

## Harvey Butchart's Hiking Log

### DETAILED HIKING LOGS (February 28, 1964 - December 31, 1964)

#### Navaho Mountain and North Trail

[February 28, 1964 to March 1, 1964]

This trip over to Navaho Mountain was part of a complicated hiking club jaunt. Twelve people came to Rainbow Bridge by boat and eleven of them were to go out by the west trail while an equal number who came by car would return by boat. The six riding in my car were Jay Hunt, Arvid Burnam, Allyn Cureton, Joann Turner, Helen May, and I. We arrived at Navaho Mountain Trading Post about 8:15 on Friday evening and after a short visit with Mr. Cameron, we headed through the moonlit pasture towards the Jeep road to the top of the Mountain.

Doctor Hunt and Allyn had been this way before but didn't remember clearly that we should climb to the top of the ridge above the draw to the south. I should have known this from the map, but instead we wasted time trying to follow a trail that petered out in the pasture. The walking was fine and cool on the road which is surprisingly smooth but so steep in places that I wondered whether my Jeep station wagon could make it. The silhouette of the sandstone crags against the moonlit sky was unforgettable. From a distance, Navaho Mountain seems to be an almost featureless dome, but when you are on it, you discover benches and ravines. We reached the area of War God Spring in two and a half hours from the Trading Post.

We camped by the beginning of a large log lodge, but in the morning I found that the center of activity is lower to the east. It consists of a cabin with a rigid pole to support a canvas roof, a sheep corral, and a leanto like something boy scouts might build. There were patches of snow covering most of the ground, and in the time I spent looking for a spring I didn't find it. One part of the snow seemed to have turned to solid ice, and this may have been the spring. I'll have to ask someone what this spring is like. I was carrying two quarts of water, more than the average for the party, and I was rather surprised to find that it lasted until we were down in Oak Canyon the next afternoon. Allyn informed us that his thermometer recorded a temperature of 20 degrees on Saturday morning. I was warm in my down bag except underneath. When I put a layer of pine needles on the air mattress, I overcame that problem. The next night in Surprise Valley, I began the night with oak leaves under my bag. Helen May had much the lightest pack since she was carrying only a sheet-blanket combination to sleep in. She amazed me by appearing to sleep fine in what would have left me a frozen corpse. We kept a fire of large logs burning all night, and I spent some of the short night trying to warm my feet by the coals.

The road west of War God Spring drops slightly and then goes up a very steep slope. Here the switchbacks are so abrupt that I hardly see how even a short military Jeep could turn. Arvid suggested that one go up one stretch forward and then back up the next. The view is wonderful to the south from this upper series of switchbacks. The forest is still ponderosa pine below here, but above, along the less steep climb, you are in a fir and aspen combination. The summit is more pronounced than I had believed. There are two aluminum buildings, both locked, and two towers for shortwave radio. For the last mile above the switchbacks, the snow had been rather fatiguing, crusted along the road and about nine inches deep.

There is a mountain register in a rock pile on the very top, placed there by the Tucson hikers. I recognized some of the names, and I was surprised to see so many since 1961. Some of the signers had come by Jeep, and a few had gone down the north side to Rainbow Bridge.

We had come to the summit from the spring in about one and a half hours. We left the top at 9:50 a.m. and headed northwest. I broke trail through the knee deep snow. It was tiring, but we soon came to a view towards the west. We were above Horse Canyon, and it was obvious that we could have descended here. Hunt thought this was the place, but we convinced him that his directions were 90 degrees wrong. We turned north and when we got to a clearing on the rim, we could see Rainbow Bridge and all the rest of the amazing country in this part of Utah. Several stretches of Lake Powell contrasted with the prevailing red of the surrounding rocks. We could see three distinct mountain systems to the northeast. After consulting the map of Utah, I still can't be sure of the identifications. I took the nearest to be the Abajo Mountains. There was a high dome farther north, and then some snow covered peaks quit a lot farther away. I thought of the La Sals and also the Henrys, but I'll need help when I get the pictures developed. There was so much haze to the south that we couldn't see the San Francisco Peaks.

We made faster time when we started down the steep slope to the north. The snow was still deep, but the only effort needed was to pick ourselves up after stepping on a smooth snow-covered pole or a rock slab. Hunt went for several hundred yards without rising from a sitting position. I preferred staying on my feet, but we made about equal speed. Some of us had boots that kept out the snow, but snow caked down in my shoes around the heels, and when we came to a rockslide 2000 feet lower than the summit, by Allyn's altimeter, we all agreed that it was time for lunch and a change of socks. We got a good fire going, but the wind at 8400 feet was still cold. Helen May held us back on the descent as well as on the ascent, and her small pack was passed around among the men. Allyn did almost all the guide service on the way down.

After we ate, I suggested that the ridge to the west would lead us clear down, but after I had gone about halfway to it, I decided that the ordeal of reaching it wasn't worth the effort. The red slabs were particularly hard to negotiate covered as they were with three inches of snow. I saw that the ridge to the east was about as good, and much nearer to us. I shouted my advice and returned to the group. The walking down through the junipers with no more snow was ideal, far better than the party had done 15 months before, when they followed the bed of the ravine. Cliffs formed on both sides of our ridge, and I was a little worried that we might not be able to get to the bed on either side of the ridge at the end. When we were about 300 yards short of the junction of the arms of Oak Canyon, the west arm being in the red rocks and the east being light colored sandstone, I led the way down to the east. My hunch was right. We got down with very little difficulty but saw no place where we could get down the cliff farther on. We still had to fight through a few thickets. We soon came to a seep spring that increased below to quite a little brook. Near the source was a considerable sheet formed of solid ice. The other three men accepted the challenge and scooted down this slide and also slide over a five feet of ice fall below.

Not far below the junction of the two branches, the creek goes down into a narrow slot. We followed Hunt's suggestion and went over the low ridge to the east although it would have been shorter for the ones headed for Rainbow Bridge if we had crossed and had climbed the ridge to the west. We followed a minor draw where we found a couple cairns north to the main trail. It was 3:15 p.m. when we reached the trail,

about two hours earlier than the three strong hikers made it in 1962. Hunt agreed that we had followed a much better route.

It was now too late for Cureton and me to learn much about Oak Canyon, so we left the others and headed for an early camp next to Nasja Creek. We had a comfortable night and started on at 7:50 the next morning. We got to Bald Rock Creek by nine and continued to make good progress. Jim David and I had followed the road, so when we had the chance, we turned up the valley just east of Navaho Begay and found the inner trail. There is more fine scenery here. When we came to a new pipeline road, I led Cureton to the right. We spent over an hour learning that this is not the road to the trading post, but we turned around and found a way past several hogans back to the road. We reached the car just after four and drove to Rainbow Lodge just in time to welcome the first of the hikers. Above the upper switchbacks on the south side of the summit, I picked up a piece of porous rock that looked like pumice. However, the geologists say that it's sandstone.

Attempted descent north of Cardenas and a shortcut in the Tanner Trail  
[March 21, 1964]

Doug Shough and I started out shortly after six, but we had to turn back after driving three miles when the generator burnt out. We took the Falcon and still got to the Lipan Point parking lot with a quarter hour to spare. Francois Leydet had said that he might see us off so we waited until nine before starting down the Tanner Trail.

The snow was deep enough to make the trail hard to find. We followed deer tracks part of the way because they use short cuts that seem to avoid the snow. Before we left Lipan Point, we tried to see which would be the best way to reach the top of the Redwall above Cardenas Bridge. The ridge is low between Escalante and Cardenas Buttes, but I was afraid there would be a lot of insecure walking on the north side, so we went over the higher place between Cardenas and the point farther east. Fifteen minutes of hard walking got us from the trail to the pass and about 12 minutes of route finding got us down to the top of the Redwall. There is a well built cairn about two feet high halfway down the Supai. Going west along the top of the Redwall was just as awkward as it would have been to come from west of Cardenas, a route that seems more direct.

I looked at the area below the Redwall west of our descent area. From above, it appeared that the Tapeats was a continuous cliff, so I decided to go through that formation to the east directly below the Redwall descent and just north of the natural bridge. We had gone off the rim of the Redwall just last spring, but the details were already vague in my mind. This time I noticed that you go north of the last of the Supai that tops this promontory and continue past a place where the Redwall narrows and shows a faulting or slump with the surface lower to the north. After getting on this slump block, you go off the rim to the east and soon find a ravine sloping northeast that takes you through the Redwall.

Directly below was an easy way through the Tapeats and from above there seemed to be a way to get through the great basalt cliff which totals approximately 500 feet here. I had seen deer droppings on my way through the Tapeats and I could even make out a deer trail in the lava scree below. I hoped to go around to the east along a ledge and hit a scree slope that would lead me through the basalt. The footing

along these slopes was covered with basalt chips and was about as precarious as it ever gets. This took me around the corner into a ravine containing some good vegetation, but beyond, there seemed to be no way to continue. I wondered whether the deer, still common here to judge from droppings, visit this place to browse and then turn back. At any rate, I had to turn back. (Doug Shough had decided to leave me at the top of the Redwall and start back since he was having trouble with a sprained ankle. It had been injured at a square dance several days earlier and had seemed all right on Friday.)

After a bit of backtracking, I got to the top of the basalt and then needed only a few feet of hand and toe climbing to get to the top of the Tapeats. It was easy to go along the top of the Tapeats to the base of the Bright Angel Shale cliff and then east to the Tanner Trail. The basalt scree was interesting. From a distance it seems to be uniform, but I carried out three small pieces only a few yards apart. Some may have copper value. Several years ago, Keith Runcorn was interested in getting samples of the Precambrian lava for paleomagnetic study. At that time I didn't know how accessible this location on the south side of the river was from the Tanner Trail.

So far the trip has been mostly frustrating, crossing off a hoped-for route to the river west of the Tanner Trail. Where the Tanner Trail goes along below the cliff in the Bright Angel Shale I had noticed an old trace of a trail going up toward a place in the cliff where the talus reaches to within 25 feet of the rim above. There is a picture in an old book (National Geographic, August, 1914, page 118 and also Kolb book of 1914, second picture on back) with the caption, On the Tanner Trail. I thought it must have been taken just above this shale cliff, but I couldn't imagine a horse getting down that 25 foot drop. On the former occasion when I had investigated the switchbacks leading to the low part of the cliff, I had given up the idea that a trail had ever existed here. This time I studied the notch in the shale and hoped that there might be a way up for a man. When I got to the place, I noticed more deer droppings. There were two possibilities: a chimney climb to the south or a steep ramp a few yards to the north. It must average 60 or 70 degrees with the horizontal, but the shale leaves many two inch steps and there are some places to hold for further safety. I had to be careful, but I got up all right. Above here the walking was very poor but entirely possible. After I had gone up and to the south for 100 yards, I came to a distinct trail. When I backtracked along it, it led to the same place I had come up. The last 50 yards are gone because of the numerous rolling rocks, but I could follow it up to the south until it connected with the present Tanner Trail about halfway up the Redwall. I'm satisfied that my conjecture concerning the picture was correct. They must have built quite a wall to provide footing for a horse down the 25 vertical feet I had just climbed. The only other explanation of the trail above and below this place would be that someone had the idea of doing this but never finished the job. (Later I found the real answer. Around the corner to the north, there is a very simple scramble down. This was obviously the horse trail.)

I overtook Doug getting a nap at the foot of the steep climb to the rim and we reached the car by 4:10 p.m. I could still use some more time and study on the area below the Redwall to the west of the point where I came through the Redwall by the natural bridge, but I have practically given up hope of finding a better route to the Unkar ruins than via the Tanner Trail and along the river from there. (See the log from Cardenas to Hance Rapids.) The positive discovery of the day was the short cut in the Tanner Trail. Ticks are thick at this time of the year in some parts of the canyon but I didn't see a single one in this area. For the first time I did notice droppings on the Tanner Trail that looked more like bighorn sheep than deer.

Along the Redwall rim and down Royal Arch Creek to the beach east of its mouth  
[April 18, 1964 to April 19, 1964]

Time slips by. I had been looking into Royal Arch Creek beginning in July of 1958 with further visits in October, 1959 and November 1960. I had learned that you can go down the long east arm of the creek and on through the Redwall to see Royal Arch, possibly my most interesting discovery, or rather rediscovery, in the Park. I had found the way through the Supai to the top of the Redwall southeast of Apache Point. But still there was the investigation of the route along the Redwall rim above the creek on the west and the bench mark shown on the map to the east of the mouth of Royal Arch Creek. I had seen what I was sure was an artificial cairn from a half mile away, but I wanted to prove that the mappers could have gone along the steep talus below the Redwall on the east side of the creek. (Evans came from Garnet Canyon along this bench.) I had kept this in mind and still had no realization that it was three and a half years since my most recent visit to this interesting amphitheater.

Francois Leydet met me at the Visitor's Center at Grand Canyon Village and we proceeded to the Park boundary sign on the Topocoba Road. When it was too late, we discovered that neither of us had a compass, but we hit the rim in the neighborhood of Point Quetzal and then stayed near the telephone line. We wobbled a bit after we left the line behind and wound up looking up at the rim to the west of Apache Point. Colin's cache was just where we left it almost exactly a year ago and we rather thought we were the first visitors since then. The sun was not shining steadily, but Francois figured that he could follow the rim to the vicinity of Point Quetzal and then head for the drainage we had come up from the cars. He succeeded in this very neatly while the next day when I had the advantage of the sun, I managed to get into the wrong valley and had to walk northwest after I hit the road.

I didn't break any speed records, an hour and three-quarters from the car to the cache on the saddle out to the point, 35 minutes from there around the point to the break in the Toroweap and Coconino, over an hour and a half from there to the Redwall rim above Royal Arch, and an hour and twenty minutes from there to the place where the Redwall gorge begins. In another hour I was ready to leave the bed and start scrambling along the talus to the bench overlooking the river east of the mouth of the creek. This was at the angle where the blue line comes down from the east to the letter k in the name Creek. The mile from here to the bench mark above the river took me another hour.

My memory for the route had faded somewhat, and I couldn't find the cairn I had built as a guide in getting down the Supai west of Elves Chasm. However, I think I must have found the same place that took me so long in 1960. There seems to be options to get through the other ledges, but the one about two-thirds of the way down the Supai seems to have only one way down. I used the same crack on the return. Down on the Redwall rim, the burro trail is just as distinct as it is on the Esplanade and it requires less detouring and climbing up and down. I was a little surprised that there was no water in any of the holes where the bedrock showed in the Redwall ravines. There was a little rainpool near where I got down into the main arm of the creek and I soon came to the place that had persuaded me to leave my pack behind on the first trip for it is a slight hindrance in getting down in a few places. However, 200 yards below this barrier, there's a break in the Redwall to the west where a burro could come down for a drink at the pools below. On the return, I used this route to save some distance and found manure part way

down to the creekbed. There were no signs of burros further down, but I continued to see plenty of bighorn signs down the creek and out on the broad shelf where the bench mark is.

Not very far down the creek is a shallow cave a little above the bed on the west. I recognized the same burnt stick and some charcoal that I had seen before. Even if a flood could reach this cave, I believe the resulting eddy might deposit wood rather than remove it. I didn't seem to recall all the slight difficulties in detail. At one place I waded through a pool that was almost hip deep where before I was able to walk on rugosities along the east wall at a level lower than the standing water. On the return I found that I could go up to the west and follow a ledge to bypass this pool. At another place I found that I could climb up more directly. I didn't leave the bed quite as soon as I should have and had the most precarious footing of the day in crossing a clay exposure. You should be careful to avoid going along the talus immediately below the main Redwall cliff because this would not only have worse footing, but you would be too high when you come out facing the river. The walking took care but it was no worse than heading Forster Canyon along the Esplanade or in getting around below Great Thumb Point. For a short distance a definite bighorn trail was discernible. Views of Royal Arch were hard to obtain and I probably would have missed it if I had not been looking for it specifically. You could get a good view from a point northeast of the dropoff below the arch if there wasn't a fine monument standing in the way. Royal Arch is rather well hidden from anyone who is not walking the creekbed.

The bench mark itself had impressed me as being at least three and a half feet high when I was standing on the Redwall rim across the creek to the west, but when I got to it I found that I could not put my hand on the top rock. It is at least seven and a half feet high and about a yard in diameter. I left my pack and canteen by it and went to see the slump block almost a mile to the east where I had noted evidence that bighorn can get down. It didn't look as formidable from above as it had looked from below. I believe a man could get down here with a 30 foot rope, and there is a good ledge between these drops. The sheep can surely drop that far safely. However, I don't think that they could get back up. Bighorn tracks and droppings were all over the place. Along the top of the Redwall and higher, burro signs were also plentiful. I saw two burros and heard another bray, but I failed to sight a bighorn.

After a supper of salty soup and sardines, I found that there was very little water left in the two quart canteen. After sleeping for two and a half hours, I finished the canteen and then began to feel the need for more water. Rather than stew about this shortage, I packed up and used the moonlight part of the way back along the talus to the creekbed. It took me half again as long as it had by daylight, but after leaving the bench mark at 11:15 p.m., I got plenty of water at 12:40 a.m. and figured I had done the right thing in spite of some cactus I grazed against while walking in the dark. The night was clear and I slept with no danger of a flash flood. There were a very few mosquitoes at both sleeping sites and again my down bag was a bit too warm.

On the return up the talus at the break in the Coconino, I was able to follow more of the trail than ever before, and this time I found an old shovel. However, I didn't note any fresh trail construction. One more objective in this area remains for me -- to follow the trail along the Esplanade south of Royal Arch Creek. If I had someone along to drive the car from Apache Point to Bass Camp, I believe I could do this in one long day. (I eventually did this without a car shuttle.)

Topocoba Trail to Sinyala Fault and Matkatamiba Canyon to Supai along the Redwall rim  
[March 26, 1964 to March 30, 1964]

The start of this trip was only two days after a heavy snow had occurred in Flagstaff, 22 inches in fact, and more was predicted. I almost dropped my plans but I have seen our weather man go wrong before. The road to Hualapai Hilltop was my chief worry, but as it turned out, there was only a little snow and mud on the road when I went and none when I returned. The only hint of bad weather was on Sunday afternoon when an overcast sky cut off most of the sun, but in the night it cleared.

My first project had been to trace the trail that goes away from the Topocoba Trail up Havasu Canyon. On the way through Hualapai Canyon, I got into conversation with a geology graduate student from Stanford. He had a new temporary map of the Supai Quad including the area containing the ramifications of Havasu Canyon south of the Topocoba Trail. It is quite winding and the trail follows the bottom for almost 20 miles before it comes out west of the main arm. Since this would have used up two days, I decided to postpone it for another occasion. One concern was the probability of finding enough water in bedrock pools so soon after the storm. About a mile and a half up Lee Canyon from the junction with Rattlesnake Canyon, there is a convenient break in the Supai cliff. There was evidence that this observation was also made by the Indians for I found a bit of trail construction. Horse trails led in both directions from the top of this break. One went down into Putesoi Canyon where it is still fairly deep and I came out east of Mount Wodo. One look and I gave up thoughts of climbing this (we climbed it later). It is for the birds and the hardware experts. There was water in the holes in Putesoi and the nameless draw north of Wodo. I figured that all canyons would have accessible water, but I filled my two quart canteen anyway. In this belief I was quite wrong and I camped at a dry spot south of the point which forms the south corner of the promontory bounded by Manakacha Point on the north.

In the morning I followed the horse trail past the rope route. I knew I could get water in the major canyon where the Apache Trail goes down to Supai, but this would require quite a detour. In order to avoid this, I followed a couple shallow canyon beds several hundred yards off the trail, but there was no water. Just when I had accepted this delay, I found plenty of shallow pools on the flat rocks northwest of Manakacha Point. They were too shallow for dipping the canteen, but I tried a trick I have thought of before, sucking the water into the mouth and squirting it into the canteen. It works all right, but after you have gotten the water by that method, you can be sure your friends won't borrow your canteen. This much carried me through to the spring in the Sinyala Fault. Just south of Carbonate Canyon, I came to fresh footprints. Jim Smith, the Stanford graduate student said he had hiked along here two days before. It's nice to know whose tracks you're following. He was on a one day trip from the campground and had to turn back as soon as he got a view of Mount Sinyala.

Speaking of tracks, it seems that there are more bighorn sheep in the area I covered than there are deer. For a long time I found the old scat, but farther into the wilds I saw plenty of hoof prints. Still I made no sightings. Allyn Cureton told me today that last summer when he was on a speed test, he saw one about 50 yards away when he was at the south end of the Kaibab Bridge. They may be coming back in spite of the burros.

The spring in the fault arm of Sinyala Canyon had no more water in it that Allyn and I had found in late May of 1959. There were three pools deep enough to dip a canteen but only enough flow to wet the rocks between the pools. This is a good many vertical feet above the top of the Redwall, but there seems to be a limey stratum. Another irregularity of the Supai extending at least north from the Sinyala Fault to the exposure above the river is a considerable thickness of crossbedded sandstone. I would guess its depth as around 80 feet. It forms hanging valleys on either side of the saddle between Matkatamiba Mesa and the mainland. The tilt of the exposed surfaces is more uniform than that of the Coconino Sandstone. Another geological difference of this area is the prevalence of a shallow stratum of deep brown cemented conglomerate at the top of the Redwall. Similar material shows along the Hance Trail on the east side of Red Canyon. There is an unusually large amount of beautiful chert at the top of the Redwall and I noted one piece of this conglomerate or breccia that had been polished flat. The pieces of chert were still sharp and of various colors contrasting well with the chocolate brown of the cement. On Saturday I had no trouble getting up the fault to the east. When horses use the spring, I believe they come down from the east. A game trail shows in many places. Near the saddle I found two horse or burro skeletons. I was sure of the count because two skulls were only yards apart while the other bones had been spread down the gully, probably by storm waters. It would be very unlikely for two to die of natural death so close together. Possibly they were shot in the early days of the National Park. Only about 50 yards farther on there is a low wall high enough for a windbreak. Tucked under some of the rocks is a still legible Maxwell House Coffee can upside down over a tin cup. Inside this container was a cloth sack that used to hold salt, all of which had been extracted by small animals. On the ground nearby is a short chain of iron links, each about two inches long. Who can explain the very small cache of salt and a purpose for the chain.

During the previous day while I was following the horse trail along the Esplanade through familiar territory, my feet were sore and the pack with food for six days was making my shoulders ache. Walking by myself was lonesome and I was wondering whether I really enjoyed this type of activity. However, when I topped the rise of Sinyala Fault and looked down into the Matkatamiba Basin, the old lure of the unknown came back. It was a different world from the Esplanade above. Early in the morning you could hardly avoid stepping on the delicate white pasque flowers. There were some others in bloom also, and the humming birds were getting busy. I didn't resent the presence of wild burros, the animal that offers good trails and indicates the availability of water. Sure enough, about three-fourths of the way from the saddle to the Redwall gorge, there was some shale exposed in the wash and a seep spring. Some water was running down the moss, but where it was dripping I counted 20 drops in ten seconds. I would guess that it is permanent. It took me an hour to climb from the Sinyala Spring to the saddle and another hour to get down to the Redwall rim above Matkatamiba. Walking was interrupted by picture taking, but in another hour and a quarter, I was looking down on the Colorado River. It struck me again how deep and narrow the inner gorge is compared to the granite gorge of the tourist area.

The distance from the mouth of Matkatamiba to the slot at Mile 148.5 is short on the map, but it took me almost an hour. Of course some of the time was used in going off the burro trail to get pictures from the brink. The principal project for the entire trip was to determine the climbing possibilities through the Redwall at Mile 148.5. The very first place I looked over the edge I could see two places which would stop a climber. They were far enough down so that there were no bypasses. Later, I found another higher in the gorge. They are not terribly high, 10, 20, or 30 feet at a fall, but that is enough to cross this one out

as an Indian route. Then I turned my attention to the Supai cliffs to the south. Aerials had made this look like an attractive route, much shorter than the way I had come. There are about three bands of sandstone cliffs, each not very high, which continue around the bay. I was soon above burro tracks, but I was encouraged to find clear bighorn hoof marks. By going up on the west and then after passing the first band going along the ledge to the east, I was able to find breaks in all three bands. There seemed only one easy way through the middle wall and I found a rock pile as a step here. It took me an hour to get from the Redwall to the Esplanade and after eating lunch, I got down in 40 minutes. There was a trickle of water in this bay, but I don't think it would last through a dry season.

Even with a burro trail to follow, the miles didn't buzz by very quickly. It took well over an hour to go from the slot at Mile 148.5 to 150 Mile Canyon, a truly impressive sight from across the river. In a small gully above the Redwall rim about mile 150.7, I was surprised to find a good little spring. From the clump of trees and the amount of cans around it, I would regard this as reliable. Burros may foul up some waterholes, but they also use their hoofs to deepen pools. This one had enough of a basin to dip a large canteen into and the water was clear. About the slowest progress of the day was between miles 151 and 152. The talus is steep to the rim and is a mass of large boulders. You can't see a burro trail through this chaos, and you have to go up and down to pass small ravines. As I approached Sinyala Canyon, I could speed up so I quit worrying about arriving at camp after dark. I was starting into Sinyala by 5:30 pm and reached the spring by 6:25. Along the way, I looked into Sinyala for obstructions in the Redwall. I could see at least one impossible fall. Scratch another route to the river.

Saturday had been so strenuous that when I crawled into the bag I was tempted to take the Esplanade route to Supai, but if I did that I would be canceling my second main objective of the trip. I hoped that water would be just as accessible along the Redwall rim as it had been from Matkatamiba to Sinyala. There had been rain pools in almost every wash. Before I got to sleep, I had decided to get an early start and head for the unknown. A fairly remarkable feature of Sinyala Canyon before you get down to the Redwall slit is the presence of great blocks of sandstone in the bed. I believe James says that blocks ranging in size from small boulders to the proportions of a cathedral roll into the beds of the wide canyons. I have always felt that he stretched that story a bit, but a couple blocks in Sinyala Canyon would match a country church.

I found some rain pools in the very early morning when my canteen was rather full, but after Mile 155, there were no more pools. I was carrying my two quart canteen (Anything smaller than a gallon should be regarded as a toy. -- Dan Davis) but I reasoned that it was the equal of a gallon size during the hot months. After an early lunch at the mouth of Havasu Creek, I began to worry about the water situation. I finally got my canteen full again from a pool in the canyon that goes to the south of Mount Sinyala. To reach the water, I had to climb down some rather smooth limestone. After this detour, I found some right by the trail. Another nice discovery along this canyon was a natural bridge or arch. It is near the top of the Redwall in a fractured zone about two-thirds of the way from the rim above Havasu Creek to where you can get across. The dimensions are about 40 feet broad by 25 feet high and it is obviously the result of a cave collapsing.

It is hard to get a good view of Mooney Falls from the east rim since the fall is so nearly under another rim. I took a picture while lying on my stomach for safety. There is a much better view of Havasu Falls.

After the slow passage around the previous side canyon, I was resigned to a long grind to head Carbonate. I can see why Joe Wampler recommends just going around and coming back even with Havasu Falls. It took me an hour to reach the cross over and 40 minutes over the fine trail on the other side. There were no rain pools at the head of Carbonate where I had thought of stopping for the night. Instead I walked on to where the Hualapai and Topocoba Trails join. It was a long day from 5:50 a.m. to 7:30 p.m. My rations weren't agreeing with me perfectly, and I had some things to do at home, so I walked out Monday instead of checking the trail to the rim from Beaver Canyon. It was a fine trip through, cool and no ants or flies at the campsites. I did have to duck my head away from about one mosquito, and I saw two ticks in five days.

North between Escalante and Cardenas Buttes, down the Redwall between Twin Promontories, and to the Colorado River down Escalante Creek

[May 2, 1964]

Years ago Marston had given me the idea that there should be an Indian trail to the Unkar area more direct than the Tanner Trail. I figured that I had found it when I located the way through the Redwall and Tapeats in the neighborhood of Cardenas Bridge on the east side of the promontory that goes north below Cardenas Butte. However, the basalt below the Tapeats practically cuts this possibility out. The footing along the base of the Tapeats to the north and east would make travel slow and going east requires a return to the top of the Tapeats and the use of the Tanner Trail. On the present occasion, I intended to go through the Tapeats and then north along the top of the basalt or else in the same direction along the base of the Redwall until I can get down the Tapeats and basalt.

I left the car and jogged down the Tanner Trail since the day was cool and invigorating. I was carrying a full gallon of water with the possibility in mind that I wouldn't reach the river before dark. This time I left the Tanner Trail and went over the low ridge between Escalante and Cardenas Buttes. It was much more direct than the route Doug Shough and I had used earlier this spring. The Supai directly north of the pass presented a problem. I was investigating a barely possible climb down when I found a potsherd. I gave up this first chance and followed a ledge and a faint deer trail to the northeast to the next angle directly west of the summit of Cardenas. Here it was easy to walk down to the top of the Redwall although I found no cairns as Doug and I had along the other route. When I was passing the west offshoot of the bridge promontory, I noted a gently sloping valley down the Redwall between the twin promontories. I thought there must be a hidden dropoff at the bottom, but I figured that I had plenty of time and this area deserved some investigation. If it went through, I would be an hour ahead of schedule, and if I had to come back up, I would be a half hour behind. Within a few minutes I could see that it was an amazingly simple walk-down, not even any loose rocks to avoid. I found the shale below much more of an obstacle. At first I started to the west along the rim of the Tapeats. There was no easy walking here as the shale slope came right to the brink. Here the basalt and Tapeats cliffs were continuous and I could see no improvement towards the west. There was one place around the bend to the east and north that seemed worth inspecting. Getting there along the steep and crumbling shale was precarious and a close look was needed before I found the safe way down. The top 15 feet were the hardest, but I found a crack with hand and foot holds. It also took some looking to find the way down the basalt cliffs, but it was there, north and down and then back to the south to the top of a long talus leading to the bed of the drainage without a name that goes to the river downstream from Unkar Rapids. I crossed the red shale hills of this valley and went up to a break in the spine of Tapeats that separated this basin from Escalante Creek. Near the base of the

Tapeats, I saw my first rattlesnake in over a year. It was small and sluggish from the cold and failed to rattle until I disturbed it. On my previous trip across this country, I had given the cliffs near the lower end of Escalante Creek one look and then headed for the ridge leading to 75 Mile Creek. Since I was still ahead of schedule, I thought I would take a chance and do some more scouting for routes. The west arm of the creek led down to a fall but now I had deer tracks to guide me up and around to the west. The bypass was both easy and not long. I was soon down by the river, and if I had wanted to use my air mattress, I could have been to the river party at Hance Rapids in short order. In order to avoid catching a worse cold, I followed the route I already knew, along the rising ramp from the mouth of Escalante to the cliff above 75 Mile, back along the rim of 75 Mile until I could get into the bed, and back to the river through the impressively narrow gorge. There was a distinct deer trail from Escalante over to the bed of 75 Mile Creek, and in the narrow canyon leading to the river, I found some stones piled below a short fall indicating that a poor climber had come up this way. I walked the bank to the Reilly-Litton Camp at Hance Creek, using the mattress for 100 feet around a point.

My broken wrist and the Little Colorado River  
[May, 1964]

I had two college students with me, Jim Griffin and another. We were still trying to locate the Dam Site Trail. My interpretation of the Little Colorado River Map made me think that it went down from the jumping off place of a deep draw. We got down the bed and then followed the bench away from the high fall. We could go down for about 15 more minutes, but then we seemed to be baffled by cliffs. I made a foolishly long step up to a shelf beneath a rock ceiling. My Kelty caught on the edge of the roof and threw me off balance. I fell backwards on the slope that went to the big precipice about 15 or 20 feet downhill. My reflex action was to throw out my arms to keep from rolling downhill. Unfortunately, my left hand caught between two rocks. When my body weight came down, it broke my wrist into a double right angle. I knew it hurt, but when I looked at my left hand in that very unnatural shape, I felt quite a bit of shock. It took me about 15 minutes before I felt like getting up and making a sling out of my shirt for the bad arm.

With a lot of care to move slowly, I got out of that area using the good arm for climbing where I had used both hands on the way down. I had to walk about 40 minutes after the accident to reach the car and then Jim Griffin drove me to the emergency room at the hospital. Roma came from home when she got the message, and then we had to wait for a doctor for about 45 minutes. I was in a lot more pain from that injury than when I broke my heels, but the wrist recovered much faster. It was stiff long after I was able to use it. In fact, I believe I could tell which wrist had been broken for almost a year, but I was limping with the bad heels for several months.

Salt Trail Canyon with a broken arm  
[June, 1964]

I had told the editor of Arizona Highways, Raymond Carlson, that I was willing to guide a professional writer and photographer down the Salt Trail to the bed of the lower gorge of the Little Colorado River. He set up a date with Jo Jeffers and Wayne Davis to meet me and have me drive then to Salt Trail Canyon.

When the day came, my broken wrist had only 11 days to start mending and I was carrying my left arm in a sling. It would hurt like sin as well as possibly setting back the recovery if I were to fall with my arm in the sling, but I went anyway. The plan was for Davis and his 20 year old assistant to stay down at the bottom overnight while Jo Jeffers, her husband, and I would get to the bottom and then come out the same day.

In spite of my very cautious progress, the college boy and I found ourselves getting ahead of the other three. We had to stop and wait a couple times. On the third delay, we waited so long that we turned around and went up. We found that the other three had just come to a decision not to go any further toward the bottom. This was down in the Supai, about two-fifths of the way to the bottom. Carlson then asked me to do the article on the lower gorge of the Little Colorado which finally appeared in the September, 1965 issue of Arizona Highways.

Dam Site Trail, Dam Site, and Sheep Trail  
[July 12, 1964]

Jack Ryan, Duane Naff, and Geoffrey Elston went with me to see how difficult the Dam Site Trail is. We had found the top two weeks ago when my arm was much too weak to allow me to use it in the descent. This trailhead is located at a fault that doesn't connect with any drainage to speak of. It is about a fifth of the way down from the top of the plateau to the west down to the bed of the wash to the east. The top 20 feet can be done without a rope, but it is a harder, more exposed climb than any of the other trails into the Little Colorado River Gorge, or so it seemed with my left hand not normal yet. I took off the pack and canteen and handed them to Geoff who seemed to be about the quickest climber in the group. About 30 yards lower there is a place where the route is obscure, but a piece of cable gives some guidance. The rest is straight forward talus, but one has to be careful not to roll rocks on those below. The water wasn't running but there was enough standing in pools so that a hike through would have been quite feasible. The footing was just as good as it had been last January, and in the forenoon it wasn't too hot, especially in the shade.

I stepped off the width of the Dam Site natural gate and this time I came up with the estimate that it is only 27 feet wide and our combined opinion would say it is over twice that in height, say about 70 feet.

About 300 yards to the east, we went up to the north. We saw a place where a rod was placed in the rock with a heavy wire fastened to it. Probably there had been a ladder here, but we were able to get up without it, but again this was rather hard for me. We saw a lot more ladders and signs of the work here than we had noted before from the rim on the south side. It seemed to us that the engineers had gone wild with the idea that they should make everything easy and fun. A bridge higher on the south side made it possible to go along a higher ledge to the east, and I suppose one could climb to the north rim in that direction. A ladder to the north in the vicinity of the foot bridge across the inner gorge seemed to connect with the north rim there, and a trail led west to a break in the cliff.

On the south side was the most spectacular ladder of all. It is 60 or 70 feet long and leads up to the under side of a natural bridge. Another short ladder goes on to the rim. Inspecting this natural bridge from the south side would make an interesting short walk. The foot bridge across the inner gorge didn't look too

sound to us. The timbers may be rotten. (We did this another time and went up the ladder and through the natural bridge.) Cables on either side seemed strong, but they wouldn't give the bridge any support until the bridge had fallen about eight inches at the center. We were headed for the north rim if possible so we decided not to attempt a crossing of the bridge.

There seemed to be a good chance to get up to the rim if we went west. This worked out all right. In two places there were climbs that were about as hard as I could negotiate. A pile of rocks built up for a step showed us that we were not the first to try this. A bit west of where we came up was an empty hogan which provided shade for our lunch stop.

On the way to the top of the Sheep Trail, we looked at the cable crossing, and once again I thought that the engineers did a few things for kicks. I believe it would be just as easy to drive to the head of the Sheep Trail as to come to the south end of the cable and cross by hand car. The Sheep Trail is still in fine shape and we got to the bottom in short order. We got a gallon of water which we doped with Halazone and then I took a dip in a hole. The water was only about 30 feet across, but the center was too deep for me to touch bottom. The hike back was warm but we got up the Dam Site Trail in less than 30 minutes and reached the car before 4:00 p.m.

Hermit Basin to Bass Canyon, Dragon and Crystal Creeks  
[August 6, 1964 to August 11, 1964]

After some good chit chat at the Visitor's Center with the Chief Ranger (Lynn Coffin), I got started down the Hermit Trail carrying about the heaviest pack I have tried, 37 pounds. My objective was Supai in 11 days with some interesting side trips along the way. The stage of water was not too much different from what it had been for my trip through Marble Canyon and I thought that 12 to 15 miles a day was quite feasible.

In Hermit Basin I met seasonal ranger Marge Goff on her way back from a nature hike to Santa Maria Spring. In our short conversation, she assured me that several of the rangers were now waging a war of extermination against the burros and that they would soon all be gone. I didn't express my views on that subject very forcibly, but from what I have read about previous attempts, I would say that about all they can hope to do is to keep the numbers in check. Unless they would have a regular military campaign, enough burros would escape to bring back the race. It would take a lot of men willing to go down into a lot of exhausting terrain simultaneously to get the job done. I am not even sure I favor the project anyway. No doubt it is more thrilling to observe deer or bighorn sheep, but I got quite excited in seeing my first wild burro. Also, the trails are much more distinct in those areas of the canyon where there are burros. With my heavy pack, I used six hours to get to the river instead of the three and a half which would be possible with only a lunch and canteen. My Kelty pack is rather bad in the prone position on an air mattress since it holds my head down. I need two mattresses to hold my nose out of the water and I have ten inches of the lower mattress projecting in front of the one which supports my face. If all the river were like the stretches from Hermit to Boucher Creek and from there to Crystal Creek, and if all rapids were as easy to walk around as Boucher, my schedule would have been feasible. You can walk the boulder bar almost as easily as a trail. I covered the three miles From Hermit to Crystal Creek at two miles an hour.

Unfortunately, this was the exception. For the rest of the way to Serpentine Canyon, the rapids were closer together and the way around them was over big angular blocks of schist. Getting out of the water had to be done in soft mud, and then the mud on the sneakers made the footing precarious. I soon learned another thing. The rule that the portage should be made on the side of the tributary stream had about as many exceptions as not. I ended by playing it safe. I would land on whichever side would give me a view of the rapid ahead from farthest upstream. If the opposite side offered the better chance to walk to the foot of the rapid, I could still cross over. Just once this portaging had to be modified. At Mile 99.6, the nameless ravine from the north downstream from Tuna Creek, blocks have fallen that break the low stage of the river into three channels. A land bypass would have to go quite high on the south wall and with a 35 pound pack, I decided that this would be more hazardous than taking the fast water. It was getting late Saturday evening when I landed on the south side, so I decided to camp and think it over until morning. From most places I could have gone upriver by paddling in the slack water next to the cliffs and walking the talus slopes between, but the current had been strong right to the Wall below Tuna Creek Rapid. Over at the right, the channel was visibly rough while the water looked smooth between two big rocks on the left. In the morning, I put one mattress in my pack and draped myself transversely across the other. I had time enough to kick myself into any chosen channel. When I found myself going over the one with the smooth appearance, I saw why it was so smooth. It dropped abruptly two or three feet on a number of rocks that were hidden from my viewpoint, necessarily a distance upstream. I stayed right side up on the mattress, but the water spun me so fast that I didn't have time to fend away. I bruised my elbow on one rock and scraped the mattress stiffly on both sides before I was out in the clear. The deep water was eddying every which way, and I had to climb on the mattress in paddling position before I could drive it out of that pocket. This was rather difficult with my heavy pack, and I may have stuck a finger nail through the rubberized nylon. At any rate I soon realized that my raft was sinking slowly. I soon found the small tear and fixed it with adhesive tape, but the mattress continued to leak somewhere else. My other mattress had a slow leak before the trip began. I could still navigate for an hour or so between rapids and then give them some more air before pushing off again. But this experience sobered me to the extent that I decided to leave the river at the Bass Trail. Furthermore, below Crystal Creek, I had averaged less than one mile per hour. I might have taken a chance on improving this speed, but my wet socks chafed through the outer skin, and I was convinced. I also decided that shorter trips are more to my liking than the lonesomeness of 11 days by myself.

So much for the navigation. On Thursday night I camped on the sand just east of the mouth of Crystal Creek. The only drawback was the large red ants. In the morning, I wrapped all but two days' supply of food in a plastic sheet and left it in the shade of a large rock and started up the creekbed. But first I found the Indian ruins Dock had told me about, up on the high terrace to the west of the mouth. In about 40 minutes I came to a place where chockstones had formed a fall, but there was a neat bypass formed by deer and bighorn. Incidentally, I saw bighorn tracks on the sand near Boucher Rapids as well as up Crystal and Dragon Canyons. They seem to be as common as the deer in this area. In 75 minutes I came to the tributary from the west which comes from the bay below Mencius Temple. Some water was flowing. I had maps for all the areas I hoped to encounter during the trip except for Crystal and Dragon. Now I mistook this for Crystal itself and left my blanket and mattress above the creek on a bench. After walking about two and a half hours from the river, I came to the real junction of Crystal and Dragon. About half as much water comes from Crystal as from Dragon Creek, which might let us conjecture that Harry McDonald would have continued up Dragon.

As you get into the lower Tapeats, the bed suddenly goes dry. I had to back up a few yards to fill my canteen. The tributary coming from the bay west of Shiva looks just as impressive at the junction as the main bed which is somewhat choked with willows here. I went up the tributary and when I had seen my error, I decided to climb out and get a view of the country. Progress north over the detrital ridges was laborious, but I could see that the main canyon was getting very narrow in the Tapeats so I concluded that I should stay above the Tapeats rim. From here a break in the Redwall was evident, about due north of the west end of Shiva. There has been a lot of breakage of the Redwall, and a slump of Supai Sandstone as well as limestone forms a ramp over the Bright Angel Shale to the base of the Redwall. I continued along the top of the Redwall until I could see into the bay north of Shiva. One could probably get through all the higher formations clear around to the north side of this bay, but it was already 1:30 p.m., so I turned back. This may have been McDonald's route to the rim, but I would rather expect him to go up the creekbed much farther before climbing out. Miles away in the west arm of Dragon, the bed seemed to penetrate quite a bit of the Redwall. Possibly the Stanton climbing party used this break in the Redwall. At least there seemed to be no other break farther south. On the return, I went to the bed of the creek and almost went to the lip of the dry fall into the Tapeats gorge. A well developed deer and sheep trail goes east around this barrier and descends by a break a quarter of a mile downstream. There is a permanent spring in this upper portion of the Tapeats gorge, but when I got to the bottom, it was supplemented by a stiff rain which I sat out under an overhang with my magazine to pass the time. When I reached my blanket, it was dripping wet, but by hanging it on a mesquite near a fire, it got dry enough to use by midnight, the earliest that I ever wanted cover during this warm season.

There were two ideas for the next day, to look at the bases of the Tower of Ra and Osiris Temple, and if there was time, to go up Crystal Creek far enough to see the valley above the Tapeats. The first chance to get out of the lower gorge of Crystal is by the canyon draining the bay between Ra and Osiris (wrong). I was able to get through the Tapeats at a break on the south side about a half mile up from the main stream. Here I found a piece of float copper ore that weighed considerably more than ordinary sandstone. Perhaps I should have gone close to the Redwall ravine north of Ra, but from my viewpoint, there didn't seem to be any chance of climbing it. I started the return down the bottom of the bed, but a fall halfway through the Tapeats forced me back out to the north where I had seen that one could go to the bottom through the Hakatai Shale which shows well here. The deeper rocks of this amphitheater seem pretty complicated. It would take a real geologist to diagram all the outcroppings of Base Limestone, Shinumo Quartzite, etc. For instance, on the west side of Crystal, the Tapeats seems quite a bit higher than it does on the east side.

The trip up Crystal was easy. The grade seemed a bit steeper and I got into the Tapeats sooner than I had in Dragon. The inner gorge through this sandstone is particularly striking for being narrow and deep. One wall supported quite a growth of maidenhair fern. There were deer tracks here which led me to think that one might get through without a block. Just as the rims were getting low, there was a 20 foot fall which could not be bypassed. The place had been so pretty and shady that I didn't begrudge the time I had been there although I had to back up some distance to get around the Tapeats. I went up on the west side, but I could see from there that the easier way, marked by a deer trail, was on the east. After going several hundred feet above the bed to get pictures of the upper valley, I went back to the river in time to paddle down to camp at the nameless ravine just west of Tuna. From the Tonto Trail south of the river, I had

seen a place where it seemed easy to get through the Tapeats, but from below I couldn't locate it. I knew by now that river travel would be slow, so I decided to call off the side trips and concentrate on getting to Supai.

I have already described the rough ride through the barrier rocks just below my camp. Another rapid that impressed me was the one about one third mile upstream from Ruby, which seems to drop about four feet in only 20 yards. At the low stage there seemed to be no channel. The rocks appeared to be covered with not more than a foot of water in many places. I wonder what the Sport Yak Party did here? The Sunday night camp was at Serpentine and was early enough to relax. There had been no ants at all on the sand on the south side of the river at Mile 99.4 and only a few at the mouth of Serpentine.

In starting on the next morning, I thought I might see what Colin Fletcher had done in going from Bass to Serpentine mostly on land. Even when I tried the south slope to get below the lower part of the rapid, I found it so slow that I got back in the water to reach the tail end of the fast water. After a few more yards of walking, I got back into the river for the next hour that brought me to Bass Rapids and the abandoned metal boat. By steady paddling, I could make about a mile an hour. It was still early in the day, but I knew it would be a long haul to get from there to Hermit Rest so I decided to use Monday mostly to rest.

First I carried my pack to Bedrock Tank. I had never seen water here before, but this time there was some dripping over the fall, and there were small pools in the gravel below. There are still some tools cached here from the days when Bass was alive. Something I hadn't noticed before was a three inch pipe driven back into a crevice with a regular valve fitting at the end. After stowing my gear where I thought it would be safe both from rain and a flood, I found the trail up to the west and visited the old copper mine in Copper Canyon. First I checked the trail, still well preserved, that goes along the east wall above the mine. After going north high in the schist, it starts down. When Cureton and Finicum had been with me, we had left this trail when it started down. This time I followed it down, but it soon ended.

There was less water in the vertical mine shaft than I had expected, but there were rain pools in the creekbed. Instead of going on to the Hakatai Cable as I had thought I might, I decided instead to loaf with my magazine on the old cot in the mine shaft.

On Tuesday I reached the rim in four hours and 37 minutes and then reached the car by 9:30 p.m. Mostly on the Bass Trail I just plodded along expecting no surprises after the number of times I had covered it, but once I stopped for a breather about where the west half map has the name BASS for Bass Canyon, between the two bench marks. For the first time, I saw a neat hole through the Supai rim at the top of the wall to the east. I would estimate the hole to be about 10 feet across with nearly 100 feet of solid rock above it. I wonder how well known this window is? Another observation that broke the monotony was a rattlesnake sunning itself on the trail in the Supai. It didn't rattle but casually moved out of my way when I would have stepped on it in two more strides.

After scoring with that new to me window, I got careless and missed seeing the Indian ruins near where the trail comes to the top of the Coconino. Another thing that I missed this time were the dams in the creekbed at the top of the Coconino which Bass had built to catch water. If they are going to conduct

nature hikes part way down the Bass Trail, as Marge Goff had said, the guide might do well to locate these interesting old structures. The authorities might also have to worry about the state of the road near the last part on the way to Bass Camp. It is in much worse condition now than it was a year and a half ago and I would think an ordinary car might have trouble on it.

The burro situation seems about the same as I have known it. I saw tracks near the mouth of Boucher and there were two burros browsing below the Redwall along the Hermit Trail. There were no signs in the Crystal Dragon Basin. There were signs at the mouth of Serpentine, and plenty of tracks in Bass and Copper Canyons. I heard them bray in both of these canyons.

North Rim trip off Cape Royal and to the Indian ruins near Point Sublime  
[August 22, 1964 to August 26, 1964]

The first thing I did was to drive to Kanab where I finally connected with Preston Swapp. I am a little skeptical when old timers are glib with all details concerning some exploit that happened 20 or 30 years before. Preston was realistically vague and confused about many points. First he thought they had followed the top of the wall connecting Cape Royal to Wotan's Throne, 500 feet below their tops. When I pointed out the deep notch, he agreed that they must have gone along the shale on the east side of the wall. He didn't remember much about where they came back up the Coconino, but he agreed with my suggestion that it was at the southwest end right under Wotan. He reread the Andrews' article and studied the pictures before he pointed to the ridge that he thought they had climbed, the one directly above the end of the wall. He disagreed with the idea that they had left several fixed ropes for the return. He thought there was only one, whereas Wood, in the American Alpine Journal, lists about six. Swapp remembers very clearly that they did get on top, but agrees that they stayed on top only a short time, just long enough for him to go over to the south rim and get water. He also remembers distinctly that he found a very old and rusty tin can on top near where he found the water. He says they slept another night at the base of the Coconino below Cape Royal. He has no recollection of Andrews' narrow escape, but figures that George stepped on some loose gravel and sat down once. He thought that he himself showed up better on that kind of climbing than the others, and he says he was opposed all the time to being tied to the rest on the final climb to the top. He didn't like the idea of one man pulling all the rest with him. My impression was that he honestly didn't remember much about the trip except that they did get to the top. I don't think that he was covering up for the others who claimed the ascent, but I would have preferred an informant who could remember a few more details about how they did things. He didn't know about climbing a rope by the Prusik method. His impression was that he had gone up about everything without a rope at all.

By the time I had visited with some of the rangers and secured a permit to climb Wotan on Monday, there was not much left of Sunday. I did go down along the top of the Coconino from the campground north to the ranger village but couldn't see anything that looked like a passage. Maybe there is a break farther to the south. I should check this before I say that it takes an awfully good climber to make it through here. One of the fire fighting maintenance men, Jim Fain, said that a man he knows came up out of the Transept and surprised a couple girls who were taking sun baths in the nude.

Sunday night, after seeing the movie on the upriver trip in the jet boats, I drove out to the Walhalla Glades parking and slept just above where I wanted to go down Monday morning. By 6:30 a.m., I was on my way with eight quarts of water and a 120 foot rope. The way down to the rappel was just as I had remembered it, a little brushy, plenty of loose rocks, and a couple places that require a short chimney climb. The place I tied the rope must have been the same as it was two years ago, a clump of pale hoptrees. (Identification due to Ed Rothfuss who came down on Tuesday to help me retrieve the rope.) It seemed solid enough, but I had a qualm or two when I was in mid air halfway down. Another thing I should remember is that the new rope, one half inch in diameter went through the carabineer more easily with the same three turns around the metal than did the old rope which was five eighths inch in diameter. When I was about 15 feet from the bottom hanging free of the wall, the rope began to slide through the ring faster than I wanted it to. I suppose I could have gripped the rope with my left hand hard enough to stop it, but I let it slide at an accelerating pace and was a little surprised that my hand wasn't burned by the time I hit the bottom. I was glad this hadn't happened on the rappel that seemed a lot higher below Cape Royal. I should have had a practice session with the new rope.

At the bottom of the rappel, I filled my two quart canteen from the Purex bottle and left that behind. I thought that six quarts from here on would be plenty when I would find plenty at the foot of the rope to get me up on the return. This trip from the rim to the Hermit Shale had taken two hours compared to the one and a quarter hours I had logged on my trip with Allyn Cureton two years ago. Walking the shale slope seemed rather discouraging this time, and I wanted to change my view that it had seemed safer than traveling the Nankoweap Trail near the top of the Supai. I reached the base of the wall connecting Cape Royal to Wotan in only five minutes more than I had taken with Allyn, but I felt weak and lacking ambition. At the time I thought that it was my age finally getting to me, but later I decided it was probably my head cold. Anyway, the water went so fast during an early lunch that I decided to turn back. The return to the rope was made at a very leisurely speed, and I saw some good fossil footprints in a loose block of Coconino just before I reached the ravine. After a slow and sloppy job of Prusiking, I got up the rope and pulled my pack up, this operation taking an hour and a quarter. I was so sure I never wanted to do anything like this again that I left the rope where it was. After cleaning up, eating, and sleeping; I was ready to reconsider. Ed Rothfuss was off duty, and I got him to go back with me to see the ravine and encourage me while I brought the rope out. He was following me about 80 and 60 feet below the rim when he spotted two sets of pictographs. They were in red clay on light parts of the Kaibab under overhangs. Some of the designs were quite familiar, but there were a number of odd drawings like a grid of city streets. Rothfuss then took me to the southwest corner of the campground and showed me the way down to a small platform ruin that I think our family visited 18 years ago. A good many girls who work at the lodge had known all about this ruin, but none of the rangers knew where it was until Rothfuss looked for it a few days before.

Before we parted, Ed told me how to find the ruin I had heard was out near Point Sublime. Quite a number of the rangers had visited it just this summer. About two and a half miles north of Point Sublime are several cairns on the east side of the road. Since you have to walk about ten minutes to get to the rim, they can all be regarded as correct. To get an idea of what you are trying to do, it is well to study the rim from the Point Sublime picnic area. About a mile and a half to the north, the rim turns east. There are a couple ravines or breaks where one can go down through the Kaibab here, and the southwesterly one is the place. A cairn marks the immediate spot on the rim where you should start down. On Wednesday

morning, I drove out to Point Sublime and then found the ruins within 40 minutes of leaving the car. I did foul up a little and went down one dead end ravine. The next one south went down through the Kaibab nicely with a good deer trail. Near its head, I found two sherds and brought the best one away for identification. Since the ruin was not around the corner to the south, I went across the next ravine and found it, a row of neat granaries and a small chamber on the ledge below. Some daredevils have climbed from the top of a juniper on a couple boards to a higher ledge. (Lex Lindsay identified the sherd as Dogoszhi black on white, 1050 ad.)

My cold kept me from wanting to do any real hiking, so I went home Wednesday afternoon.

Point Sublime, Dragon, Shiva Saddle, and Salt Water Wash  
[August 31, 1964 to September 3, 1964]

Dirk Springorum the German geology student who went with me on several trips last year, was back at the Museum and he accepted my invitation to go with me back to the north rim.

We got our permit at the ranger station announcing as the principal objective to find the location of the route from Point Sublime to Tuna Creek. I had studied the route from the map and from distant views from the south rim and thought it would be easy to go down a mile north and west to the rim. From there we thought we could proceed to the saddle between Flint and Tuna Creeks and walk down easily into Tuna. On Monday afternoon we spent several hours looking at the area. We could get down to the top of the Coconino at the place I had picked. In a couple places the Coconino was partially broken or covered by a talus, but we decided that it wasn't safe without a rope, and I wanted a ropeless route. Below Point Sublime the Coconino and Supai would be easy, and one could get below the Kaibab by way of the big ravine to the west (farther west than the one through which the road runs). We could not be a bit sure of the route through the Redwall. The drop from the Flint Tuna saddle is much steeper than I had thought from the road on the way out, we left after a good night at the picnic area.

The route we wanted to look at came down on the west side of the Dragon. The morning light made the Redwall seem more difficult than it had in the afternoon. There would be a lot of manzanita on the way down. While studying it from the viewpoint where the road nicks the rim of Crystal, we changed our minds again. We decided to walk on the Dragon and possibly attempt an ascent of the Dragon's Head. I told Dirk that I wouldn't set my heart on that one since I had been getting frustrated so often lately. We found the fire road to the basin in good shape. About the time I thought we might be getting into position for a take off to the Dragon, we found red paint blazes marking a trail this way, so it was safe to conclude that we had found the right route. It is quite hard to identify the various ravines shown on the map so we were quite grateful to have the paint and later yellow plastic ribbons to follow. The route goes south from the road at Crystal Ridge, then veers west across Milk Creek rather near the rim. You dip rather low through the scrub oak on the east side of the first spine of rock outcrops. At the south end of this spine there are no more trail markers, but it seems sure that you are supposed to go to the west of the next spine. We kept high here which put us into locust thickets. On the way back, we found a fair deer trail below the thickets, except that we had to fight our way through scrub oak at the saddle to get back on the marked

trail. Before we got to the steep climb up on the Dragon, we found the deer trail. It took 105 minutes to get from the car to the top of the Dragon.

Once on the Dragon, we soon found supplies for fire fighters hanging from a tree, some of which were wrapped in a couple parachutes. One red parachute was still high up where it had caught in a tree. The smoothest walking south along the Dragon is first to the west rim and then to the east rim. The walk takes about 45 minutes. You get down from the south end of the Dragon on the east side just before you reach the tip. The deer trail then switches over to the west side of the ridge south to Dragon's Head. We lost the trail as we approached the rock ledges below the Head. To climb the Head, you go where most of the green shows from a distance, but there are still some ledges. We may have found the only climbable break at one place. You seem to have to go up, turn left, up again, and then right to a debris filled ravine leading to the top. I have done harder climbs, but I was glad Dirk was along to bolster my morale. It took four hours to get back from the top of the Head to the car. There seemed to be no cairns on top, but we built two small ones, the first where we topped out and the other at what we considered to be the highest point, near the north end. It didn't take long to walk the rim and get some pictures. From the top of Dragon's Head, we had a fine view of the Redwall route I had ascended north of Shiva Temple on the east side of Dragon Creek. We could also see a very probable route down into Dragon Creek from the saddle between Shiva and the north rim. We decided to inspect this on Wednesday. After getting the view from Tiyo Point, we first parked about a mile to the north. Then I thought we could drive closer if we used the fork marked Shiva Xp Pt. This was harder to follow than it had been in 1957 and I thought that we would certainly have trouble finding the car at its end. We went back and parked on the Tiyo Point road. It took 40 minutes to cross the various ravines and reach the point of departure which is just east of the ravine that is east of the promontory reaching toward Shiva Temple. Getting down and crossing this ravine to the ridge is the rough part, but there is a good deer trail along the east side of the ridge. We lost the trail and fumbled in getting started down the Coconino. You have to get below the top cliff at the end, but don't start down through the lowest part of the Toroweap into the Coconino until you are over to the west. There is a fair trail through the top of the Coconino down to the talus where no trail is needed.

We first checked the draw at the north end of the saddle. After going below the top cliff of Supai, we were baffled by the second. Then we went to the south end and found that the way down is easy at the north edge of this bay. The whole Supai is broken down and covered with a talus below this place, and the Redwall even looks very fair. However, if there is any difficulty in the ravine itself, one could go along the top and reach the place where I had come up before. If McDonald was using his eyes, he would have come up this way. Dirk found a couple pieces of very poorly preserved pottery on the saddle nearby, and on our way back I showed him the first mescal pit that is just to the north of the red rocks which are at the south end of the saddle.

We also saw a very probable alternate route into Dragon Creek. It is from the tip of Little Dragon down into the west of Dragon Creek. There is a lot of manzanita on this route.

On Thursday we broke up our trip home with a walk to the Colorado River down Salt Water Wash as described by Pat Reilly. I had neglected to bring his instructions and we made about all the mistakes in the approach that he did. We didn't climb the point and see the row of monuments until we were out of the canyon. We drove the Jeep too far along the top toward the river and tried one side wash that didn't

lead to the bottom. Then we drove across country around to the south of this drainage and found the trail going down. Dirk was leading most of the time and he went so fast down the bed of the wash that we didn't locate the trail along the talus to the west until we were coming out. At the drop near where the shale begins, he climbed down past the chockstones while I found the trail around to the west. On the wide slope to the river, I found a few cairns high on the west side, but the old trail was so eroded that I could make better time by joining Dirk in the bed. We got down from the car to the Colorado River in 62 minutes, and using more of the trail, from the river to the car in 100 minutes. On the way out, Dirk spotted three sticks placed near the ceiling of a shallow cave. Together they formed a sort of shelf, and Indians may have tried to keep food away from rodents up here. It was similar to the device near the driftwood platform in Marble Canyon. We enjoyed a swim, rather cold, and a rest at the river which was running clear. We found a board which had been painted and nailed to a shovel handle and propped up by rocks. We wondered whether this was the memorial to Brown, the president of D.G.C. and P. Railroad.

It was a good four days, and it left me with a desire to go back for more.

Tanner Wash

[September 19, 1964]

I stopped at Bitter Springs gas station and had a chat with Leroy Arnold, the manager. He had never been to the sinkhole, Ah Hol Sa, but he suggested leaving the highway about a quarter of a mile to the north. The side road appears to be headed for a couple of hogans, but just before it reaches the first, there is a branch turning north. It goes right to Ah Hol Sa without a fork and it ends there. Arnold said that he understood the sinkhole to be a half mile across and 500 feet deep. It took me eight minutes to make the circuit about 30 feet away from the rim, so I figure that it is about 500 feet across and about 150 feet deep. The place to climb down is at a break on the west side. It looked bad enough to scare me away when I was by myself without a rope. The bottom is generally covered with clay and rather smooth except for a hole in the clay over to the west and several big blocks of limestone near the northeast. There are a couple of drainage channels toward these blocks.

The next part of my plan was to head for the river along the right rim of Tanner Wash to get the picture of what the lower portion of the bed is like. I could see where the narrow part of the wash ended abruptly at cliffs near the top of the Hermit Shale. A steep talus goes along the base of the Kaibab and appears to connect with the creekbed farther south. I could see a definite place where a broad talus connected this upper bench with the bed of the wash below all obstructions. I knew that one cannot go down the bed through the Supai to the river, but from the rim I could see that one can go upstream along the top of the Supai about a half mile to a break where you can make it through to the river (false, two and a half miles to Salt Water Wash). Thus the entire route down Tanner Wash to the river depended on one's chance of getting down the bed far enough to reach the bench below the Kaibab. It took less than an hour to walk back from the point overlooking the river to the end of the road at Ah Hol Sa.

I drove the Jeep back heading several drainages until I could see the Bitter Springs settlement and parked again. Heading west, I soon came to a large cairn and went down into this streambed. In about 20 minutes from the car, I came to the main bed of Tanner Wash. Near the junction is a stretch of improved trail for

sheep. The attraction isn't hard to find. As soon as the Kaibab Formation is passed, there are abundant pools of water. These continue at frequent intervals and many of them are quite deep. I saw no fish and not even a tadpole. The summer floods must have cleaned them out. I had even seen pools in the lower valley deep in the shale. There were very few places where one couldn't have scrambled up one side or the other in case a flood started to come down from above. I have been in many worse places for being trapped by a flood. I continued until I was well down in the Coconino, but I was finally stopped by some climbing that might have been possible for a very agile person who could count on a companion going for a rope in case of difficulty. You can't see out into the broad part of the canyon below at this point, and I felt that there were other difficulties ahead before one would reach the place where the broad view is possible.

Retracing my steps about 200 yards, I was able to climb to the bench at the base of the Kaibab Limestone. The walking here was without any signs of a deer trail, but one could go about as easily as along the Hermit Shale below Cape Royal or many other steep rock strewn slopes in the Grand Canyon. In less than half an hour, I was around the bend looking down on the broad lower canyon. If the Glanton Party left the bed and did this, they could have felt that they were looking down on the Grand Canyon, but still they couldn't see water. If they were eager to see the canyon, it would have been much easier to keep on top of the plateau where there are many viewpoints for seeing the river itself. From where I turned back, one can't see the talus that leads on to the bed below. This route may be possible on both sides, but the one I am sure of is on the west side. Thus Jackass, Salt Water, and Tanner all furnish routes away from the river, but the length of the walk gets longer each time you go farther west. I would estimate that you could walk from the water a half mile upstream from Sheerwall Rapid to the plateau by way of Tanner Wash in about four hours.

To the Colorado River below President Harding Rapid and the pole platform  
[September 20, 1964]

Tibbetts and Grua went up beyond the bridge and were stopped. Then they came out from Buck Spring Canyon and climbed down to where only 20 feet separated them from completion of the route. (Finally, they climbed all the way up.)

After sleeping in the Jeep where Eminence Break meets the rim, I got an early start Sunday morning. Care must be exercised constantly on the loose footing, but I reached the fossil footprints on the huge blocks of Coconino in 35 minutes. I was a little surprised to find a solitary woodpecker down here drilling on a dead stalk of agave. In 20 more minutes I reached my inconspicuous cairn that marks where you can turn out of the bed below the top cliffs of Supai on the east and find better walking. I couldn't make up my mind whether to stay high and head the small canyon in the Redwall or whether to go on down into the bed of the wash and go below this Redwall cleft. Finally, I compromised and kept going down but farther to the south than I had before. This took me along the base of the Redwall on my left. The route turned out to be the best yet. Not far from where this route brought me back to the bed of the main wash from where I had started down, I found a mescal pit. It was unlike most in that there were very few stones in a pile, but there was a distinct circle with a good bit of charcoal lying around. After I had gone to the bottom and gotten out above the Redwall on the other side of the converging drainages, I found some

tracks of men's boots. There seemed to be more than one person. They were coming away from the river. I didn't follow them far, and I saw no more tracks except from deer all day. I don't see how my own tracks could have lasted from a year ago through the winter frosts and all the storms. The route down the final pitch into the inner canyon was quite perceptible most of the time and there were places where men had lined up rocks beside the trail and had built several cairns. (It took me 127 minutes to go down and 165 minutes to come back up.)

After getting the word from several people that the Platform of Poles was in plain sight from the river, I studied the wall in the general region where I knew it must be until I could see it from the left bank. It was as high as I had thought, about 250 feet above the water, but it was farther to the west than I had been looking last year. The impression, obtained from Gordon Denipah, that one goes right by the cave with the stick fitted below the ceiling, was erroneous. The separation of the routes is quite a bit below the cave and to the west. It was just a steep scramble to the crack where Euler must have turned back. No boost was necessary, just routine wriggling to get up through this crack. I had left my knapsack and even my canteen at the river after making the crossing on the air mattress. Footing above the crack was sometimes precarious and the exposure was a bit nerve racking. As one approached the platform, there was only an 18 inch wide ledge at one point. Knowing that Denipah had done this, I was encouraged to continue. There was one discrepancy between Denipah's account and my experience. Gordon said that he got a plain view of the platform from about 15 feet away but was unable to get any closer. I don't understand his difficulty. When you get that close, you can continue to the brink right above the platform. I didn't do it, but I feel that I could have lain on my stomach and allowed my feet to slide down until they touched the poles. I was strong in my impression that these poles were driftwood from the river. They were all rather straight and were juniper if I am a judge (Grua and Ellen Tibbetts crossed and climbed beyond). The main supporting poles had been cut to the right lengths to fit the natural niches in the rock. The largest one was farthest out and was about five inches in diameter. A number of these had been blown out of place. Extra poles were clustered towards the east side, leaving a big gap on the outside to the west. I could see one small pole lying on the rocks 80 feet below. When I was through taking about five pictures from the ledge to the east and above the platform, I retraced the route down and went below for another picture. Lying here was a pole of the same material from which I sawed a foot long sample for further study. (A Ph.D in forestry says the wood is cottonwood.)

This platform could be quite ancient (770 ad using Carbon 14 dating at the University of Michigan) because it is protected from all but the most oblique rain by a large projecting slab of rock. It can hardly be called a bridge since one can't go a yard past it on the west side and the surface of the rock gives no sign of any recent fall. My conjecture is that it might have been a place for meditation. (Grua and Tibbetts crossed and climbed out.)

### Salt Trail Canyon

[October 10, 1964 to October 11, 1964]

The most unusual thing about this trip was the personnel: Marshall Demick from New York City, Dirk Springorum from Germany, John O'Brian from England, and Bodil Helt from Denmark. We reached the head of the trail about 11:00 a.m. but first we walked along the rim to look directly into Salt Trail Canyon

from above. I had the idea that the trace of a road would lead us to a point between Salt Trail Canyon and Big Canyon from which we could take pictures directly down the Little Colorado River, but we stopped the car too soon for that.

We soon saw that Miss Helt was going to slow us down a little, but she kept up a fair speed until we got to the Supai Sandstone. Here Marshall went to the west side of the wash to skirt a small cliff. I took the rest along the marked trail up under the cliff along the east side. At one place the trail seemed to be gone and since Marshall seemed to be making better time than the rest of us along the bottom of the wash, I led the rest down to join him. This was a mistake as we found on the return. The trail below the top Supai cliff down to the cross over at the start of the Redwall is mostly rather good. We found plenty of water in pools in the bed although it hadn't rained for several weeks. Bodil became quite tired about the time we reached the beginning of the Redwall and crossed to the west rim and Marshall carried her pack in addition to his own.

I had just read the paper by Titiev in the 1937 American Anthropologist, but I couldn't make any more positive identification of landmarks than I had before. We found three places where pilgrims had piled small rocks on the top of big ones, quite close together, a little north of the place where the trail starts down the Redwall. These small stones are mostly chert, but they come from the vicinity and not from the rim as I once had thought. We noticed the name J. D. Baumgartner, USGS, 6/8/52. Another date without a name was scratched on a rock higher up the trail, 5/7/58. We appreciated the frequent cairns all along the trail especially for the Redwall descent. The Little Colorado was flowing a light tan on Saturday, but before we left on Sunday, it was a milky blue.

A mouse chewed pile of prospector's supplies was just above the high watermark at the east edge of the delta. There were cans of tomatoes, many cans of Vienna sausages, a pan or two, two sleeping bags looking quite new, and farther upstream a stout nylon rope tied around a clump of willows. The rope was buried under sand and mud in several places. We had a good time swimming and swapping stories around the fire. In the morning Dirk and John went on down river to the Colorado for a week of geologizing. I walked upstream to take some pictures, and Bodil and Marshall started out about 75 minutes ahead of me. We all got out in good shape.

Something that interested me was the travertine. Some of the wood that had been cemented into the travertine was still there. Perhaps it had once been entirely sealed in, and only recently been exposed by further erosion. The level of this travertine was at least 15 feet above the present river level. It would be interesting to know how old the wood could be without rotting away. (Travertine dams were cut by the flood of 1923.)

Steamboat Mountain  
[October 17, 1964]

A student, Marshall Demick, went with me to Swamp Point Friday evening and we slept next to the car. Both of us were wide awake by 5:30 on Saturday morning and we were going down the trail to the saddle by 6:00 a.m. The cabin just west of the saddle had one broken window and two were swinging open. We

were able to follow the old trail to Powell Spring, but it is getting rather overgrown with maples. The scarlet leaves were mostly on the ground and past their prime, but there were streaks on the hillsides, especially below the Coconino, that were a deep pink for a half mile at a time.

At the end of the trail, the best walking was along the bed of the wash, but there were places where it was a fight to make any progress. There are several drops in the bed after one gets into the Supai. The upper ones are minor and can be detoured by only a short scramble through the brush to the side. The lower half of the Supai is something else. You can detour to either side, but you have to walk along the steep benches through rather bad brush occasionally for 25 minutes until you can get down. We went to the south this time instead of to the north as I had with Jerry Bortle in 1962. We doubled back to a slide near the head of a canyon tributary to the south but we later saw that we could have continued west and descended the point where the two arms come together.

We went down the bed of this southern arm and continued down Saddle Canyon bypassing an upper fall in the Redwall where it becomes the bed. After we looked at the narrows where the stream has cut into the high Redwall on the north side of the fault, we went back and up to the top of the ridge to the south where the deer get by the barrier falls in the Redwall narrows. From the top of this bypass, we continued up the slope to the south and broke through the brush into the pinyon pine and juniper forest that covers the Hermit Shale. It was tiring but not difficult to climb the talus that reaches up on the Coconino at the northeast corner of the mountain. At the place where the Coconino looked possible, we found that we were not mistaken. I left my extra jug of water and Marshall left, against my advice, all his food and water at the base of the Coconino. As I had predicted, he was drinking from my canteen before we returned. The break in the Coconino was so obvious from below that I neglected to build a cairn at the top of the break. On the return I walked right by the place and had to go out on a point to look before I learned about the mistake.

To get up the Toroweap cliff, we went southeast. We were able to get up by an obscure crack before we had gone as far as a place that was obviously broken down. On the return I was glad to find the cairn I built at the top of this route. From a distance, going up the Kaibab cliff had seemed sure if we got close in this direction. We found trees growing quite high on the slope, but in most of the ravines along here, there is an impassible 30 foot wall at the top. I picked one that I thought might have a crack out of sight at the top and Marshall went to inspect the next one to the west. I should have put my canteen in the pack and then worn the pack in front. Instead, I put both at the base of the crack and chimney climbed past a chockstone and got up only to find that Marshall was stopped at the top of this ravine. I told him to come up mine while I proceeded to explore the top of the mountain. The valley that separated the north rim from the main part of the summit goes down to the west right through the Kaibab. One can walk around to the west side and simply walk up into this valley. When I went back to met Marshall who should have been on top by then, I found that he had gone past my break to the next ravine east and was stopped again. He is from New York City. He has plenty of stamina but he showed on numerous occasions that he has little sense of orientation and routes. I told him about the easy way to the west and I climbed down to retrieve my pack and water while he waited at the bottom of my ravine. We walked west past the first ravine he had tried. The very next one looked interesting to me. First I thought it would be possible, and then I became skeptical. When I got near the top, I found that there was a break filled with big rocks. We could climb through a hole behind a chockstone. Marshall handed me my pack and canteen and I could

put them ahead of me through the hole. By this time it was getting later than we liked and we just built a cairn and took some pictures from the highest point.

As I had guessed I would, I liked the views from the top of Steamboat Mountain as well as any in the entire park. Stone Creek and the Middle Granite Gorge were especially fine. The Redwall overhang in the Tapeats tributary containing the main spring was impressive. In Stina Canyon and also in Saddle Canyon we could see streaks of bright green foliage coming down from the base of the Coconino, probably indicating springs. There were numerous creases in the slopes lined with the color of the maples.

I had marked the rim above my chimney climb with a cairn, but we walked down the open valley to the west through the woods to the top of the Toroweap and kept to this level as we went north and then southeast. The walking was relatively easy but it was further and we lost time compared to our approach route. It began to rain on us here and for the next hour we became increasingly wetter. We found the cairns marking the top of our route through the Toroweap, but I overshot the place where we were to descend the Coconino by a few yards. We went down the formation and came to the talus 20 yards southeast of my jacket and Marshall's water and pack. We considered staying on the Esplanade in the junipers leading to Powell Plateau, and I now feel sure we would have made better time if we had done so. We actually went down to the bed of Saddle Canyon over the same route we had used on the approach. Instead of going up the short canyon to the south and climbing out above the Supai, I led the way a short distance into the canyon toward Fire Point and then up above a couple of the Supai walls. I leveled off above a cliff that I thought was above all the barriers in the bed of Saddle Canyon. When we reached the bed, we found that there was one major fall above us, and the only way out was to retrace the route we had been following for 20 minutes. It was just getting dark and both of us were tired and wet. I had thought that we would keep on going after dark, but breaking through the wet brush for several hours didn't appeal. Instead, we located a dry overhang and gathered firewood for the night. Marshall had plenty of dry matches in a can and we stayed rather snug with a small fire warming the one who was lying right in front of it. We took shifts stoking the fire and sleeping. I slept about four half hour stretches, but Marshall made much better use of his hour shifts on our dusty bed.

We still had some of the six quarts of water I had carried from the car, and we also had rain pockets in the bedrock. Food was no problem either since both of us were carrying enough for breakfast. On Sunday morning we backtracked for 20 minutes and climbed to the right height to pass the barrier before going back to the bed. It was routine slogging to get to the car by 10:00 a.m. It was a fine climb and I believe it could be done in a day with the improvements I could now make in our route. As it was, we left the car at six and I was on top by twelve, but I could cut an hour from that time by turning out of Saddle Canyon to the south when we first encountered falls in the Supai. One could head the arm that comes down from Powell Plateau and stay on the saddle from Powell over to Steamboat. We could thus avoid the climb back up from the top of the Redwall and also avoid the brush by staying in the junipers.

Phantom Canyon

[November 25, 1964 to November 26, 1964]

Dick Jacobson and I walked down the Kaibab Trail to Bright Angel Campground in two hours even and took the usual 45 minute lunch stop. He had done the rim to rim to rim hike with considerable walking at night in fine shape, but before long I could see that he wasn't too enthusiastic with the scree slope walking up to the break in the Tapeats northwest of the campground. In walking over to the saddle east of Cheops, we refreshed my memory of the most dense and broadest spread of all sorts of small cacti I know of. Jake got a spike into his shoe. On the Phantom side of the divide, we didn't drop down soon enough and I didn't hit the deer trail as soon as I should have. It comes down to the streambed only a little way upstream from the waterfall, just as soon as there is a passage through the Tapeats cliff. The horse trail from the northeast, from Bright Angel Creek upstream from the granite narrows, comes down to the bed of Phantom at least a quarter of a mile upstream from here. I didn't go up here to check the old campsite under the overhang, but I am sure that this is where it is. We took two and a half hours to reach Phantom Creek from Bright Angel Campground and another half hour to go from here to the bedroll cache a few hundred yards up Haunted Canyon. It was only four o'clock, but we stopped for the night here and enjoyed an early supper.

As usual, my young companion could sleep much later than I and we got an eight o'clock start. Half in the water, we found a rather recently killed deer eaten down to the skeleton, possibly the work of a mountain lion assisted in the clean up by coyotes. There was no water in the bed above the region of seep springs about halfway from the end of Haunted and the fork in upper Phantom. In the shale above the fork, a little water was flowing.

We could see the place where we wanted to try the ascent of the Redwall, about 100 yards to the southeast of the notch which drains the east side of Shiva. I started up the talus too soon and discovered my mistake when it would have meant a long downward detour unless we kept on up to a ledge which led across to the right place. Soon the climbing began and it was about as steep and exposed as I have ever done, and I might have turned back if Jack had expressed concern or if I had been by myself. However, the rock was rough and offered good finger holds when we took our time and looked for them. Good ledges broke the serious climbing about every 12 feet during the steep 60 feet that put us on the easy ledge going over to the notch. When I had looked down from above on my way from the Isis saddle to the Shiva saddle, I couldn't see how one could get up from the lowest part of the notch to the wooded broken level. When we came around the corner now, we were above the difficult part and had a choice of routes out to the top of the Redwall. As was to be expected, I had more trouble descending. At one place I let myself down holding only by my hands and had to pull up again when I couldn't find a foothold. A foot had a half to the north there was a good step below. On the return we went directly down the talus to the shale bed of the west arm of Phantom. This arm ends in a high fall a few hundred yards to the north.

Dick had stabbed his leg on an agave during our climb and this affected his ambition. When we were in the drainage below Buddha Temple on our way back to Bright Angel Creek by the old horse trail, he wanted to leave me and return to Phantom Ranch right down the draw to Phantom Creek. He wanted to wait at the Ranch for me to get through with my trip up the Transept. I had to tell him that I was rather sure he could not reach the bed of Phantom by that route and that the closest way was to continue. He was a bit discouraged Thursday afternoon, especially when he slipped and landed in a small cactus and most of all when he lost his glasses as we were fording Bright Angel Creek. I turned south with him and we slept at the campground two creek crossings north of the Ranch.

On the way out, I met Dewey Wildoner and Donald Davis with whom I had been corresponding. Jacobson got back his pep on Friday and we made it to the rim in good time under a beautiful clear sky. I had met some interesting people and had learned that one can go over to Dragon Creek via the Shiva Saddle.

Down Peach Springs Wash to the Colorado River  
[December 30, 1964 to December 31, 1964]

Instead of asking directions to the road down Peach Springs Wash, I just drove off the highway in the general direction and found the good road past the pumping station which ends (at this time) at a gravel pit. When I was ten minutes away from the car, I found the narrow road that goes to the corral. At first I began to go after the car but I changed my mind again and proceeded on foot. It was not my four wheel drive Jeep, and I thought that the extra time for driving back and starting over might not be warranted. At the end of the trip, I watched for the fork where I should have turned off the wide road. It is up on the plateau about one and a half miles from the highway (false now). I noticed that where I parked was 6.1 miles from the highway and 1200 feet lower. If I had taken the right road, I could have driven about two miles farther than I did, but beyond that, the road has rough places that would be better in a power wagon. The best way to get to the corral would be along the bottom of the wash. A road has been bladed along the flats east of the wash, but floods have cut it. Walking time from the gravel pit to the corral was two hours and from there to the river about four and a half. It takes about a half hour along Diamond Creek itself.

Peach Springs Wash was a remarkable contrast to all other approaches to the bottom of the canyon I had ever seen. The route can be described as consisting of four parts and a broad upper bowl where the good road ends. On the road down the wash, you soon come to a fence with a wire strand gate. Here the road goes over a low ridge while the wash detours through a narrow canyon to the west. In a quarter of a mile, you come out into a broad valley surrounded by easy slopes and some exposed cliffs. After a couple miles through this valley, you turn slightly to the right and enter the section that goes nearly straight for mile after mile. This seems to be determined by a great fault. The disparity of the formations seems to indicate that the east wall is several hundred feet higher than the west. I would like to know more about the geology of this area. Igneous rocks on the east seem to overlie more limestone, but before you get to the bed of Diamond Creek, both sides show granite. There are several side canyons which might offer access to the bottom, but mostly the walls are formed by tiers of sheer cliffs. The Redwall near the top has the usual Grand Canyon coloration, but most of the walls are nondescript desert drab. The bed of the wash is as broad as though a big river had been here and the slope is uncannily uniform for the 17 estimated miles I walked to the river. If any great blocks ever fell from these cliffs, they have either weathered away or have been buried under gravel and small boulders. The final section, the bed of Diamond Creek, was also an evenly graded slope of gravel and small boulders, but it is much narrower, and I believe that floods occasionally cover it from wall to wall.

I could orient myself on the Williams Quad map when I came to the opposed side canyons, Halls to the east and Lost Man to the west. The corral and spring are about three fourths of a mile up canyon from this

place. I was looking for cottonwoods to show where the spring is, but there is nothing more luxuriant than a thick grove of mesquite. The spring is just below a small shale ledge and is quite easy to locate since burro trails go right to it from both gates of the corral. At present the gates are wide open, but I could tell that they had been built to allow burros or other stock to go toward the water but the poles would come together and trap the animals in the corral. I saw numerous burros on both days.

On the terrace near the junction of Diamond Creek and Peach Springs Wash, there are mortar free walls of water smoothed boulders. They are placed along the rim of the terrace and appear to be barricades to protect a camp from possible flood waters rather than the foundations for buildings. Lying nearby are a few old weathered two by fours, about three old steel mesh cots, and a very large pile of rusty cans. I recognized a part of a stove. I wonder whether the Farley Hotel was just a tent camp. (I found out later that the hotel was a frame building.) On the return I noticed a better built wall coming out from the cliff about ten minutes walk upstream from this junk at the junction. It is about two and a half feet high and comes out about 30 feet from the wall and ends where the stream has cut into the terrace.

Near the campsite at the east side of Peach Springs Wash, just where it reaches Diamond Creek, I could see where men had cut through the edge of the terrace to get a wagon down to the water in Diamond, but for the rest of the way to the river, I couldn't recognize anything like a trail. One just walks the bed and hops the water numerous times. I watched for Leo Brown's rock pile but I didn't see it.

On the sand dune near the river, there are more signs of former occupation: old two by fours, part of a stove, part of a heavy mining machine, and a lot of pieces of granite core where someone was investigating the rock. There were some very old tin cans and, closer to the river, some charcoal from the camps of river runners.

I reached the river in time to snap a few pictures and get an early supper. They must be trying to replenish Lake Mead because the river was flowing well and was as dirty as it ever was. Tamarisks were growing out of a foot or more of water, and the rapid was kicking up quite a noise.

About the most impressive view of this trip is the sight of Diamond Peak standing at the end of the straight stretch of Peach Spring Wash. It looks like something from Glacier National Park. I wonder whether it has ever been climbed. It is relatively accessible and Diamond Creek supplies plenty of water for camping.

The other thing that impressed me about this route is that with good footing and a straight course, one can cover surprisingly large amounts of territory on foot. Landmarks ahead looked discouragingly far away, but within two or three hours I would pass them.

On the return, I was glad that the road was there for a guide into the correct side canyon and that I could see my own footprints where I needed to leave the road to go to my car. I hadn't remembered the landmarks here as well as I should have.

\*\* On a later trip, we climbed Diamond Peak, but Green found an old bottle at the top with names.

## Thunder River [dates unknown]

When you look west from any of the observation points near the village of Grand Canyon, you see a series of major promontories jutting out alternately from the north and south rims: Point Sublime, Havasupai Point (not to be confused with the Indian Reservation), Powell Plateau, and farthest of all, the Great Thumb Mesa. Beyond the latter lies the interesting Havasupai Indian Reservation with its stream of blue green water and three majestic falls. North, across the Colorado River from the Great Thumb, is a wilder area of great interest.

This is the region drained by Thunder River, a stream just as large as Havasu Creek and a lot swifter and colder. Other tributaries from the north bank such as Kanab Creek carry more water during floods, but for permanent flow, Thunder River, or Tapeats as Powell called it, is the largest stream coming in from the right between the Escalante and the Gulf of California. This is remarkable when one considers that Thunder River flows above ground for only about five miles.

Strange and contradictory reports have been circulated about this stream and the area in general. C. E. Dutton explored the north rim country for the government in 1880. His report devoted over a page to his trip down through the Tapeats Amphitheater to the river. He followed a trail built by gold miners four years before. The only way to make his description conform to the terrain is to conclude that he missed Thunder River entirely and went to the mouth of Deer Creek, three miles farther west. He was very specific about the last few hundred yards where one must dismount and follow a narrow ledge with the creek out of sight below in its crevasse like channel. He even mentions the place where the path is so narrow you have to stoop to get past the overhang in the cliff on the right. It is a precise account of the route from Surprise Valley, through which runs Little Deer Creek, to the bank of the Colorado. The mystery is that he didn't mention striking Deer Creek Falls whose clear water sometimes drops directly into the brown flood of the Colorado.

The present trail to Thunder River goes to the east when one has come down the Redwall. One no longer sees the old trace of a trail to the west into Deer Creek Canyon, or Surprise Valley. This name must arise from the fact that the lower end of the valley seems to be blocked by a ridge which the creek pierces by its strange slit. The fame of Thunder River rests on two things: the fishing and the falls at Thunder Spring. It was stocked sometime in the twenties, and after World War II, fishermen were coming out with tales of 23 inch trout. The spring is near the trail. A considerable volume of water gushes out of a small opening in the cliff at the foot of the great Redwall formation and fans out over a short half cone to drop sheer for a hundred feet. It is more dramatic than the falls in Havasu Creek, for the observer has had no warning. The most water he has seen along the 15 mile trail has been a few stagnant rain pools full of dead bugs. There is a slightly smaller fall 50 yards below the first, but the whole of Thunder Creek from here to its junction with Tapeats is one long chain of cascades. The trail switchbacks down this thousand feet of altitude alternating between catclaw and cactus away from the stream and monkey flowers where the water comes to the edge of the path. The trail was first developed by prospectors, but from its present state of preservation one would guess that it was improved during the depression by the CCC workers.

In 1948 Philip Ferry and Al Schmitz asked Park Superintendent H. C. Bryant whether there was any part of the national park that needed investigation. Doctor Bryant referred them to Thunder River as a place where reliable observers could clear up some conflicting reports. Park Ranger R.E. Lawes and two companions had been on the rim of a side canyon about a half mile away from the source of Tapeats Creek and had come back with the report that it began with a high fall. Jonreed Lauritzen, a writer and contributor to *Arizona Highways*, had been up the stream, often hip deep in the cold water, and had come back with the story of nothing more exciting than a lot of small springs in the streambed. The names Thunder River and Tapeats Creek are often used synonymously, but the Forest Service map draws a distinction. Below the junction with the tributary from Thunder Spring at the end of the horse trail, it is called Thunder River, and above this point is referred to as Tapeats Creek. Ferry and Schmitz hired a guide and some horses and went in to explore Thunder River without realizing that the argument was over the source of Tapeats Creek and had nothing to do with Thunder Spring. The large scale topographic map of the park is not helpful here. This map, drawn by Matthes and Evans between 1902 and 1923, is a marvelous piece of work up to the park boundaries everywhere except north of Tapeats Creek, where it is completely blank. Thunder Spring is shown, but the larger source, which supplies three fourths of the water in Thunder River, is in the blank area. Forest Service maps of various dates show this spring about two miles east and a mile north of Thunder Spring. Ferry and Schmitz measured the accessible falls below Thunder Spring and noted the width of Thunder River. They went along the bank toward the Colorado until the creek entered its final narrow gorge. They reported their conclusion in an article published by *Natural History* in 1949 that Lawes was right about there being a good fall at the source. Lauritzen was understandably irked at being regarded as practically blind by men who had not even understood the problem. He replied in *Arizona Highways* for April, 1950, that the falls at Thunder Spring had been well known since 1905. Ferry and Schmitz hadn't even taken the usual hike to the river along the top of the final gorge and then down a talus from the right to the mouth of the creek, while Lauritzen had struggled all day through deep water to see the source of Tapeats Creek. Lawes had seen a cavern mouth which Lauritzen had missed.

These inconsistencies were finally explained by some Fredonia high school boys in the summer of 1956. Without realizing that there was any argument to settle, they made their way upstream to the source. In climbing around the big springs to the east, Don Finicum, the leader, came on a large cavern mouth about 30 feet wide by 10 feet high. No water was coming out, but there was plenty standing in the corridor farther back. It was now clear that Lawes had seen this cave mouth when it was acting as a spillway at a high stage of the late spring melt. The rush of white water down the steep talus gave the impression of a high fall.

Both Ferry and Lauritzen gave the impression that there is something sinister about this region. Lauritzen passed on a story of a miner who found too much gold in a bar at the mouth of Thunder River to pan by hand. When he returned from Kanab with planking for a sluice box, the river had risen over the bar. In his desperation, he walked out into the river and drowned. Lauritzen fancied something unnatural about this creek, perhaps basing his impression on the great difficulty one has in following it any distance. Ferry passed along his guide's remark that he couldn't see why anyone would want to visit such a gloomy place. Coming back to specific events, we can note that one guide for a fishing party lost several horses that were poisoned by some kind of forage here in the fall of the year. The horse Al Schmitz was riding to

cross the creek lost his footing and almost drowned Al. All his color film was lost. When Lauritzen was going up the creek to the source, he lost his footing and his picture record also was ruined.

Ferry's and Lauritzen's articles inspired me to try to reach the source too, but when I got to the end of the trail in 1952 and again in 1956, the water chilled my ardor. I settled for trips to the river and to Deer Creek. As I was leaving the second time, I noted the possibility of following the talus above the gorge. In the fall of 1956, I met Don Finicum at the Flagstaff State College and learned about the cavern near the source. In the summer of 1957 and again at Thanksgiving, I was able to reach the cavern at the source by way of the bench above the creek and had the pleasure of getting the first close pictures of the source.

The two students, Don Finicum and Allyn Cureton, who were with me on the fall trip, found the way back through the dry part of the cave to the large corridor containing the main stream before it finds the cracks down to the surface springs. No one knows how far back under the Kaibab Plateau one could follow this 15 by 20 foot channel. (Now known, 3000 feet.)

Just a week or two earlier a cave explorer from Pittsburgh, George Beck, climbed into Thunder Spring and followed it back, using a rubber boat, without finding the passage becoming any smaller.

This area should continue to grow in popularity. There are two interesting trails down from the rim in the neighborhood of Big Saddle Deer Camp, which is about 50 miles southeast of Fredonia, Arizona. They meet on the Esplanade, the great plateau of fantastic red rocks about a thousand feet below the rim. Consulting a map of the North Kaibab Forest is a must for one who is going in without a guide, and one should carry a gallon of water in the hot season. The falls, the dramatic change from desert to oasis, the fishing, and the caverns all measureless to man will draw more people than the flour gold in the river ever did.