

## Harvey Butchart's Hiking Log

### DETAILED HIKING LOGS (April 16, 1963 - February 16, 1964)

From Manakacha Point to Supai

[April 16, 1963]

After priming me to save a date in May for a trip off Manakacha Point, Jay Hunt abruptly suggested that we do it the next Saturday. I had intended to use this weekend for completing the traverse below Great Thumb Point, but I was glad enough to switch my plans. This time there would be two vehicles for the trip. I would take Doug Shough, and Hunt would take Arvid Burnam and Francis Earl, all good walkers and climbers. I wasn't sure that I would have the Jeep for the drive up the rough road on the mesa, but Hunt was rather sure his truck would make it if I didn't have the use of the four-wheel drive.

However, I easily located Colin Fletcher in the campground and learned that he had succeeded in having the fan belt put on the Jeep and it was ready to go. While we were stopped in the village, Hunt passed through in his truck without a thought for more gas. When we arrived at the rendezvous, 34 miles from civilization, he greeted us with the news that we would have to trail him back to town the next day since his gas gage read zero. Another reason for his party to be glad nothing had been able to stop us was that the only water they had was in three small canteens, and it was very possible that there would be none this side of the Esplanade or Supai. There was no great assurance that we would make it off the mesa, so if I hadn't had plenty, they would have been in trouble.

In the morning, we got an early start and by eight we were at the end of the road, this time taking the northern branch. After more map study, I noted that the map doesn't show the road going as far as it actually does as well as not showing the branch leading to the place the telephone line goes down. One thing we saw that may explain the original need for a road here is an old reel of rather heavy cable. It surely is not extremely long, but it suggests the idea that a mining company was planning an aerial tram down to Supai, certainly a more practical method of bringing out the ore than the wagon road which was supposed to go down Lee Canyon.

There were a couple small cairns leading from the end of the road either towards a crack between the blocks at the very point, or perhaps to the semi-detached high block forming the very point itself. On top of this platform, there was a large cairn. This may have been a marker for the surveyors, or it may have had something to do with the proposed cable way. We of course thought it marked the route down. Francis was about the most aggressive in searching for a route. He had the others put him on the end of a rope and belay him over the edge below one of the chutes in a place that I at once dismissed as impossible. I told the others that if they were going to spend their time on that sort of thing, I would amuse myself exploring along the rim. That was not my sort of fun. Francis soon asked for help back up and reported it impossible below. I knew that we could have come over below this point from the south without having the obstacle of this top cliff of Kaibab. Next, Francis hurried ahead of the others around to the north side of the point and soon reported a way to get below the top cliff that only required rope work for about 10 feet. There was a fine block for tying to, and we could go down hand over hand this far. When we were on the steep clay slope below the top cliff, we scattered out to the right and left to see

where there might be a split in the Toroweap and Coconino Formations. Hunt had given me the impression that the Indians had told him the route was just south of the point, so I went in that direction with Arvid for a companion. We got to a place where we had covered all the lower rim as far as where we had been on the other occasion.

On our way around to the northeast to join Hunt and Earl, we picked up Doug who had been waiting for us. Hunt was making a lot slower time across this poor footing than Earl. Even from some distance, the lower rim around here seemed more promising than where we had been, and I hurried on. Doug was keeping close until Francis shouted that the walking was better higher up, and the rest of the party took his suggestion. I could see a piece of a bighorn trail down near the Toroweap rim, but this lasted no distance. The others saw me approaching a break in this rim, so they thought that they would wait for my report. After inspecting two possible routes down, I returned and went below the first cliff of Toroweap at the first place. It was possible to go around a small point to the east and find a perfect place to scramble down below all the Toroweap. A landmark for this is a huge detached block of limestone lying at the top of the Coconino. My next reconnaissance was fruitless -- going east along the top of the Coconino. I satisfied myself that there was no route in that direction. The rim to the west looked even worse, but the others shouted for me to go around there and report. Only a couple hundred yards in this direction, I saw something that needed investigation, a steep ramp against the sandstone cliff. There was a convenient notch leading down to the exposed part. At times it was only three feet wide but after a short chimney where one had to wriggle down, it only took cool nerves to go over halfway down the Coconino. Then after a wider platform where moss covered the clay, one soon came to a water smoothed overhang of 10 or 12 feet. I realized that I could not get down without a rope, but for some reason I didn't inspect the part leading on to the bottom except to note that it averaged steeper than the part higher up.

Doug came down to the rim of the Toroweap and relayed my report to the rest who had been eating lunch where they were waiting. They came down to see even though I hadn't given a very encouraging report. When I came up from this ramp, I left my pack and continued looking farther west. For several yards here, I had the worst footing that I had encountered all morning, but I got as far as a talus that had looked encouraging from a distance and found that there was absolutely no hope over there. In the meantime, Francis had come to my pack and was considering the descent to repeat my investigation. I had said that a short rope would get us past the place where I had stopped, but I thought there were more difficulties below. Hunt, Burnam, and Shough had stopped across a small bay from here and informed us that there was no hope in getting down where I had indicated the possibility. I went over and joined them as did Francis. Hunt said that we couldn't get down to the mossy platform, and then I informed him that I had gone 20 feet farther. I also told them that I was glad they had decided not to go over and make me look chicken by going on down. That remark turned the trick. They immediately took the rope over to my crack leading down to the ramp. Francis had gone ahead and when he reached the overhang, he reported that the rest would be easy. Burnam, Shough, and Earl held the rope while Hunt went down the overhang first. Then they helped me down, and Hunt waited at the drop to help the others while I went on down to the bottom of the Coconino cliff. This ramp was very narrow, and at one spot there is an awkward long step over rocks that could have been loose. Doug stayed up to anchor the rope for the last one down and then went back to drive the Jeep to the campsite at the junction of the Mesa Road with the Topocoba Road. I led the rest down to the wash which holds the Apache War Trail leading to the fort above the chapel. We knew that it would be difficult to see where the trail left the bottom of the wash, and we still

missed it, but not for long. We scrambled out of the wash before we were boxed in the way Allyn and I had been in 1960. It took us only about an hour and 20 minutes to go from the bottom of the Coconino down the Apache Trail to Supai.

Doug went back to the rim by an easier route than going up the rope we had left. There's a walk-up through the rim about five minutes walk east of the point. This should be about where the road is shown as ending on the map. If someone would bother drilling a hole in the sandstone and fixing a ladder at the overhang in the ramp, one should be able to go from a Jeep, down to Supai in two hours or less. Of course, one could trot down the Hualapai Trail in less time than this, but it would not be as sporting. I saw bighorn droppings just below this ramp, and one of the others reported signs at the top. On a prominent block of limestone one ravine to the east of our ramp, there is a large cairn which may have been a reminder of this place. The Supai say this is not their rope descent.

#### Below Tahuta and Great Thumb Points

[April 15, 1963 to April 16, 1963]

I find that I can drive the first seven miles of the road up on the mesa in a little over a half hour, but after that I averaged only a little better time than a fast walk. Something always seems to happen to the Jeep on the part where I lose my way and have to plow through the sage brush to get back on the track so I have now resolved to walk beyond the clear part of the track. On Monday I reached the hill where a surveyor's upright pole with a crossbar, sticks out of a large juniper tree, less than 10 minutes walk from my cairn marking the route down into Fossil Bay. After eating by the car, I set out at 1:10 p.m. and reached the rim at 140 Mile Canyon in about 45 minutes.

The grove of cottonwoods marking the site of the spring is visible from here and I got another picture of the Great Thumb Trail which should include this grove. The deer trail off the rim is about 200 yards east of the rift where a piece of the deer trail starts down at a steeper angle. I could see no clear signs that horses also use this route to water. It was easy for me to get down to the good horse trail on the Esplanade in about 30 minutes and over to the spring in another 30. It would have taken me at least an hour to go along the rim to the head of the Great Thumb Trail, so I was clearly ahead.

I had been seriously considering taking a rope to the route a little west of Tahuta Point, so I observed it quite closely. My best estimate of distances would be that one could walk backwards holding to the rope for the top 30 feet of the Coconino cliff, and then there would be about 20 feet of rappelling below to reach the talus. I was satisfied with the steady walking without having to retrace the route to come back for the rope. It was 4:30 p.m. when I started into the big bay just east of Tahuta Point and it took me an hour and 45 minutes to get clear across. There were plenty of bighorn signs, but I saw none on this trip.

As I was deciding whether to stop for the night when I had crossed the cove east of Tahuta, I noticed a route that appears to go right through the Coconino and Toroweap formations. There's also a fair chance that a route goes through the top of the Kaibab, but some use of a rope would make this certain. I was tempted to leave my pack here and return when I had filled in the gap below Great Thumb Point. I gave up the idea since my announced plan had been to go on and out at Fossil Bay, but this would be an interesting lead to follow at a future time. My bivouac site was most interesting, a sheltered shelf below

an overhang formed by the upper layer of Supai Sandstone. The night was quite windy and I was grateful for the protection of big blocks of stone almost closing in my apartment. The view towards Tapeats Creek both in the twilight and dawn was most memorable.

Only about an hour was needed to go on around the next cove to the base of Great Thumb Point but by the time I had walked out on the projecting rims and had crossed the next shallow cove to my former farthest north, it was 9:00 a.m., two and a half hours after I had started on. In one ravine of this bay northeast of Great Thumb, I spotted a couple potholes that probably hold water through the wet seasons. One had a fair supply, but I still had quite a little left of my original six quarts and didn't feel like climbing down for more. The water situation seemed better than I had pictured it to Colin Fletcher. The spring at the cottonwoods west of the Great Thumb Trail was flowing a precipitable trickle after going dry last fall and I noted water on the rocks at several other places. I was rather surprised to find my reliable pothole in the main arm of Fossil Bay to be about a foot below the rim and alive with wrigglers. When I reached this location about 2:00 p.m., I was completely out, but I got water from the only other hole nearby, shallower and cleaner. Only dead butterflies and bugs floated on the surface.

A bighorn skeleton, a large chunk of calcite, and blocks fallen from the Kaibab full of fossils took my attention on the return to Stanton Point. One can get down into Specter Chasm on the south side for about four-fifths of the Supai, but after that it would be impossible.

#### Rim of the Little Colorado River Gorge [April 27, 1963]

I was all set to go through the West Fork of Oak Creek Canyon and appeared at six on schedule, but no one else showed due no doubt to the weather. If we had gone through by the approved route, it would have meant wading through numerous pools and swimming two deep holes over 60 feet each. Snow was still covering the ground from the storm on the previous day, and the highways were icy. A strong cold wind was blowing, and I was not too surprised to be the only hiker on hand. I had decided to invite all who showed to go with me to inspect more of the Little Colorado River Gorge, so I waited for 20 minutes then took off by myself.

I turned the Jeep off the highway about one-quarter mile east of the road to the scenic view where Highway 64 starts up the grade. Here the canyon is already about 1700 feet deep and is deepening about 25 feet per mile. The road goes only a half mile farther than we had walked on the other occasion, about three and a half miles in all. This is one of the mysteries -- why should such a good road be built that leads only to the rim of Lee Canyon and then quits. Or one should say that there is quite a bit of road building part way into Lee Canyon, and then the work simply stops. Someone must have ideas about carrying it down and across, but the money gave out. First I went over to the rim just south of the mouth of Lee Canyon and found that I was looking at the river about Mile 33. From the rim I couldn't tell whether one could go on down from the lip where the canyon ends. On the rim facing the river, there was a cairn and at the two places below, I found trail construction, including juniper logs and walls to help stock descend. From the end of the hanging valley, there was no chance to proceed lower, so I concluded that the above trail was simply to help animals get to the water in the potholes. Many shallow pools had been filled just the day before, but there were also deeper holes in the rocks that evidently had held water

for sometime to judge by wrigglers and algae. I returned along the bottom of Lee Canyon and climbed out to the south when I was nearing the car. What I still didn't notice is that a good horse trail leaves the end of the road and goes down immediately to the north into the canyon. Here again is a riddle, why it should be wide enough for a truck at first but soon tapers down to a track for one horse.

After I had eaten an early lunch, I left the car about 11:10 a.m. and walked to the plateau in the northeast direction. After crossing Lee Canyon, I came to about seven other ravines of lesser depth. I looked into the main canyon about Mile 31.3 and then paralleled the rim. At one place I noticed that vehicles can come down from the higher plateau to the west. Something else that seemed a bit strange was that over much of this area there was little or no brush to scratch ones legs. Sheep droppings were almost everywhere, but the only animals seen were three horses and a newborn colt. These were even with Mile 28, my farthest north.

I wasn't sure of my map identification until I saw the gooseneck at Mile 29 with its characteristic spine of rock pushing the riverbed to the east. I could also identify the broad island detached from the east rim to the north, the one showing the 5500 foot contour. Walking this far from the road end and crossing the ravines near the rim as well as stopping for a few pictures took me 120 minutes. On the return I discovered the horse trail and made faster time, 110 minutes. My turn around was marked by a big surveyor's rock pile with a pole in the center. I was still seven river miles from the Piute Trail. The next time I try to locate the Piute Trail, I will go down by Cedar Mountain. This was a day of minor accomplishments, but the views into the Little Colorado River Gorge were inspiring and there were quite a few birds around, mostly juncos. The day was memorable for how cold it can be almost to the first of May. I wore my wool gloves until afternoon.

### Blue Springs Trail

[May 10, 1963 to May 11, 1963]

Peter Huntoon was still eager to see the bottom of the Blue Springs Trail after the frustration we experienced last fall. We left Flagstaff soon after five on Friday afternoon and had the Jeep ready for four-wheel driving by 7:30 p.m. at Desert View. This time we went around on the north side of Cedar Mountain and found the track quite a lot smoother. It became apparent very soon in the night driving that Pete remembered the route better than I. We found that the road had been worked on since last fall, and there were very few places where I felt that the Jeep was listing badly. The place where the main track goes to a hogan while our route turns west along a ridge caught us again, but Pete checked me before we had gone many yards out of the way. We reached the hogan east of Gold Hill in less than two hours from the highway which would have been a very satisfactory time in the daylight. We spent a windy but comfortable night here.

On Saturday morning we drove up to the old parking above the last valley before the trailhead. Pete finished eating before me and took off. When I started down the steep part of the rock climb, he was already nearing the top of the Coconino. I got down the first 100 feet and side-stepped around the point to the ravine just west of the first cairn. From here to the top of the Coconino is obvious. The main bed here is split by a spur. Both chutes drop off abruptly, and I wouldn't consider going down either, but Pete was already well down in a crack near the west half. I didn't remember the route from five years ago, but I was

sure it was not the way he was taking. I should have known that I was not taking the right route when I was about two-thirds of the way down over to the west and Pete shouted that he was through and was going on. I continued down where I had started until there was only about 50 more feet of Coconino below, but it was impossible. After returning to the ravine where Pete had started down, I had wasted 75 minutes. A check of the east chute assured me that this was not for me, so I went over to a cairn leading to the west again. This time I stayed out of the west chute but only a short distance. Very soon I began spotting cairns.

The route through the Coconino goes to the west and then angles back towards the chute. In fact, there is a yellow painted arrow that directs one into the chute just below an overhanging chockblock. This particular arrow should be removed as there is little future here. Another arrow points to the west and one can descend getting farther and farther away from the chute. One has to proceed with caution at numerous places and this route, while the best is still not very good. I can think of people who might balk at going down here. At one place, a cairn directs you to hold on to some very poor grips and pull yourself up until you can get a knee on a ledge. You work your way farther and farther west and reach the bottom of the Coconino quite far from the chute. Then you have to follow the top of the Supai still farther west and reach a break to take you down to the talus. You should then angle sharply back to the chute or rather the rockslide below the double chute. The cairns and painted arrows are surely helpful, for finding the best way through the Coconino is harder than it is up to Wotan's Throne or Shiva Temple. Pete made it down to the river from this place by the bottom of the wash as I had done in 1958 and went from the rim to the bottom in about one and a half hours, although he wasn't carrying a watch to verify that.

I followed the well built trail around the base of the upper Supai cliff and it was much easier this way. I agreed with Womack in wondering who would take the trouble to build such a good trail at the lower end of this impressive climb. On the return Pete tried the east chute and wound up doing the hardest solo climb of his career. I came up from the river without incident in two hours of walking. We both took a swim at the bottom and noticed that the big springs come out of a crack a foot or more above the level of the pool instead of reaching the surface from below as in 1958. The water impressed me this time as being soda flavored rather than salty. I drank one and a half quarts on my way out.

Hubbell and Poston Buttes, and Jupiter Temple  
[May 24, 1963 to May 27, 1963]

Bill Breed introduced me to Dirk Springorum, a graduate student in geology, and I was glad to invite him along. I had thought of making an attempt to climb Vishnu Temple if Allyn Cureton had been able to go with me, but I decided to try for Hubbell and Poston Buttes and Jupiter Temple first.

Instead of going away from town at 6:00 a.m. as planned, I had to stay until almost nine when I got two flats within a half hour. Instead of taking a crack at Jupiter on our way down to Juno Ruin, we stopped at North Rim Headquarters and had a good visit. Then I took Dirk to see Point Imperial and Cape Royal. We finally got started down from the car towards the north facing notch near Cape Final about four. We rappelled with a carabineer and body sling down the 40+ foot drop followed by the 20 foot drop near the base of the Coconino and then followed the ledge east as Jerry and I had done last fall. This time we had a second rope for the end of this ledge long enough to tie to the large dead fir 15 feet above the clump of

bushes you have to get by. Dirk had more trouble getting his wide pack past the brush but he put it down and reached back for it. With one of the main stems cut by Jerry last fall, I was able to negotiate this spot rather easily both going down and coming back.

We were able to follow the deer trail that generally follows the base of the Coconino to the angle in the cliff where we went down on the northeast to the top of the Supai. The uppermost wall is about the least broken. A good way to descend occurs about midway between the draw to the south and the angle north. On the return, I marked the route by a two stone cairn. We used different routes on the descent and the return, but I would say our descent nearer the draw was the easier. Lower down we worked more to the north.

We found the deer trail leaving the saddle, and this time I marked the head with a small cairn. After leaving the trail to descend the second ravine to the west, we got down through some loose rocks and brush to the south tributary of Lava Canyon. As usual we went to the west along the top of the Tapeats and then down the break to the ruin. The return from Jupiter Temple was made by following the deer trail farther to the west before descending. This trail seems to disappear as you reach a slope wooded by junipers, and the footing down here is much better. It's not so direct, however, and the gain is more evident on the climb up. Both the bed of the ravine and the juniper forest are preferable to walking up the rock slide. We reached the ruin at seven for a trip of three hours, a few minutes longer than Jerry and I had taken last fall. We took precisely the same time to get back to the car, five hours and 20 minutes.

The second day we got an early start at 6:15 a.m. and went up the tributary that heads near Hubbell Butte. Getting by the fall in the Bright Angel Shale was just as hard as I had remembered it, and this time we committed the error of going higher and staying out of the wash longer than was necessary. Near the top of the Redwall, the ravine splits and I couldn't remember which part I had taken in 1958. This time we went to the east and it went through all right.

The Supai cliff that rings Hubbell Butte is remarkably uniform, and we got the impression there is no break at all on the west, so we went around to the east side. There were impressive overhangs, but toward the southeast we began seeing encouraging signs. Dirk was in favor of going up the first place that seemed the least bit possible, but I talked him into investigating further. Quite close to the south end, but still on the east side, we found a crack. Dirk showed that he could get up the awkward ten feet to reach the crack, and after that it was easy. However, the crack was so narrow that I couldn't maneuver enough to get even a knee up to the floor of it. After some thought, I simply rolled over and sat down after which I could scoot in farther and then stand up. There was no other problem and we were the first to build a cairn on top. Dirk went down the difficult place first and then gave me real help in placing my feet on invisible projections. I believe if I had been by myself, I wouldn't have climbed Hubbell Butte. There was nothing to walking over and climbing Poston Butte, but we were surprised to find a large cairn already on it. At the south end of this ridge, it was easy to go down to the top of the Redwall to the east. Below that, I was afraid it would be steep, but we found a nice deer trail down to the saddle. We could also see that the Redwall is almost entirely covered by a rather gentle slope of brush to the north and we are sure one could easily walk down to the tributary of Lava that comes up to Hubbell on the east. We wanted to investigate the descent directly to the ruin. Through the upper half of the Redwall, it was simply walking down a debris choked ravine. To negotiate the lowest third, we had to turn to the east. Just before we were to run

out of shelf here, there was an easy descent. The break in the Tapeats wasn't immediately evident, but it's just west of the end of the detached block that forms the overhang for the ruin. This block is in a class by itself. A chunk of rock a quarter mile long in the east-west direction and about half that wide has split away from the main cliff and seems to have slipped down to the south. I believe the map is wrong in showing it longer in the north-south direction. This jaunt took only six hours, and after quite a breather in which both of us read Time, we parted company about 2:00 p.m.

Dirk was down there with a vowed intention of studying the gravel terraces, so he went downstream. I had never measured the Hartman Bridge, so I went upstream. The measurement was admittedly crude, but it showed that this bridge compares favorably with Goldwater's in size. I had a short rope, seven feet long as judged by Dirk's six foot height. Under the bridge I found a dead sapling of the same length as the rope. I couldn't go straight across as I was applying my stick, but along a curve, I used the stick 23 times on the span. If we straightened this by cutting it to 20 times seven feet, we still get a respectable 140 foot span compared to my measurement of the other bridge as 147 feet across.

The third day, we started about a half hour later to try to climb Jupiter. We made the saddle in one hour and 25 minutes and after a short breather, we headed for Jupiter. The top of the Redwall makes a good route, but as we approached the notch between Juno and Jupiter, we began slanting up. There were plenty chances to reach the main ledge supporting vegetation below the top two cliffs of Supai. Some scouting was necessary to find a breach leading upward. The route was to the south, up a break, then a little farther south, up another, and then to the north to get to the shale below the final defense of the platform on which Jupiter is built. We couldn't see a break on the west side, so I led Dirk around to the east. As usual he wanted to try the first chance we came to, but I continued looking for an easier way. I was soon rewarded by a very simple scramble to the upper platform, and Dirk soon gave up and followed me. We found the ascent through the Coconino as easy as we had hoped, although hands were necessary near the top. We built the first cairn on top and were eating lunch when I noticed a yard long lath with staples in one end. It had been stuck upright in a bush at the summit. Vern Ruesch suggests that this was left by a surveyor who arrived by helicopter, and we are inclined to agree. We returned to camp at the ruin and had a good loaf and a bath in the spring. The climb out was without incident. We had hung the rope in the crack at the east end of the face, and the Prusiking could be varied by some stepping on small shelves.

We both agreed that this had been a fine trip with ideal weather, birds and flowers to watch, a campsite surrounded by terrific scenery, and 100% success on all projects.

Lava and Carbon Buttes, and a route to Lava Creek  
[June 12, 1963 to June 15, 1963]

Dirk Springorum and I had been intending to go into Nankoweap Basin from the north rim until I got word that the Reillys were at Grand Canyon Inn on the south rim. We left Flagstaff at 6:30 in the morning and were talking to Pat and Susie about two hours later. They were planning to do some more reading at the south rim and then study the Shinumo Wash area of Marble Canyon before going to the north rim. They wanted to go down from Point Sublime to Tuna and Crystal Creeks. They promised to spend an evening with us at the end of his vacation and bring us up to date on what they had seen.



I figured that after this delay, it would hardly be worth going around to the north rim before starting on foot. We ran into a further delay when I got a spike in a tubeless tire at the parking lot of the Grand Canyon Inn. We finally got started down the Tanner Trail about 11:15 a.m. and reached the river in just over three hours. The river was flowing clear at about 2500 cfs and it was easy to go along the bank. Crossing the boulders and walking through the sand is not too easy, however, and I suspect that it is still better to follow the old route at the edge of the outwash hills. We followed the west edge of what used to be the island.

Fording looked feasible about a quarter of a mile above the island. With bare feet, walking over the irregular boulders two or three feet below the surface was not simple. They're still coated with slick mud, and the cracks between the boulders are uncomfortable for bare feet. Perhaps the horsemen who used this crossing went where it was deeper and smoother on the bottom. Anyway, after I had walked about a third of the way across, I gave up and mostly swam back. It would have taken too long to do the whole river on foot.

The low stage of the river impresses me as being quite suitable for foldboating. There are three short rapids between Lava and Tanner Creeks which would be harder to negotiate without touching a rock than either of these better known rapids. These supposedly lesser riffles are found by boulder bars which pretty well cross the river. The one at the ford causes considerably more white water than Lava Creek and it is much more noticeable from the rim at Desert View. The river slides between the huge rocks at Lava Creek without kicking up so much fuss. Dirk and I looked at the swift water below Lava Creek and the wide expanse downstream where the current is less, but we settled for the deep and quiet pool above Lava Creek. It was not too wide and the only current was in the middle third. Assisted by a breeze from downstream, we crossed without drifting down at all.

We saw footprints like Colin Fletcher's along bank, two sets going north and one coming back. It was fairly late when we were through with the crossing and we settled down for the night at the Butte Fault. There was little water flowing here at this hour, and before morning it was coming along copiously. We had a good night although it was a bit cool for my two cotton blankets. Shortly after six in the morning while we were passing a couple of dubious cairns, we came to a pair of three foot rock piles marking a spot of copper ore. It was not particularly rich and the hole was shallow. The malachite was in the Tapeats Sandstone.

The profile of Lava Butte from the Tanner Trail had made the ascent seem like a simple walk-up from the west, but when we got to the highest part of the saddle, we still had a 30 foot cliff to surmount. After a bit of skirmishing, we found a talus leading to a fine crack. We first walked to the back of the crack and up a few steps. From there it was a chimney climb including getting to a meager ledge and coming back to where the crack was wider before getting out on top. Dirk preceded me here, but I feel sure I could have done this one solo. From here it was simple though a bit steep, and we had fine views from the top. There were no signs that we had been anticipated in this climb. On the way back down the Butte Fault, we came to a deeper mine digging that was partly filled with slides.

With two quarts of water apiece and our lunches in my sack, we started north along the Butte Fault about 8:30 a.m. A short walk brings you to a dry fall which you have to bypass to the east. On my trip five years

ago, I'm pretty sure I followed deer tracks up the shale to a low part of the rim and avoided climbed as high as I led Dirk this time. There is a cairn where you should leave the wash to do this. As you approach Carbon Creek, you should leave the main wash and proceed to the lowest part of the divide to drop into Carbon. It still surprises me how low this divide is, only about 40 vertical feet. The gate to the final gorge where Carbon goes down to the Colorado River is impressive for the deformed strata.

With the idea of following the Butte Fault, I led Dirk out of the bed of Carbon to the left too soon. We had to climb down again after missing the dubious springs. (Melvin McCormick says this water contains arsenic.) We proceeded up the bed of the branch that lies in the fault until it was clear that a tributary came down from just north of Carbon Butte. The east face of Carbon Butte is quite broken but it is impressively steep when viewed from close below. We preferred to go up the shale to the north and then walk to the top along the north ridge. This was probably wrong since the scramble through the loose shale was so difficult. Again the views were fine and we seem to have been the first to build a cairn on top.

To the north in an arm of the tributary we had come up, there was quite a bit of water loving vegetation. To check for a possible spring we went over to it and ate our lunch in the shade of a big rock. There was enough water to convince us that this runs very well at night. We were not certain about the quality of this water so we didn't drink any. However, before we left Dirk saw some birds apparently drinking it although here didn't seem to be any well established animal tracks leading to this water.

Next we went over a low ridge and slid down a one shale exposure to the bottom of Butte Fault. It was a slow climb from here to the saddle between Chuar and Temple Buttes. It was either shale or steep and rotten sandstone. The sight of the river gorge below was rewarding, but we didn't like the looks of the Redwall leading higher on the Temple. Our water was low also, so we decided not to push our lunch and just go back to camp along Lava Creek. There was plenty of time to move our gear to the old trail site about an hour and 40 minute walk upstream. The spring water was cool and good, but as it turned out the night did not bring a sound sleep. We were fighting ants and trying to dodge mosquitoes.

In the morning, Dirk and I started upstream together; he to take samples of gravel in the terraces and I was scouting to see whether a burro could get through the Tapeats to account for McDonald's route from the rim to his mines. I left the bed quite a bit east of the Juno Ruin and found a good way to climb through the Tapeats. It's in a ravine at the top of the most extensive talus along here. For a few feet, I had to use my hands to get past a projection, but I feel that McDonald could have built trail here to obviate this. There was a fair deer trail to the east around and under Point Chiavria. I had agreed to get back to the separation point at 9:45 a.m. so I had time to go far enough to see only into the canyon northeast of Chiavria. I wanted to check again the break in the Tapeats we had used in coming down from Poston Butte, so I made the return longer. I decided that the big blocks of stone at the lower part of this break make this impossible for a loaded burro. As I returned along the peculiar trough behind the block of Tapeats which roofs Juno Ruin, I noted another place where the Tapeats has many ledges and a fair amount of vegetation. I should have walked up here but I was sure to be overdue as it was and I was content with a photo.

On the return, Dirk saw a minnow in the smallest stream of water I have ever known to support fish, Lava Creek above the junction with the arm called Chuar.

We slept that night at the bottom of the Tanner Trail and climbed out in the morning in my fastest time, four hours and 42 minutes.

### Piute Trail

[July 4, 1963]

Allen Sinclair came with me and we drove the Jeep around the north side of Cedar Mountain. After following the road as it swings to the south to get down east of Cedar Mountain, we took the branch to the east instead of north towards Gold Hill. We passed by a fork that would have taken us southeast. In one shallow draw we started to take the left hand track, but when we saw it heading too much to the north, we came back and went over a ridge to the east. We had to go down off this small ridge over a very rough road in low range of the four-wheel drive. If we had taken the right turn earlier, we probably could have reached the same area. After this, we kept to the left in case of a choice. As we approached the rim, we were in a very rocky draw where the road kept up on a ledge to the north side. We came to the end of the road at a dry cattle tank.

After looking at the map and looking at the gorge, we thought we were north of the Piute Trail. In going along the rim to the south, we had to cross two or three small draws. In just under a half hour, we could see that the south side of the minor point we were on could not be the right location. We were able to identify the curves in the riverbed and we now placed the Piute Trail as about one and a half miles north of where we had parked the car. When we returned to the car, we got a refill of the half-gallon canteen. We were also carrying a gallon and a quart in my knapsack, as well as food.

When we got out of the depression containing the tank, the walking was quite level. There seemed to be more of a trail in this direction than one would expect. We looked over the rim a time or two, and the first real encouragement was the appearance of a straight ravine on the other side of the canyon similar to the one shown on the map. Soon we could see a break ahead where the east side had been thrust 50 or 60 feet higher than the west. I remarked that we would very likely find a rock pile at the head of the trail, if that was really it. A few minutes later, we could see the talus filled ravine with not one but two fair sized cairns. My fourth effort to locate the Piute Trail was successful.

The upper part was easy and safe. Towards the bottom of the Kaibab, there was an awkward place where the small cairns directed us to the west wall. At the end of a ledge, one had to turn around and slide down to some stepping stones with almost no use of the feet for five feet. On the way back, Allen bypassed this place by climbing over some looser material. The rest of the way down was fairly easy except that there was a continuous hazard of stepping on loose rocks in the talus. At other places, steep clay slopes were hard and difficult to stand on. At the very bottom, we had to go over a boulder slope to the east before we could get down the last small cliff.

Right away we settled a question that had interested me on the first Blue Springs jaunt. I found that the permanent mineral spring water begins a couple hundred yards downstream from the foot of the Piute Trail. Sinclair and I were both happy to sit in the cool water of a yard deep pool for several minutes. Walking along the bottom of the canyon was quite easy although we got into some mud. The small stream

was simple to step across where the bed was boulder strewn, but just as often it was running shallow and several yards wide in the mud. The water didn't seem to taste very salty. In fact it almost seemed sweetish in an unpleasant way, but perhaps that was because in our dry condition we needed extra salt. I noticed later when we ate some late lunch that Fritos seemed to have lost their salt taste also.

We located Waterhole Canyon beyond doubt and in another 15 minutes we reached Horse Trail Canyon. This name must have come from a horse trail higher up because the only way I could see to get up the first 150 feet was by a harder climb than is needed on the Piute Trail. We timed ourselves up from the river to the rim at the head of the Piute Trail in 70 minutes (Later I found a horse trail clear down).

Barbenceta and Nankoweap Buttes, and Nankoweap Mesa  
[August 27, 1963 to August 29, 1963]

I wanted to get started Sunday afternoon and get an early start down the Nankoweap Trail Monday morning, but Dirk Springorum was having some sort of fling with some young people in Phoenix. Since I had promised him the chance to go with me on two different occasions, I told his cabin mate to tell him to be ready at 8:00 on Monday morning. When I looked in at that time, he was sound asleep, so I concluded that he wasn't counting on accepting my offer, and I took off for the north rim.

After a short visit at the Ranger Station to present them with pictures of Hartman Bridge and some other points of interest, I dropped in on Joe Hall who had been around a few weeks and now had the use of cabins with the minimum conveniences. We had quite a visit and made plans to start down the Nankoweap Trail together.

We parked both cars at Point Imperial and kept about 50 yards from the rim until we hit the Jeep road marked with paint blazes. Even though it winds quite a bit, it is faster to follow the cleared road than to head through the forest. We reached the burn in 50 minutes. After we had followed the road along the park boundary to the end and were a few yards into the brush, I saw a tawny coat gliding swiftly through the locust and aspen shoots across the little valley. I thought Joe was looking at it too, but his attention was somewhere else. The head and tail were low and out of sight. It went about 50 feet by in the time I could count to three and then it disappeared. Joe gave me the best suggestion as to what I had seen, a mountain lion. Just about any other animal would have been either too small or would have held its head as high as the shoulders. This is the first I have ever seen out of a zoo.

This time I hit the Coconino rim a bit too far to the south, but we were only a few yards off. I led Joe too far back along the right ravine to descend, or we would have had our choice of several good deer trails a couple of which were improved by man at some distant time. On the return we both found them and the cairns at the top. I also fumbled slightly in locating the place where the trail goes down from the saddle, but the delay was no more than a minute or two. Joe wanted to see the place where the trail, at the base of the top Supai cliff, gets bad. I took him to the spot where I used hands and knees in order not to scrape the pack against the overhang. With only a light pack, he was able to take this standing up while stepping on the outside three inches of ledge. He had recently climbed Shiva Temple and the difficulties and exposure had affected him less than they had me. I'm sure he could do any rock climb that I would indulge in.

Half an hour after Joe returned, a rain came up. I soon found a good overhang and let the water sluice down a fall a few yards away while I made myself comfortable with a magazine and my lunch. I wish I had been looking where Joe was during this rain. I was east of Marion Point, but Joe could see across the narrow gorge and was able to watch some spectacular waterfalls. A problem which I have never even tried to work on is to construct a list of the finest storm-born falls in the canyon. There must be many grand ones formed by notches in the Redwall. I missed a fine chance during this rain. I could have filled my half gallon canteen and left the gallon Clerks bottle full of water here for the return. Instead, I decided that I had more than enough for the descent, so I filled the canteen, and carried the empty bottle on down the trail.

In 1962, I had walked around the summit block of Barbenceta Butte, so this time I came prepared. I picked up a fairly stout stick about a foot long and took my 70 foot rope. When I got to the top block, I tied one end of the double rope to the middle of a stick and placed it under the overhang with the rope going up a narrow crack and over the top of the block. Around on the north side, I arranged the rope so that it hung down where there were the most toe holds. I had to tie a knot to form a stirrup and with other knots for better gripping, I was soon on top. On the return, I tried going down into Little Nankoweap Canyon. This would have been easy from the north, but there was still a 50 foot cliff on my side, and I returned to the trail up Tilted Mesa for a three and a half hour detour. I made one of my poorer traverses of the Redwall trying to stay on the trail and giving up, but I got to Nankoweap Creek by 6:15 in the evening. The usually clear stream was a richer red than I had ever seen in the old Colorado or even the Little Colorado. The soup boiled over in a rich red froth. The weather had been rather unseasonably cool and I was pleased to find that the one blanket was enough although I needed my clothes as well before morning. A jacket came in handy as protection for my face from the few puny mosquitoes.

About 6:30 Wednesday morning, I jogged downstream a hundred yards and started up the Butte Fault ravine. About two-thirds of the way to the pass, I went up to the east and found a good deer trail leading to the notch in the shattered remnants of the Redwall. It is an amazing place. An inconceivably powerful shearing force has turned the whole Redwall abruptly up through an angle of 90 degrees. To the south the Redwall shows as sheets separated by deep cracks and to the north there is a considerable solid chunk still forming a blunt tower. You soon walk through the notch after a short climb and start down into a hanging valley whose bed and east wall are the Supai and higher formations. It is the most unusual place that I have passed in the Redwall. The valley you now enter is eons removed from the shales and Redwall you left just a few minutes ago.

The trail led to the south keeping to the west side of the arroyo at the bottom of the valley. Very shortly my confidence in the feasibility of the route to the top of Nankoweap Mesa was shaken. The Supai cliff east of the wash seemed impressive. Upstream at a fork, I saw how it could be passed, either by going up to the end of the east fork where there is a narrow talus of Coconino blocks, or by going up the shattered wall between the two forks. I did the latter before I saw the more direct possibility. A deer trail showed around the top of the Supai, but on the bare rock I couldn't tell whether it went up on the ravine leading to the letters we in the name Nankoweap on the east half map, or around the angle to the north. I had forgotten which place had looked promising from the trail below Saddle Mountain, so I went up the first place that appeared possible. The bigger arm near the cliff to the south looked fine higher up, but it appeared tricky to get across above the lowest Coconino cliff, so I continued up the most encouraging,

smaller branch to the north. I had to choose once more and thus got above all the Coconino. I could see that if I could get up just ten feet at the bottom of the Toroweap, the rest would be easy. Luck was with me again for there were safe hand and toe holds on the ten foot wall. I built a small cairn and made the top in a routine scramble in two hours and 50 minutes from the creek to the top of the mesa.

The views were most rewarding and I had the same feeling of being on a sky island that you get from Shiva Temple and Wotan's Throne. Of course I headed for the highest part, the rim to the southwest where I built another cairn and then followed the rim rather closely to the southeast and returned along the east rim for pictures of the river. After an early lunch, I capped the point east of where the mesa becomes a narrow ridge to the northwest. There were no signs of previous cairns but I saw a deer antler and deer droppings were common. Tracks also looked fresh in places. I think I can tell the difference between deer and bighorn droppings, and I would say that bighorns have also been quite common on the mesa and down in the basin too. After building my second summit cairn, I could see that the two quarts of water would soon be gone. I would like to have continued to the farthest reach of the northwest ridge, but I didn't want to take a chance of being weakened by dehydration on the route I had to use for the return.

Without really intending to vary the previous route, I started down from the rim farther north than I had been before. When I got my bearings and headed south near the bottom of the Kaibab, I ran into a clear deer trail and followed it down the ravine around the angle to the north of where I had come up. This worked fine until I lost the deer trail just above the bottom of the Coconino. I had to come back up and follow a ledge to the north away from the wash to make it down to the Hermit Shale. There were no further problems and I dropped down over the Supai at the talus noted before. I finished the canteen at the top of the Redwall notch and was sitting in the creek 40 minutes later. After a good rest, I climbed Nankoweap Butte, two hours up and one back. The higher summit block is easy on the east. It took me 11 hours the next day to go to Point Imperial.

#### Buck Farm Point and Saddle Canyon

[September 4, 1963 to September 5, 1963]

The local paper carried an article about two discoveries near the trailer camp of the Arizona Power Authority on Buck Farm Point. From the helicopter they had seen a storage bin under a ledge of Supai Sandstone. It faces south and is just below the e of the name Marble Canyon on the Nankoweap Quad. Lynn Roberts had landed Euler on a platform of the ridge leading down to the saddle to the east, and they had been able to climb down to the cyst. Euler's theory was that this bin is near an old route the Indians used in crossing the river. From here they would have gone east along the top of the ridge and then climbed down the Redwall to the river at about Mile 43.1, just upstream from President Harding Rapids. Here is where the other recent find is located, in a still more unusual structure in the form of a bridge made of driftwood poles. It spans a 15 foot crevice in the Redwall 250 feet above the river. The mystery to me is that a person who could negotiate the wellnigh impossible climbing down to this place would bother to build an aid in crossing this minor obstruction.

From the map and some information I had received from Melvin McCormick, I got the idea that the prehistoric Indians would have entered this area from Saddle Canyon. I went up to the Buck Farm trailer settlement to see what I could pick up with the idea that I might go down into this whole region below the

rim the same way the Indians did. Lynn Roberts, the pilot, was most friendly and cooperative. He showed me his pictures and also spotted the ruins on my map. He had heard from Bob Vaughn, an old time cattleman, about the trail down Saddle Canyon. (The trail goes up and then east before it ends.)

I parked the Jeep at the hunting camp and started with my food and bedroll for two days. The only trail to the top of Saddle Mountain still in evidence is the one heading for the saddle between Saddle Mountain and the rim. (A trail goes south and then east from here.) First I went down into the bed of the wash where the thick oaks and maples were still wet from the last shower. The slow bushwhacking and the occasional drops in the bed soon convinced me that this was not the route. About halfway to the rim of the ravine on the north side, I came to a deer trail that had also been used by cattle years ago. This was a lot better and there were occasional overhangs in the Kaibab Limestone that would be welcome if the rain returned. This followed a bench that was above the cliffs. I could see that the bed would have been absolutely impossible because of the big fall with a shallow cavern under it. Around the next point I could see that there was probably a way down. After I left my pack under a protecting ledge and put some firewood out of the rain, I went on and found that the deer had a way to the bottom. Also, there were pools of rainwater in the wash, so I would be able to proceed in the morning. I got supper where I had first stopped and then moved on to a still better overhang for sleeping.

Starting before six on Thursday morning with just my lunch and water, I went down following the deer trail. I could see another trail on the other (south) side of the canyon, but as the one I was on continued horizontally eastward, I followed it past the place where the streambed drops over the Coconino cliff. The only halfway possible route down this cliff for miles seemed to be by a rockslide across the canyon on the south side. Just as I was turning back to cross over, I saw a potsherd, decorated with black on white. I went up to the base of the cliff above without finding any ruin. Bob Vaughn had said that there was a ruin along this trail. One has to double back about 10 minutes to make the crossing.

The trail on the south was still more distinct than that on the north,, and I was quite encouraged to find deer droppings on the rockslide, an old one well consolidated with a brush cover. All was well until I was within 85 feet of the easy walking below. From here on it was vertical. A man willing to take a chance might have made it, but I backed out. It took me one and a half hours to walk to the car, and now I wish I had returned with my rope. (You can get down Buck Farm Canyon near its head through the Supai in the south tributary.)

From Buck Farm Point I had seen a place below the rim to the northeast that would warrant more study. The Coconino cliff was covered by a talus. If you could get off the rim, the rest of the Kaibab didn't seem too bad. Twenty feet of cliff at the top of the Coconino and the rim itself needed study. I walked around to it and found that I couldn't even get off the rim. The views were fine, however, and I went out on the point opposite Tatahatso Canyon before walking back to the trailers.

Here I had another good visit with Lynn Roberts and he wound it up by inviting me on a helicopter flight as his guest. He showed me the bin and then we dropped over the ridge and found the bridge of saplings. We went downstream over President Harding Rapid. I'm almost certain that one can get down the Redwall with no sweat a little downstream from Harding on the left bank. Likewise, the slopes on the south side of Tatahatso Point seem to be well covered with talus. About the next thing I want to try is to

descend here. We flew along above the Redwall cliff at the lower end of Saddle Canyon and made sure there is not a way down there. A close look at what had stopped me made me think I should have tried harder. Then we swung back over the plateau looking at the buffalo herd and the ruins of the farming complex. It was a glorious and never to be forgotten flight.

Getting out to the highway was something of a problem. James Wilson, who is a state fish and game officer, was talking to the man in charge of the drilling operation, Forcier. Wilson had just helped salvage a truck that had spent the night in Houserock Wash. He said that we could get out to the highway if we turned off a couple of ruts in the fields and kept to the west of the main wash. To reach this turn-off, we had to pass a running stream where a Forest Service truck was caught in water almost covering the wheels. This left no room to pass. After some wading and inspecting of the terrain, Wilson took his four-wheel drive vehicle up over the bumps and crossed the stream a hundred feet above the road. I also had my Jeep in four-wheel drive and followed him in low range. We drove for what seemed like miles in water filled ruts. This was safer than getting out on the soggy meadowland. When we came to a truck that had stalled in the water, Wilson tried to go around and became mired. He had a chain long enough to reach my Jeep while it was still on firm soil and I pulled him out driving backwards in low range. Then he pulled the other truck out of the water. I was able to go on by myself and finally reach the highway.

#### Nankoweap Basin

[September 21, 1963 to September 22, 1963]

At the last museum seminar of the season, I ran into Dirk and we planned a trip for him to Nankoweap Basin. At first I thought that I would go down Saddle Canyon to the ruins between Buck Farm and Saddle Canyons, but Dirk did not relish the idea of tackling the bad trail by himself, not to mention the wilderness for 36 hours, so I guided him down the Nankoweap Trail although I realized that there would hardly be time for me to accomplish anything new. We slept in the dining room at the hunting camp near Saddle Canyon and got started walking at 6:30 a.m. The trail starts down into Saddle Canyon just east of the buildings and then slopes to the west to the bottom. About one-third of the way up to the Saddle Mountain Pass, the trail can be followed, then for a quarter of a mile it leaves the main drainage and follows the divider between the main gulch and the ravine starting below the saddle. After that it becomes lost in brush and rocks. It was tough bushwhacking, but we made the saddle in one and a half hours. On the way back we kept out of the bed more and got down to the car, a 1200 foot descent, in an hour and 10 minutes.

I had carried a rope with the intention of trying the Redwall in the ravine closest to the saddle. We saw that it would be a gamble, and if we were unable to get down there, all the time for work Saturday afternoon at the bottom of Nankoweap would be gone. (I later found out that no rope is needed.) It was rather important to Dirk since he was going back to Germany by the first of October. We hiked from the saddle to the beginning of Tilted Mesa in two and a half hours, faster than I had done it before by myself. It took six and a half hours overall from the hunting camp to Nankoweap Creek compared to eight and a half on the way out. I can't say that I am improving much at finding the best route through the rock slides. I even had some trouble leading Dirk down the deer trail which is now preferable to the ruined horse trail down the Redwall. Even on the return the next day, I still missed parts of the deer trail. We did notice something that had escaped me before. Someone has marked parts of this deer trail with cairns, especially



the lower part where it is still in the Bright Angel Shale. Just above the Tapeats, we used the old route to the east and followed the good trail construction through the broken part. We camped a quarter of a mile upstream from where I had stopped before because both of us were interested in going upstream.

After lunch, Dirk went with me up to the south arm. Here he had begun making observations of terraces while I hurried on trying to spot the large window through a fin of Redwall. As I passed the mouth of the arm going between Mount Hayden and Woolsey Point, I noted again that one can see the Goldwater Bridge. I wanted to return to camp by six, so I turned back at four just short of the arm that heads between Mount Hayden and Sullivan Point. I should have seen the lens shaped window if it had been in this arm. I realize now that I should have gone up the south arm. I did note that there is a good spring not far from the O of the word National on the Nankoweap Quad map. After staying on the surface for a half mile, it disappears, but a bigger spring keeps the flow permanent a little below the junction with the south arm.

The night was clear and cool but still we had a few mosquitoes. Dirk lost his can opener, probably to a pack rat. As we were crossing a low terrace near the main stream on our way out, we each saw a sherd. The climb to the top of the Redwall took us longer than it had taken me when I was by myself, but we did the rest quite a bit faster. It was seven hours overall from the creek to the saddle. There were a lot of yellow jackets along the route on the ledge of Supai, and while I was preparing to take a picture, one of them stung me on the top of the head. After I brushed it off, it kept on attacking. I got away as fast as I could. This time I saw a minnow myself in the little pool of the creek where we filled our canteens. The hunting camp is the closest approach for a car to reach the saddle. I would now like to try going down to the top of the Redwall through Saddle Canyon and then go around into Little Nankoweap from there. It would be a good two day trip to circle Saddle Mountain on foot. (I did this in 1969, in one long day - from 4:00 p.m. to 2:50 p.m.)

Rope Trail trip to the Colorado River at Supai  
[September 28, 1963 to September 29, 1963]

We left Flagstaff shortly before 5:00 p.m. and after stops at Williams and Seligman, we reached the Hualapai Hilltop and were ready to hike by nine. I had voted in favor of sleeping by the car and going down in the morning, but the club had preferred the idea of walking down to the creek first. It took us three hours and with an inadequate supply of flashlights, there was plenty of stumbling. It seemed that the trail had become much worse because of the August rains, but when we returned by daylight, we could see that it was only because we had taken the worst way over the rocks. After getting to sleep about 1:30 a.m., I awoke about 5:30 a.m. and felt weakened all day because of the poor rest that night.

Most of the party took time getting ready to move on to the campground below Havasu Falls, but the five who had agreed to see the rope trail were on their way fairly early. We were by the south travertine deposit by eight. Jay Hunt knew just where to start up, about 50 yards northeast of the travertine itself. You climb the talus and follow a trace of a trail until you come to an angle in the wall. Someone, perhaps Wampler, has scratched an arrow on the rock pointing up. You then walk over to the travertine and walk northeast following cairns to the Esplanade. You head for the butte in the Hermit Shale labeled 4540 on the west half map. It's easy to swing around it to the south and then go a few yards north to head a ravine which parallels the rim above. You then angle up to the south into the only prominent ravine along the

entire cliff. An indistinct trail takes you up the talus to the broken lower half of the Coconino until you see a long rope.

I was sure it was best to spread out in the rest of the climb, so when the others stopped for some breath, I went on ahead. Hunt had trusted his 200 pounds to these ropes previously, but I felt better when I had tested the first one with as good a jerk as I could give it. It is about three-fourths inch in diameter and gives a good grip. You have to go up hand over hand for only about three feet before there are adequate toe holds for a rest. At the top of this pitch, the rope is tied in a very interesting natural hole right through the solid rock which happens to be in the direct line. From below, it isn't apparent how the upper rim can be reached, but when you get close, you see a neat split in the rim about four feet wide. There is another rope to help you negotiate a chockblock, but here the chimney is narrow enough to allow a back to the wall climb. We were really careless not to have noticed this break when we were here before. I have a feeling that I looked down here as far as the chockblock without seeing the rope and assumed that there was a long drop below the block. Now the top is well marked by a cairn and a three foot finger of limestone propped in an upright position. (Built by Hunt.) The small pebbles near the top of the chute are almost impossible not to dislodge, so each climber should get to the top before the next one enters the chute.

The other four in the group: Jay Hunt and his son John, Wayne Brown, and Allyn Cureton went on up and over to the Apache descent north of Manakacha Point while I went down the ropes again to go along the Esplanade to the Apache Trail down the draw to Supai. This would be new for me. There was a clear horse trail along the base of the talus and although it had a lot of bends, it was faster than the route over the top. I was ready to go down into the draw an hour and a half after I had left the others. It took me just one and a half hours to go from the floor of the valley to the top of the rope trail, above the Toroweap Formation but below the Kaibab. The latter offers nothing but an uphill walk here.

I was able to climb down to the bottom of Apache Trail Canyon through the ravine just west of the 40' line on the map. I rested and had lunch waiting for the others for an hour. At 11:30 a.m., I had been able to shout and receive an answer. When they had not come along by 12:30 p.m., I thought it distinctly odd. I began to wonder whether they had found no fastening for the rope at the crucial place on the ramp down the Coconino and had to return to the route with the fixed rope. I went up the main wash and then went out by a tributary leading up to the ramp. This time my shouts didn't draw any answer and I thought my guess confirmed. When I got back down to the bed of the wash, they were only 100 yards behind. They couldn't hear because they were already down in the bed of the wash. We found plenty of rain pools left from the wet weather of three weeks before as we proceeded down the bed. We left the bed for the trail at the correct place, for once. The trail bypasses drops in the creekbed two or three times both to the right and the left before it finally leaves the bed to follow the ledges along the north side. There is a crude gate a few yards to the right at the correct place and a string of rain pools in the middle of the bed.

It was warm as we approached the village, but I decided that there might never be a better time for going up the Ladder Trail. The others went on with the understanding that we would assemble again at the church. I found the scramble to the top very short and easy, requiring about eight minutes, but I also felt faint from the heat and exertion. I had to lie down for a few minutes. If I ever go back to Mount Sinyala from the village, this will be my route. However, I can drive my Jeep to the rim above the Apache Trail in

less than five hours from home, so I'll be more likely to use this route to investigate the possible break in the rim at Mile 148.5.

We were all back to the village by 2:15 p.m., but instead of starting for the river; Jay, Allyn, and I seemed to feel a bit disorganized. I seemed under the weather from a combination of heat and lack of sleep, so instead we fooled around the village and campground chewing the fat with the hiking club. After a good night, we headed for the river about 6:40 Sunday Morning. Hunt knew the way after five previous trips to the river in two years. There are a few places where the trail is hard to find, but if you get stranded in a mess of vines, you can be sure you have missed it. It is always better than that somewhere else. Three creek crossings are necessary upstream from Beaver Falls and five below. There are several places where you wade without crossing the creek. At one of these places, Hunt had to swim. A student named Brant Gaedge, who joined us for this hike, couldn't swim a stroke, but I was able to lead him and Allyn around near some dams and arrive back on the bank in front of Jay. We were held up a couple times when one of the party would have an idea about the route that didn't pan out, but even then we got from the campground to the Colorado River in less than two and a half hours. The trail below Beaver Falls is just as good as it is upstream, and the entire trip is a fine one. It was a great relief to find the walking so simple in contrast to my all day ordeal with the vines and wild oats in 1946. However, I did see some things then that I missed this time. In trying for the best route then, I located two mine shafts on the right below Beaver Canyon. I'm also rather sure that either going or coming back I missed the trail that goes high and descends below the falls. I remember scrambling down rather near a branch of the stream which had separated from the main flow above the falls.

On the present occasion, we went to the west of the narrows at the mouth and got down to the riverbed. It was most interesting to see the clear water of the creek, no more than a foot deep over the bar, flow into the shallow river. The Colorado was still muddy from the summer rains. Jay and Allyn went to look for the bighorn skeleton that Hunt had found when he came down the river from Hermit Creek a year ago last spring, and I took Brant back with me at a leisurely pace because I wanted to get some pictures. We missed the trail several times and needed about three hours to reach the campground. It took us four hours to go from the camp to the car, but here we had to wait a couple hours for Allyn and Jay. They had been unable to locate the horns, but they had taken a swim and palavered with the Indians before they came on to the rim.

Eminence Break to above President Harding Rapids  
[October 12, 1963]

The Jeep isn't fast but I was at Cedar Ridge by 9:30 a.m. It was almost two by the time I drove down the grade to the neck of Tatabatso Point, so I had taken four and a half hours to reach a place which is an easy hour and ten minutes drive from Cedar Ridge Trading Post. I had only the Nankowep Quad, and I couldn't orient myself since Shinumo altar is not shown nor are the red shale ridges south of the road west of the Trading Post. Roughly, what I did wrong was to cut south through the gap between the long ridge and the outlier butte of red shale. I got south almost as far as Saddle Mountain before I concluded I was headed wrong. After that I ran around, mostly north and west whenever I could find a track, and I dead ended at a group of hogans. Finally, I decided that I would head north far enough to get on the road out to the tram anchorage at Mile 33 and then work south. Finally I located on the map where this road comes

through the Eminence Break. After a bit more fumbling, I located Black Spot Reservoir and was still bothered to see the main road going right down into the water and out the other side. I had to cruise over hill and dale to come to the continuation west. All the stock tanks were well filled after the August and September rains. From here on, there was no confusion.

My impression of the walls along the south side of Tatahatso Point, formed from the distance of Saddle Canyon, was wrong. There is only one place to leave the rim, right where the road comes near the rim at the break itself. Even here only one of the three ravines at the top is easy to scramble down. After a few yards you go across to the left wall and proceed down the narrowing slot on a mixture of bedrock and talus. An interesting feature of the rock near the top is the presence of beds of crystals. Imperfect hexagonal crystals about two and a half inches long protrude horizontally from the vertical matrix as thick as bristles in a brush. They remind one of a bed of nails and there are many yards of this material weathering out. At one time there must have been cracks several inches wide filled with the mineralized water that formed the crystals.

About 50 yards down from the rim, at the narrowest part of the ravine, there is a freak bridge. At various places, I have seen single rocks wedged in a crack with plenty of space beneath, but here a column formed of two blocks each roughly cubical about 15 feet on the edge toppled from above into this nearly straight walled corridor. The blocks landed so as to form a nearly horizontal bridge with about ten feet clearance beneath. They must have come from quite a height near the rim to the southeast and it's hard to understand why the impact didn't shatter them. One would think that nature would have to try another million times before it could do the same trick again.

There was no cairn on the rim as there is at the top of the Hopi Salt Trail and the Piute Trail into the Little Colorado River Gorge, but down a few yards I found three small rock piles. I built a small one on the rim, but any that were left farther down have been obliterated by the frequent slides. After I took a couple pictures at the rim, I discovered that all the film was gone although the counter showed a dozen more. The catch was defective and I had rolled quite a few blank frames onto the spool. That shook my resolution to go down and cross the river to the bridge. I settled for a reconnaissance.

The gully is easier and safer than the Piute Trail and I would take about anyone along on a trip down to President Harding Rapids. Instead of keeping to the bed all the way down, I would recommend following a ledge below the top cliff of Supai on the left to get on a consolidated talus. The walking is easier here, but you should arrive in the middle of the bed about the place the first Redwall shows. Here where two branches join and cut through to the river, go up the small faulty gully to the south. You can go around the next slot that cuts through to the river at a higher level, on the red sandstone. A short walk to the south puts you on the edge of the final scramble down to the river. I don't feel sure what happened here, but I think a huge chunk of the sandstone slipped down over the Redwall and buried the rim of the lower Redwall on the right side of the break. At least you are able to walk all the way down to the river on this very red sandstone. It may even be the Hermit Shale that's along the top of the Supai Formation.

I checked both slots cutting through the top of the Redwall toward the river, but there are long vertical drops below the promising beginnings. To reach the gravel covered bed leading out to a view of the river in the northern most slot, I had to do a bit of climbing down some rather smooth limestone. I let myself

slide a few inches at the bottom, but not before I noticed that there were plenty of rocks to pile up as a mount to help me back up later. On the return, I had to use one rock as a stepping stone. It took me two hours from the rim down to a place where I could see that there was a simple way down to the river from the top of the Redwall. By then I had decided to go home that night. It took an hour and three-quarters to go from there back to the car. I got around the south edge of Black Spot Reservoir before dark and had no trouble keeping on the right road the rest of the way along the north side of the shale ridge all the way back to Highway 89 at Cedar Ridge.

On the return up the ravine formed by Eminence Break to where I had parked the car, I picked up a very fresh looking piece of pottery. To me it looked like something the Hopi might have shown at the museum a couple of years ago. I put it in my pocket with the thought that the Hopi must still use pottery canteens. When I showed it to Bob Euler and Chuck McNutt, they were both quite excited about it. They agreed that it was Jedito black on yellow, about the finest pottery that the Hopi ever made. It was made from 600 to 300 years ago, and Bob was particularly interested because it was the first evidence he had seen that the Indians were still using this area after the main era of pueblo and cliff dwelling construction around the year 1200. This sherd showed that some Hopi had been here possibly as recently as 1600. Perhaps the bridge of poles has been there only 300 years. Bob's first thought about the poles was that they couldn't have withstood the weather more than a few decades (Actually, they're 1100 years old).

My trip down from the car and back had taken less than four hours, but I had found a fine route to the river (considerably shorter and faster than the route in 29 Mile Wash), the crystal beds, a bridge that may be quite unique, the rare sherd, and something else that would be easy to miss. I happened to pass a block of Coconino that had fallen from the cliff above and lodged in the gully although it was as big as a living room. The flat side was almost vertical and the sun was within 15 minutes of putting this face in the shade. In the oblique light I saw a couple dozen fine fossil footprints of the type I had photographed during my descent at Mile 19 from the right rim. There were two sets of the large tracks about the size of my hand. Again there seemed to be two very different shapes of feet on the same animal. Besides the large prints, there were dozens of smaller ones on the same large slab. I would guess that this is the most remarkable collection of footprints found to date in the Coconino Sandstone. I'm trying to get our paleontologist, Doctor Beus, to come with me the next time I go down this trail.

Eminence Trail, sites on the right bank, and Mile 43.2  
[October 27, 1963]

Sid Dowd, a geology student, went with me and we reached the rim at the Eminence Break about 10:10 a.m. This time I had a camera and got two pictures of the keystone arch about 50 yards from the trail head. This time we agreed that the two blocks had been standing in front so that rockfalls would be safer, but I wasn't prepared to find Sid as slow as he proved to be. He was very deliberate in his movements, but still he dislodged more rocks than I did. He took twice as long in getting to the big rock containing the fossil footprints. Here he accepted my request not to go any further when he had done all the work in getting impressions with his Plaster of Paris. I got a couple impressions with only modeling clay and also got a couple of pictures outlining the tracks with chalk. The largest tracks were about seven and a half inches long and about half that wide. On what we took to be the front half of the foot, on the inside edge, there were four protuberances which made depressions that were smooth and round. The distance

between prints of the feet on the same side was 22 inches and the parallel lines through the set of tracks going in the same direction showed still more. This second set was mostly covered by pads of rock that had yet to weather away. The three or four prints that did show seemed not quite the same. In fact, Sid judged them to be from a different sort of animal. I checked the slide I had taken of fossil prints in the Coconino at Mile 19, and there is no resemblance.

When I continued down, I left the bed below the top cliff of Supai on the left and went past the peculiar rock capping a column of clay and boulders shaped like a shoe repairman's last. A little south of here I went down to the main bed and continued as I had two weeks ago. On the return I kept to the east above the Redwall and came back to the shoemaker's last without dropping down. I believe I prefer this route. I found a faint deer trail as I approached the final descent to the river, and when I started down over the red shale it was quite distinct. About three-fourths of the way down the buried Redwall, I even noted a place where the trail was bordered by rocks lined up by human hands.

The walking was very simple along the left bank of the river and in less than 20 minutes I had passed President Harding Rapid and was even with where I thought I should see the bridge of driftwood poles high in a ravine on the opposite side of the river. I checked the Quad map that Lynn Roberts had marked for me and was convinced that I was at the right place. Just to make sure, I walked on until I could see the smooth wall stretching on to the west. Just below Mile 43 were two ravines in the lower Redwall. I crossed just below a riffle near here and had no trouble going up on a ledge to the right of the ravine. I went east and entered the ravine where a crumbly type of rock or hard clay formed a chimney. I was able to put my back to the west wall and wriggle up to a shelf about 12 feet above. The ravine widened here with a large chockblock above, so the only way was to go out towards the river and around a corner. Where the exposure became severe, the ledge also narrowed. It seemed that the only future in this direction called for climbing a series of breaks with very poor holds, and I was not at all sure that the bridge was above. I backed out and descended the easy chimney. On checking with Bob Euler, I learned that this was the place and that he had been turned back by the chimney that I had climbed. He seems to think that you go along the ledge that I had reached to the bridge without further climbing (he's wrong).

Next I checked the other ravine, about 200 yards to the northwest. The ascent was equally easy up to a crack about 10 inches wide with small chockblocks to keep one from getting into it. I experimented with one elbow and the other hand in this crack and managed to go up about four feet, about half the distance seemed difficult, but twice I turned back at the same place. I know that Allyn could go up here handily. Just before I reached this bad spot, I found a shallow cave with three slender sticks placed carefully in it. Two of them were near the ceiling and had been cut to fit into crevices. I broke the third one and brought it out for possible study.

There were plenty of deer tracks along this northeast facing talus. The grass seemed especially green. Evidently the deer can come in the way I did and swim the river. I had been a little worried about the temperature of the water, but it was no colder than many swimming pools and I got across on the air mattress in a very few minutes. The walking is fine along the beach and I'm sure I could average at least 15 miles a day with the air mattress to get me past the paces where the water comes to the cliff. I was able to walk from the river to the car in two hours and 25 minutes without undue pushing. It is a fine way to the river and both the route down and the river itself are most scenic.

Vishnu Creek, Newberry Butte, and to the Colorado River at Mile 99.8  
[November 9, 1963 to November 11, 1963]

Starting from Grandview Point at 8:50 a.m., I reached the river via the spur trail down from the Tonto at Mile 80.8. May 5, 1958 was the date when I finally reached the river here and I found that my memory for all the details was a bit fuzzy. I went out on the spur just below the Tapeats and got my bearings. One has to drop farther down into Cottonwood Canyon than I had remembered. About 200 feet down you turn west. Plenty of trail still shows although it makes very short switches in a rather narrow ravine for a few yards then goes over a notch into the wide ravine that continues to the Colorado River. The trip from the car to the river took just less than three and a half hours which puts this trail about even with the Tanner for length. The part down to Horseshoe Mesa probably gets more foot traffic than any other non-maintained trail in Grand Canyon.

Ever since I read that the Cal Tech Party went some distance up Vishnu Creek, I had thought of the possibility of using this trail and then crossing to Vishnu as a convenient way to points north of the river. After a leisurely lunch, I blew up my mattress and paddled off. The current helped very little and I was shivering some before I made the mouth of Vishnu. I could have broken the voyage at a beach if I had felt it necessary. When we had looked at Vishnu from the ridge above Grapevine Creek, the best way seemed to be a fault line from near the base of the Tapeats going north. When I got to the mouth of Vishnu, this plan didn't seem so good. I decided first to see whether the creekbed would be feasible. Within five minutes walk from the river, I came to an overhanging chockblock that had no bypass. After backing up almost to the river, I climbed up the fault line to the east. After going over several small ridges where ravines came down, I went down and followed the bed again. After a few bends, I again ran into a fall in one of the bends to the west. This lower part of Vishnu is impressively narrow every time the creek gets away from the fault. It was a long rise and I spent 45 minutes getting to the top only to find that I couldn't follow the base of the Tapeats more than a few yards. Neither could I get back to the creekbed here, but there was a safe slope down 50 yards to the west. When I backed up and tried to follow the jagged ridge in that direction, I came to two well built cairns. Some oldtimer had solved the same problem in the same way. Making my way along here was rather ticklish with a pack, but I was careful and finally reached the simple scramble down to the creek again.

I had already found a little water flowing in the lower end of the creek, but now I walked a dry bed for quite a little distance. The bed was more open here with plenty of gravel. I was quite surprised when I rounded a bend and saw a 30 foot waterfall with an audible flow of water. Fortunately, there was a bypass to the west that was noticeably a trail. I wondered whether the prospector who had built the cairns along the ridge had improved a deer trail. The water was coming from a spring where the Bass Limestone begins. Now the valley opened up and I could see some Hakatai Shale above the limestone, with the succession of Shinumo Quartzite and Tapeats still higher. There are several ways out of this canyon to the east but the walls on the west are forbidding. I recognized the place where I had managed to get down in the spring of 1958. It had taken two and a half hours to get from the mouth of Vishnu Creek to here. I was beginning to see the futility of trying for the top of Wotan's Throne the next day, but I climbed to the top of the Tapeats to the east and looked ahead. Where I had camped on my way back from Asbestos in early April by a running stream, not a drop showed and I could see ahead to a high fall in the Tapeats, also

perfectly dry. I was quite sure there would be no water above, so I retraced my steps to the spring I had just left. This is northwest of the middle of Newberry Butte. I started getting super at 5:15 p.m. and was in bed an hour later for a solid 8 hours. I slept fine but while I was making up my mind to get out and start the new day, I tried to decide how to spend it. I had noted a possible break in the cliffs of Newberry Butte around on the southeast face and I was interested in testing that route. I also wanted to go up the Redwall between Vishnu Temple and Freya Castle and then either go on down Unkar Creek or follow the top of the Redwall along north of Rama Shrine and down into Asbestos Canyon. I finally decided to give Newberry a try and then see how much time was left.

Since I had been over the saddle to the north of Newberry five years ago, I went around the south end. For some reason I passed up the chance to go up the talus leading to the lowest shelf of Redwall. Instead I made my first approach northeast of the route I had picked. Taking just my camera and canteen, I started up but within a few minutes, I decided that this was not the place for a climber like me. Back at the south end of the shelf, it was easier. There were several places where only one route seemed at all safe. When I was over halfway up, I saw to my dismay that the route I had picked for the final pitch was out of the realm of the possible for a non-technical climber. But I saw one more chance that was invisible from below, a chimney over to the southwest at the end of the shelf. I went over to it without undue hope for I could see a chockblock halfway to the top. The rest took care and one had to look for the holds, but by bracing against both walls, the ascent was safe. At the end of this chimney, I was on top, a narrow plateau covered with sparse grass and low brush. I marked the crucial chimney with a small cairn and built another at the highest point. The widest part of the top isn't much more than 50 yards across and one can walk about 200 yards to cover the length. Success in getting to the top was doubly sweet since I felt more pessimism in going up Newberry than in anything else that I could do. It takes about 40 minutes to get from the talus to the top.

After lunch and some reading of Time magazine, I decided to go out to the rims south of Newberry and look at the Colorado River. I intended to make a sweep of the rim and wind up going down into Vishnu Creek again for the return upriver to the trail. While looking down to the canyon east of Newberry, I was impressed by the possibility of making a descent to the river there. I couldn't see it all, but it looked quite promising. If I got stopped, I thought that I would still have time to go either back and down into Vishnu or over to Asbestos before dark. In going back along the rim of this canyon which can be called Newberry Creek, I noted a well built cairn. I was the second I had seen that day, the other being at the top of the knoll below the southwest end of the butte. Some cairns marked claims and many marked routes down some cliff, but anybody's guess is as good as mine concerning cairns built where there is nothing worth marking. Perhaps they merely showed that a prospector had turned back at a certain place.

The places one can pass a uniform cliff near the bottom of the Tapeats and get down into the open bed of Newberry Creek are three that I now know. I passed by the most convenient from the west since I was not sure it went on down. I came down the main branch where I had looked for water in 1958. Again I found some in small rain pools probably left from three days before, but right below this the bottom dropped out. I had to follow the ledges to the east until I came to a break at a projecting point. From the bed I could see how I could have come down more directly from the west and I also saw a good way from the east. Walking down Newberry Creek was easy until you came to the Inner Gorge where the creek drops over a precipice. I had foreseen this and climbed a short way to the west where a long scree slope led



toward a narrow ravine with a vertical west wall. When the scree gave out, it was touch and go as to whether I would be able to proceed. In the narrow slot, it was possible to brace against both walls or find slight holds. When I was only about 200 feet above the river, the ravine made a sudden bend to the left and dropped over an impossible fall. Again it was possible to climb over a small ridge on the right, and great was my relief to see a scree slope clear to the river.

My original plan had been to cross the river here and go up the slope where the creek comes down from within the horseshoe of Horseshoe Mesa, but I had enough suspense for one day. I changed my plan to that of going downriver to the beach just upstream from where Cottonwood Creek drops over its last fall. I remembered this from 1957 and knew how to go up and down into Cottonwood and then climb out of Cottonwood to the same trail I had come down on Saturday. From a distance, it had looked like a simple beach walk down from Mile 79.8 to 80.4, but I found that there was a good deal of climbing up and down. It would have been easier for me to take to the river and walk when I came to the beaches. I could have taken that much cold water without pain. It took only two hours for me to get from the rim of Newberry Creek down to the river and then six-tenths of a mile along the bank and across to my campsite on the sand near the mouth of Cottonwood Creek.

At the present low water, the pools between riffles have almost no current. I timed a bit of driftwood at what I estimated to be five feet in ten seconds. This works out to be roughly one-third of a mile per hour. I could travel upriver on the air mattress with care, walking whenever I came to a good beach.

Climbing from the bed of Cottonwood Creek to the base of the Tapeats to the west Monday morning was considerably simpler than much that I had done in the other two days, and I was able to go from my camp to the car at Grandview Point in five and three-quarter hours including a lunch stop that took 45 minutes. The day was cool and I came out feeling fine.

I am still interested in climbing Wotan's Throne without a rope, but I believe the best approach is by way of Unkar Creek. I think it would require four days from the south rim, one to reach the last water in Unkar, two to get to the top of Wotan and return. This would also mean carrying two gallons of water. Maybe I'll give up this idea and go back to the approach from Cape Royal. If the ropes were placed one day, one could go over and back the next.

Horse Trail Canyon and the Little Colorado River Gorge to Cameron  
[January 1, 1964 to January 3, 1964]

For over five years, I have been interested in the Little Colorado River Gorge. In fact I went by the mouth in 1955. On later treks I went up Salt Trail Canyon, six and a half miles from the mouth, and I also came down the Blue Spring Trail, 13 miles from the mouth, and continued down to the junction with the Colorado River. Last year, with the help of the river map, I found the Moody, Dam Site, Hopi, and Piute Trails. Going along the bottom from Mile 16 to Mile 57 at Cameron seemed like the next project. Sleeping out in cold weather isn't too pleasant, but this season would make the walking easier because only the spring water below Mile 21 would be flowing, and most of the mud would be frozen.

Ellery and Maxine Gibson took Roma to Cameron and joined me in the Jeep for the rest of the trip to Horse Trail Canyon. This is the one just south of Big Canyon and comes down to the bed from the east. The approach road leaves Highway 89 just north of the Moenkopi Wash Bridge and angles northwest. While we were at it, we drove to the end of the road near the junction of Big Canyon with the Little Colorado River at Mile 7. The road ends above Mile 9 and we had a fine view of the blue water in the Redwall trench. I could see where I had reached the top of the Redwall from the west at Mile 10.5 before I located the Blue Spring Trail.

I may not know the best approach by car to the head of the Horse Trail. After talking to an Indian at one hogan, we went on south to the next one. The people here didn't seem very communicative, but Ellery and I went on down the shallow valley until we were rather sure we had the beginning of the trail to the river. We shook hands and he returned to drive the ladies home.

The first sheer drop came about 80 feet above the top of the Coconino. After a search, I found some trail work along a ledge to the right. It led to a ravine where the trail went down by switchbacks to the valley below. I missed the trail here, but I think it stays to the left of the bed. The cartographers could have given some indication of the detours of the trail on such a large scale map. Perhaps they had not covered this trail personally. There was another abrupt fall about 200 feet above the river. Here the trail follows a ledge to the left and then descends in a crack where a block has split away from the cliff. It was not at once obvious that the trail goes north on a ledge below the fall, behind a leaning rock, to a minor ravine where the talus takes it down to the river. From where I had left Ellery to the bottom it took me less than two hours, and I had spent 15 minutes finding the trail. One who wants to reach Blue Spring without a rock climb should use this approach. It reaches the river three miles below the Piute Trail and the Horse Trail is easier besides.

I expected to be back for water samples from the springs, but I went downriver to close the gap left between my foray upstream from Blue Spring and the foot of the Horse Trail. When I had reached Mile 15.5, I knew I had overlapped my former coverage since the Redwall was definitely showing from there on, and I also remembered the upstream view as shown in a picture I had taken on the former occasion. I now had the map with me and jotted down my time at all the main bends and other landmarks. My Wednesday evening camp was at Mile 17. I broke through the ice for water which I treated with Halazone and found mesquite logs for an all night campfire. Some find the taste of the minerals in this spring water disagreeable, but when it was ice cold, the flavor didn't bother me.

There was more open water as I went upriver in the morning, but I had no trouble finding stepping stones whenever I needed to cross. There were a few soft places in the mud, but it was mostly frozen. There would be long stretches of smooth sand, some pebble and boulder bars, and occasionally real barriers of rockfalls across the entire bed. Some of the blocks were as big as rooms and boaters would find them a serious hazard. Most of these barriers would be no more than 100 yards long but one at Mile 37.5 might be called Hell's Half Mile. With the bed averaging three times as steep a grade as the bed of the Grand Canyon. A major flood must form a rapid here more impressive than Lava Falls. During Thursday and Friday, I walked rather steadily with time out only for a few pictures and for marking the progress on the map. I found that I could average about two miles an hour.

After seeing what I thought was the last of the Redwall at Mile 16.8, I was really surprised to find it showing again about Mile 24 and some was about 60 feet above the riverbed. In this limestone are two caves, one only about eight feet deep and below high water. The other was more spacious, about 20 feet deep with a clean sandy floor and a flat ceiling. The only surface sign of former occupation was a burnt stick. It would have been a fine place to camp as a campfire in the wide mouth would have been cozy. My campsite Thursday night was almost as good, at Mile 36.8 against the cliff on the south. It was at the top of a grassy slope 30 feet above the bed, but there was the biggest collection of driftwood I saw in two days of walking. I was really comfortable behind the big fire I kept going all night.

The scenery all along the Little Colorado River from its mouth to Mile 31 is terrific. It is somewhat similar to Marble Canyon but is narrower and has more spires and clefts. The low winter sun didn't reach me in the bottom until 10:45 in the morning the first day and not until 11:35 the second. The winter full moon is correspondingly higher in the sky, and the brilliant pale light on the spires was out of this world. The familiar Grand Canyon colors of the various formations seem to be progressively obscured by desert varnish as one goes upstream. From Mile 31 on there is a difficulty in separating the formations by their colors. I had trouble identifying the last of the Supai about Mile 39 because even where there were fresh breaks, the Supai didn't seem very red and the Coconino didn't seem very light. I haven't been through the narrows of Zion, but I would guess that the trek through the Little Colorado River Gorge is at least as interesting. I am surprised that I have never heard of a predecessor making this trek. (Ben Beamer did - B.B. in cave.)

On the south side of Hellhole Bend at Mile 36, I saw something new to me. Rocks the size of basketballs had fallen right in the middle of the bed which is about 70 yards across. They had buried themselves in the mud with only a pit and some rock fragments to show what had happened. About 30 feet from the south wall was the really interesting sight. A block the size of a VW car was just showing at the bottom of a crater forming a near circle 15 feet across. The feature that really caught my eye was the sharp rim of the crater that stood a foot above the surrounding riverbed. Where else could one find a block weighing several tons falling several hundred feet into soft clay? It was late afternoon and the light was so bad that I didn't get a picture. These rockfalls must have been more recent than the last good flow of the river. Besides noting that the Redwall goes under about Mile 16, the Supai at Mile 39, and the Coconino at Mile 49; I was interested in the great thickness of the Coconino. If I have it identified correctly, it appears about Mile 38 to be 600 feet thick. It had impressed me as being thicker along the Tanner Trail than farther west, but I was surprised to see its much greater depth ten miles farther east. The Coconino especially shows the stresses which formed the monocline. There are great clefts and again whole pyramids of precariously shattered blocks. Contrasting with these crushed and faulted stones, directly across the canyon at Mile 41.5 is the smoothest vertical cliff I can recall having seen. Above a short talus, the formations coalesce into one shear wall to the full height of the Plateau. The narrowest part of the whole canyon occurs where the USGS strung a cable at Mile 46.8. From below I could well believe the statement that the cable is 700 feet long where the canyon is still 1000 feet deep. The canyon rims drop rapidly to the east, and at the Coconino Dam Site, Mile 48.7, the Coconino Sandstone forms an inner gorge with vertical walls about 70 feet high. The width of the bed here is only 35 feet and the foot bridge at the top of this slit is no longer. This notch would be worth a visit during a major flood.

The bottom of this gorge seems like a world apart and still there were quite a few deer tracks as well as coyote footprints. There were plenty of chickadees also. I encountered a live porcupine near the Dam Site and before that I had found a dead ringtailed cat. There are a few escape routes that I know from the map and also noted in passing. I had been down and up the Piute Trail last summer. The Indian Maid Trail to the east rim at Mile 33.5 looked much easier from below than it had from the opposite rim last year. The oblique sun showed a promising cleft at the top. The bottom of the Moody Trail on the other side at the same place appeared to offer problems and I already knew that the top requires a rope. (I latter found a way without using a rope.) The Dam Site Trail at Mile 47.5 seemed worth another try. Possibly there is a cleft at the top which would obviate the need of a rope. The Sheep Trail at Mile 45 is the only one which has been worked over and is still good enough for a man on horseback. (There is a place near the bottom of the Horse Trail where the retaining wall has fallen and one has to use both hands to get around a corner.) There were human footprints leading from the Sheep Trail to the gaging station a half mile upstream. After walking for two days through this sublime abyss, I was relieved to be nearing civilization. Wing and Womack, when they were planning their rubber boat ride down from Blue Spring, had heard rumors of a fall in the upper part of the gorge. I encountered nothing worse than the broken rock barriers. Several of these would stop a party with horses but should be no problem for men on foot. At Mile 40.4, there is another sort of barrier. A pool of water two or more feet deep crosses from wall to wall. Fortunately, the ice was strong. Moenkopi Wash was flowing, keeping a stream above ground for about three miles. I had to wade nine inch deep water one time when I found myself on the wrong side of the stream. The low walls of the last five miles would be of interest to a geologist, but I was quite happy to see the Cameron Bridges and finally reach the car at 4:15 pm.

#### The Moody Trail and Rockfall Crater [January 11, 1964]

The Moody Trail is just north of Hellhole Bend. I had forgotten the exact approach although I had been there just last spring. As it turned out, I parked the car at the nearest place on the reservation road going north from the highway just west of the Little Colorado Scenic View. I stopped the car about two miles from the highway just after I had crossed a small but rather steep side draw. A deeper draw was just north of the parked Jeep and a trail goes north along the one the road crosses and soon meets the other one at their junction. I used this trail for a short distance and then headed toward the rim in a northeasterly direction. Before I reached the rim, I met a deeper draw and crossed it, a waste of time because I found that it was the one I wanted. It comes out to the rim just south of Hellhole Bend, and the head of the Moody Trail (as I knew it) starts north from its mouth. I finally climbed down into the cleft Doug Shough and I had found last year with a piece of heavy wire hanging down it.

In order to be safer, I fastened two ropes together and tied them to a solid projecting rock higher up. My half inch rope reached all the way past the difficult climbing. I used my rope for holds, but there was footing every two or three feet so there was no need to rappel or to think about Prusiking back. A good climber could do this with no help, but there might be some chance taking. When I was below this ravine on the scree going down to the north, I could see two slots through the rocks parallel to the one I had descended but higher and farther west. On the way back, I picked up the cairn marked trail and found that they mark the real Moody Trail. One goes up as if to enter the western one of the pair and then switches to the other. At the place to make the switch, there are some improvements on nature, some stepping

stones and even a bridge made of three parallel juniper logs. I chose to use the route under the bridge which was about three seconds slower. Someone has fastened a cable to facilitate things near the top, but I found it just as easy to negotiate without gripping the cable. One goes under a big rock that has bridged this cleft right near the top. The entrance to this slot is marked by two fair-sized cairns. I am a little ashamed that Doug and I didn't find this route last year. It is about one third of the way from the top of the rim to the bottom of the ravine that we had followed out to the drop off.

On the way down I scrambled down the broken Coconino and went over several minor ridges towards the north. I really had remembered from the previous week that the best way through the Supai cliffs was farther north, nearly to the unbroken wall, but I thought I would investigate a short cut. I started down through the Supai just south of a big ravine. It was interesting to wriggle under a chockblock in a narrow crack but very soon I came to an impossible drop. On my way back up to the crack, I noted some fossil footprints, but they were so imperfect that I didn't even try for a picture. The largest print was about two inches across and they seemed to be of a type described by Gilmore.

It was already 11:45 a.m. when I reached the riverbed, so I knew I wouldn't get to investigate the Indian Maiden Trail going to the opposite rim. In fact, I ate my lunch as I walked along toward the rockfall crater. It's not as far around Hellhole Bend as I had thought and I reached it by 12:30 p.m. I took a number of pictures and measurements with a tape measure. The crater is over 50 feet from the south wall, right at the edge of the bed. The block that fell here is about seven by seven feet and a depth that I would estimate as five feet. The crater measures 23 feet in diameter and the rim rises about two feet above the riverbed. The rock is Coconino Sandstone and there is a fresh scar in that formation just below the limestone. I would estimate that this scar is at least 800 feet above the riverbed. The size of the scar would indicate that much of the fall lodged on the Supai ledges 200 feet from the bottom. The Moody Trail stays up near the solid cliff on the way to the cleft.

Hermit Trail and along the Redwall to Hermit Creek  
[January 25, 1964]

Ever since I found that one can come up Hermit Creek and get out on the top of the Redwall, I had intended to come down the trail and find a way through the Supai, then follow the edge of the Redwall gorge back south to where I had been. I was saving this trip for a day when nothing else would be more attractive, and when snow stopped me from going back to the rock climbing in the Little Colorado River Gorge, I decided that the time had come. Brant Gaedge accepted my invitation and came along.

We reached park headquarters before 8:30 a.m. and had a good visit with Jim Bailey. He gets around. He has been part way down the trail which comes off the rim near Yunosi Point and goes down to the place where Beaver Creek cuts down into the Redwall. Allyn and I were on this trail from Supai to the head of Beaver Canyon. He also gave me another puzzle. Jim Bailey found a piece of window glass out on the Grand Scenic Divide. His rather fanciful explanation of this was that someone had thrown a piece of broken glass off the rim at Bass Camp on a windy day and it had been blown clear out where he found it.

Brant and I had to walk through fresh snow until we were below the Coconino, and even down here there was some left in the shade. There was about a half inch clear down to the top of the Redwall. We had to

watch our footing on the rockslides. Some places tempted us to start down, especially near Santa Maria Spring, but I figured that the cliffs not seen well from above would be a real obstacle. We found a good way down on the south side of the promontory which is south of Lookout Point. A spur trail is outlined towards the end of this point. The walk down the south side of this point is simple. Walking along the edge of the Redwall to the south varied. In a few places one had to be careful, but mostly it was simple side hill walking with the false sage as the main obstacle.

I had just remarked to Brant that finding an old prospector's cairn would be interesting when we saw our first for the day. We had to keep on until we were above the arm that goes to the east towards Hermit Basin before we could find direct sunshine. I dropped the lunches and the canteen here and went on to make sure I had come to the place where I had climbed the Redwall. I had indicated on the map that I had come up this east arm of Hermit Creek, but I soon decided that this was wrong. I continued to the longer arm that points toward Dripping Springs. On the way I found another cairn and, while I was returning, still another. Someone in the old days was using this route, probably to reach the nearest water. Along here I also found one horn from a bighorn ram. It looked old, and as there was no evidence of any other part of the skeleton, I assumed that someone had carried it a while before dropping it here. Although Brant had stayed with the pack and I was afraid he might be getting impatient, I continued and went down the bed of the creek until I was sure I was repeating my former route.

When Brant and I were eating, I showed him a tick. I hadn't realized that they hatched this early.

The return was uneventful. It takes about 75 minutes to go from the creekbed in the Redwall back to the trail. It took us an even hour to cover the last one and a half miles up to the rim. We noted that the fossil footprints where the sign points them out. Most of them are pretty small and unimpressive, but one set that hasn't weathered out of the rock are about as large as the ones that I found in Marble Canyon. The stride may even be a little longer. They are still all covered with convex pads of rock, so there is no way of comparing them with the one Sid Dowd and I had measured and recorded.

Moody and Indian Maid Trails  
[February 8, 1964]

Dan Milton and Don Elston, two of the local astrogeologists, took me up on my suggestion that they might like to go down the Moody Trail with me and study the rockfall crater. Fifteen year old Jeff Elston came with them and three more came with me to inspect the Indian Maid Trail: Jay Hunt, Allyn Cureton, and Migs Hubbard. The latter is a college student who studied last year at Grenoble, France and has climbed in the Alps. His wind and footwork were very good and he seems like a very fine companion.

We parked at the same place I had left the Jeep on January 11 and needed 30 minutes to reach the head of the Moody Trail. I had the time estimated almost to the minute, two hours from the car to the bottom of the Little Colorado River. The geological party walked across the three pole bridge at the base of the slot in the rim, and on the way back, the rest of us followed their example. We lost track of the cairns near the bottom and wasted a few minutes finding the way through. After showing the map to Milton and Elston to help them locate the rockfall, I went over it with Hunt and the rest to review the supposed location of the Indian Maid Trail.

About ten we started up the east slope with the idea of getting back to the bottom by one since I had promised faithfully to be home by 5:30 p.m. to make our dinner engagement by six. Jay and I led the way up the draw. He kept to the bed until he came to the steep part and then took off to the north. I had the idea that it would be healthy not to be directly below him among the loose rocks and went to the south. (This guess was born out during the rest of the day. While the rest of us occasionally dislodged a baseball-sized rock that rolled a few feet and stopped, Hunt started about six landslides. On the return, I was leading down a chute about 100 feet below him. He started three rocks the size of small suitcases that passed me about eight feet away going hard enough to splinter against a big rock that had offered me a little protection. I just flattened against the vertical wall and hoped for the best. He says he worries about my safety when I'm alone, but he increases the danger for the entire party by dislodging four times as many rocks as any of the others.) Hunt's route proved better than mine, but on the way down I learned that I should have moved farther south still and I would have had the best way of all. When you reach the cliff at the head of the talus, you should go down into the bed of the wash but not continue up the main bed to the north against the base of the cliff. The best way is to follow a minor gully to the north up to a well built cairn. Here you reach a well consolidated slope with several other cairns.

These seemed to point toward the main drainage coming down from the angle east of where the Indian Maid Trail is shown on the map. I had become convinced that the map is always right, so I insisted that we use the time to check the slot through which the map shows the trail going. Hunt voted for the main draw, and I suggested that we split up two by two for the investigation. He preferred to come with me toward the notch on the map. This looks worse the closer you approach it. I went ahead while the others stopped to eat a can of peaches. Overhangs formed by chockblocks bar the main crack, but I found that one can go up quite a bit farther east of the main ravine. After doing some hand and toe work over as much exposure as I like, I waited for Allyn. He passed me and went on above by a route that I wouldn't attempt, but I found a safe way to reach his level. I passed him and went up behind a chockblock and came to a most peculiar bit of climbing. One could put a knee up on a shelf slightly far away for a good balance. By bracing against the sloping roof, one could make these moves deliberately. Allyn went up here ahead of me. He reported three possibilities ahead and went off to check one to the west. He soon gave up this route and joined me where I had gone ten yards higher to the east. I came to a place where there were no good holds and the next part would be done by friction grips. Allyn passed me and showed how this could go, but 30 feet farther around a corner he reported that he was stopped. We had also come to the time limit I had set, or he might have gone up a very narrow chimney between the two routes we had given up. This would have been safe, but the vertical split was so narrow, I didn't see how anyone could move at all in it. Allyn thought that he could just possibly go up here, but our considered verdict is that no Indian Trail ever reached the rim here. Jay Hunt and Migs had stayed below watching this operation through cracks in the vertical rocks.

On the descent, we looked harder at the main draw and wished we had discarded the map and had spent our time going up where it seemed most reasonable. You can see that one could reach a place just below the top cliff with ease. Then we are hoping that around the bend to the left, there is some sort of climbable notch. What convinced us that the whole route is no false alarm is that Allyn found pottery fragments on the part where we had seen several cairns. The geologists had found some of the same type when we were coming down the Moody Trail, so one of my questions is answered. The survey crew were not the first to

find these routes. I haven't shown these sherds to the anthropologists yet, but I can say that they look more weather-beaten than any other pieces I have seen.

Hunt impressed us when we had gotten back to the bottom by breaking a thin sheet of ice and sitting down in a foot of water. Allyn took off to see the rockfall crater for himself. He thought he might be able to catch us before we reached the car. He ran from the foot of the Moody Trail to the crater and back in 40 minutes including time for a short conversation and some pictures. He reached the car four minutes after Migs and I got there. Hunt had left us to sprint to the car when we were a few hundred yards away. We changed a flat tire and got back to Flagstaff in plenty of time.

Next week when I'm on the other side of the Little Colorado River with the Jeep, I want to find the head of the Indian Maid Trail. If it is like the others, there should be a cairn at the top. An interesting question to ask the mappers would concern their basis for putting the Indian Maid Trail to the rim where they did. Perhaps they found the bottom and took the word of an Indian for the rest.

#### Horse Trail to Blue Springs and the Indian Maid Trail

[February 15, 1964 to February 16, 1964]

Bob Sehley took two high school students, Geoffry Elston and Allen Sinclair in his truck and Doug Shough drove Michael Hubbard and me in his. We found a better way to approach the head of Horse Trail. About a mile northwest of the clay dam that is near the road after you pass the head of Waterhole Canyon, you turn left on an indistinct track. We parked just above the place where Horse Trail Canyon becomes steep-walled. Where the bed starts its steep course, the trail stays to the left at first then crosses over. This time we found old pottery which he recognized as common in 1120. This time we got from the car to the river in one and a half hours and we were able to come up the next day in less than two. The only part of the trail which is not in evidence is along the lower part of the valley through the Supai before you come to the final drop. No one hesitated in passing the place where the trail construction has fallen. Allen Sinclair didn't pay enough attention as we walked the ledge below the fall and went under the leaning rock. He came up last, supposedly under the eye of Bob Schley, but he went too high and missed the trail. He was able to climb out with his pack on his back elsewhere, but he delayed the party for 20 minutes. Mr. Schley had to wait for him and I became worried when we reached the vicinity of the rim and went back to check.

After walking about two miles downriver, we dropped our packs and proceeded to Blue Springs. Bob had a lot of trouble with blisters, and he was glad that I had brought tape. I noted a place where there was a collection of driftwood on a terrace to the left and on the return we picked up our packs and walked back to it for camping. At Mile 14.7, we came to a series of good springs. Around the bend on the same side of the river (right), there are more small springs down to Mile 14.5. There were two sand boils which kept black sand in motion. I could poke a stick down into one of these springs for several feet without resistance. The entire area is fractured and all these springs may come from the same vein of water. I would estimate the total flow as greater than that of Bright Angel Creek. One little spring comes out of a shallow cave. Bob collected some of the crusted salt which he thought tasted very much like salt he had found in Paho Cave in Walnut Canyon, salt which had been carried here and left with the prayer sticks. For several hundred yards, the Little Colorado River passes through a narrow trench of the upper



Redwall, and we were forced to wade. The water was not cold although there had been plenty of ice above these springs. Just beyond the narrows along the right bank were two deposits of travertine, one old and dry and the other wet and growing.

Bob wasn't interested in the Indian Maid Trail, but Doug drove us, including Jeff Klston, in the direction of the Moody Trail. We could see the roads coming down from the highway on the south side of the river. After we had passed the rocky hills and had passed to the south of the peculiar knob of rock that looks a bit like an igneous intrusion, we had to go still farther south. Just north of a high but breached dam, we started walking west to the rim. We felt pretty smart for our first view of the canyon showed us the Moody Trail. We were within a hundred yards of the ravine where we thought the Indian Maid Trail should head.

None of the three or four slots in the rim just west of the bed of the draw looked inviting and there were no cairns visible along the rim. We went over and inspected the ravine where the map shows the trail coming up, but it was worse from above than from below where I had judged it as impossible. I went back to look harder at the other set of slots and decided to try the one which is second from west to east. I asked the boys to stay above. Only about 40 feet down was the hardest place of all, where I had to slide over a small chockblock and kick under it to find a step or two. The rest was very steep but there was always a very acceptable route. Down below in the upper part of the Coconino, the cliff in the main ravine was impossible but there was a persistent crack along the east wall. Here also I began finding a sequence of cairns. Although I was going beyond the time limit I had set, I continued until the rest of the way to where we had been last Saturday would have been simple walking. I found a pile of stepping stones in two or three places and in another there was a juniper log that served as a step. The students on the rim followed my progress and when they saw me starting back up, Doug and Migs went after the truck. Jeff Elston built a couple good cairns at the head of the Indian Maid Trail.

This determination of the trail to go through a slot different from the one shown on the map proves to me that the cartographers located the trail from hearsay. They probably asked a Navaho where it went up to the east rim and were told that it was through a slot to the west of the main streambed. They jumped to the conclusion that it was through the big ravine visible from the opposite rim and put it on the map without checking it out for themselves. It was truly satisfying to find this most unlikely trail after last week's frustration.