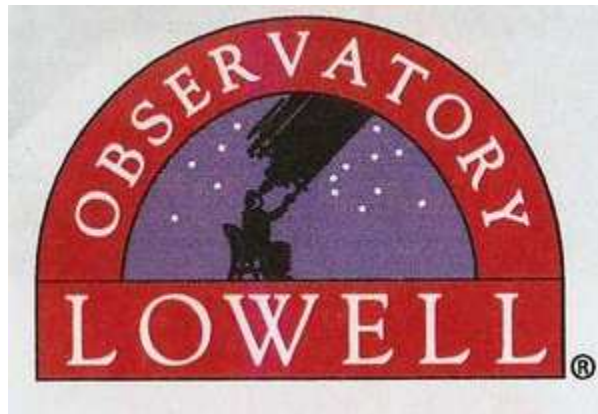


That's good. We'll come back later, maybe when we collect our student at the end of the term.

Lowell Observatory

The next day starts for Charity at 7:30. The others stir themselves quite a bit later, and it is closer to 10:00 before we have packed the van again and paid the hotel bill and left for our morning adventure.

[Lowell Observatory](#) was founded by Percival Lowell, a scion of the great Massachusetts textile fortune, for the purpose of observing Mars for intelligent life and mapping the "canals". To this day, it is supported for the most part by a Lowell family trust, and the trustee, a Lowell relative, lives on-site. They are quite proud that they are a *private* organization - not government and not public university - and the significant contributions the Observatory has made to science.

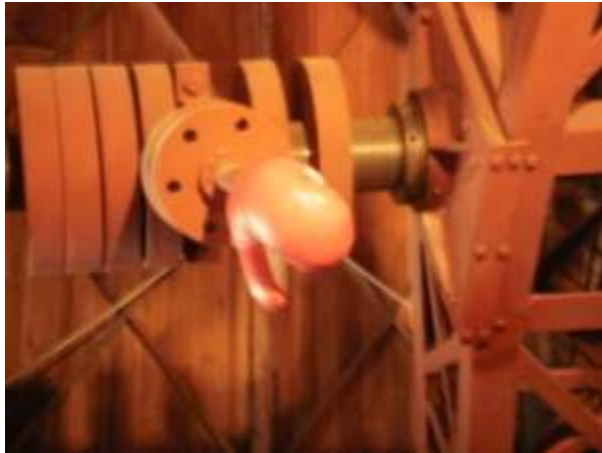




Particularly the discovery of the "planet" Pluto, using the telescope housed in this dome.

This telescope, in fact. When the size and location of a planet perturbing the orbit of Neptune was calculated, this telescope was set up to take pictures of the region of the sky in question. But comparing timed photos was too tedious for the professional astronomers, so it was left to an intern, Clyde Tombaugh, a Kansas farmboy who finished high school. Eight months later, history was made.





The telescope counterweight has some dangerous protuberances, dealt with usual academic humor. Like most of the instruments at the Flagstaff site, this is not used anymore; it's last use was to take photos of Comet Hale-Bopp.

This building was the original focus of the Lowell Observatory, when Percival founded it more than a century ago.





Percival is buried here. The guide made the point that the telescope at the time cost around \$20K, but the mausoleum built by Mrs. Lowell was more than \$40K. Kind of inverted priorities...

And this is the telescope - a Clark 24-inch refractor. Excellent optics, of course now useless due to the relatively small size and the nearness of the Flagstaff light pollution. The last practical use was by Apollo astronauts familiarizing themselves with lunar craters (are they volcanic or impact craters?).





A better file picture. If we had the time, we could have returned that evening for sky-gazing with the very telescope that Mr. Lowell used!

The observatory has this chair on a track that can move all around the dome, and up quite a way to accommodate shallow viewing angles. Most of the observations Mr. Lowell made were direct visual, with his notes and sketches made in his notebook.





This is the famous photograph of the founder at work, which is also the basis for the logo above. Interestingly, Lowell was not a professional scientist so much as a visionary and popularizer. The guide compared him with Thomas Huxley ("Darwin's Bulldog"), who correspondingly did so much to promote evolutionism. I think the comparison is quite apropos - Lowell was possessed with the personal notion, unsupported by scientific evidence, that Mars was populated with intelligent beings who built what he and others were convinced were artificial water canals.

The Observatory today is primarily for public education and historical preservation, and the instruments operated by the Lowell Observatory are miles away from the light pollution of Flagstaff and any other northern Arizona town. In fact, Lowell Observatory is partnering with The



Discovery Channel to build a large reflecting telescope which will be located near Happy Jack, Arizona. The telescope shown here is the only one at this site being used for research purposes - observing the atmospheres of the Jovian moons in ultraviolet - and therefore unaffected by city light pollution in the visible spectrum.



Our tour ends at this building which Mrs. Lowell designed to recall *her* favorite planet - Saturn. The building used to contain the Observatory library, but that has now been moved to newer, better buildings, so now it is a museum containing things like Lowell's original telescope

and various period instruments.

A photo of Clyde Tombaugh, who discovered Pluto.





The Optical Comparator used by Tombaugh, with reproduction photo plates so you, too, can see what he saw. Except he didn't have little arrows on the plates to show what was changing. An exhausting job, to be sure. Except for the large size, I remember those kind of photographic

plates from when I was doing my studies at the Steward Observatory at UA.

Another prominent contribution of the Observatory was the discovery of galaxies and the Hubble Red Shift. This spectrograph was used to detect the redshift of distant objects as the universe expands and moves them away from Earth. Except what kicked it off was the discovery that the Andromeda Nebula was moving *toward* Earth. Scientific theories are wonderful, pliable things.





As we leave the Rotunda Museum, we see that the Observatory is capitalizing on the recent demotion of Pluto from being a planet, and the attendant controversy.

The Observatory also has a nice little museum. Too bad I see they are uncritically promoting the idea that "Earth's temperature has dramatically increased since the 1970s" - based on the bogus "hockey stick" diagram that has since been debunked. Along with the other "scientific" notions like stellar formation and evolution, which occupy such enormous timescales relative to the brief history of direct observation that such conclusions are mostly speculative. Like so much of astrophysics.

Walnut Canyon

As we leave Lowell Observatory, we get the call that Charity is done with Orientation. We drop by the campus to get her, and then head east for the last part of our adventure.

Like Sunset Volcano, I had been to Walnut Canyon with my family when I was little (most likely, on that same fateful trip). Mostly I remember my mother being anxious about her active little son on the narrow path on the edge of the sheer canyon drop - lest I become another of those child casualties falling from cliff dwellings.

Walnut Canyon kind of "wraps around" this "island" in which the ancient Indians had built many of their cliff houses.



Leaving the Visitor Center (no more free admission; the card comes in handy this time, probably for its last use), there are a series of stairs that descend 185 feet to the walkway. Going down is relatively quick and easy.

We are now on that narrow path, inspecting the ledge in which the ancient homes were built under a massive limestone overhang.



Inside one of those ancient homes. Most had broken down walls. Later on, we learn that this is largely due to white settlers digging through the ruins for curios.

There are other dwellings on the opposite wall of the canyon.



More. No developed path to those, so modern tourists are less likely to leave their marks. Plus, you get an idea of the steepness of the Indians' front porches.

Below the dwellings on the other side is an idea of the geological history of the area. Of course, geological history to the Park Service is the usual "shallow oceans millions of years ago" bit. The explanation for these crazy strata is "sand dunes". I think I would want to see some known sand dunes that were then fossilized to see if they bore this kind of strata. As it is, this screams "perturbed when still soft and wet" - like after a short period catastrophic flood. One that would dump hundreds of feet of sediment.



Sharp discontinuity at the top of the fossil "sand dunes" where it meets the next layer. I defy geologists to demonstrate how a "shallow sea" laying down the next layer of sediments in clean smooth layers would have shaved off the tops of those sand dunes.

A door in an ancient wall. Is it original or is it "restored"? I'll bet that mud plaster isn't 800 years old...



With models, for scale. If the door is original, those Indians were shorties. I could barely get my legs through the door.

A reconstructed home. Unseen above the doorway is a smoke vent. Charity considers whether she wants to go in.



Mom has already seen the sign about rodents. Charity does not go in.

The predominantly sunny side of the canyon has different vegetation than the predominantly shady side. Here, tourists stand among the junipers and low shrubs on the sunny side looking across at the pine trees on the shady side.



The path is about a mile long, and doesn't take long except for all the stops to examine old walls and take pictures. However, the park closes in thirty minutes, and we have to climb up those 185 feet of stairs! Fortunately, we make it in time to get Jerri's passport book stamps, and it's time to leave for the 4 to 5 hour drive back to Tucson.

On the way back, emerging from Phoenix on the south side, we stop at the Arizona Mills Mall for dinner in the food court. I might have preferred a nicer sit down place, away from the text-in-to-request-a-music-video screens all over the dining area. Like the Ikea restaurant, just a bit further down. However, we verify that the [Sea Life Aquarium](#) is indeed open at the Mills, if a bit pricey (almost \$20

per person). That will be a different adventure, maybe our next big visit to Phoenix.