

Harvey Butchart's Hiking Log

DETAILED HIKING LOGS (February 7, 1970 - November 1, 1970)

Pollux Temple
[February 7, 1970]

Al Doty, Jim Sears, Ellen Tibbetts, Bob Packard, and I wanted another try at Pollux. It was cold enough to keep the ground frozen in the shade, but there was no snow and the weather remained fine and balmy in the sun. Al had climbed Pollux just last fall, and all of us but Bob had been off the rim west of Jicarilla Point. Jim and Ellen had been up and down the break in the Coconino into Slate from beneath Jicarilla, and Al swore that he could now repeat his route along the spine of Coconino going north from the notch.

We went along the park boundary road in my truck and then turned off on the new Jeep road at telephone pole 410. I would have preferred walking this 1.2 miles after I drove it in the truck with the shell camper because the rocks were bad in many places and it was about impossible to avoid bumping into tree limbs. I did break one dead limb and cracked the glass in a window of the camper. I am also afraid I got the front wheels out of alignment. When we parked and went west to the rim, I thought the boys were wrong in having us walk to the right, but very soon they showed me the right break in the rim. The tree trunk was still where I leaned it at the hard place last fall. We had no trouble in getting along beneath the natural bridge and down to the notch directly under the point. I had just been reviewing the log I had written concerning my trip down here on October 1, 1961, and I remembered how wrong I had been in saying that it was strange to find petroglyphs far from any ruin and where there was no chance of a travel route. We looked around well enough to find the rock shelter and the fine display of petroglyphs on the east side of the spur as far north as one can go at the level of the notch. Jim and Ellen went down the slot in the Coconino toward Slate which John Wehrman had found to be a possible route last fall while Al took Bob and me up one ledge of the Toroweap above the ruin and then north along the ridge in the Coconino. Some of the descents along this ridge took some care, but we soon came to the place where we had turned back last fall. Jim and Ellen had made fine progress down the slot and along the Hermit and they were shouting up to us before we had passed the worst place. Here Al decided that he had gone right down the crest instead of around to the side of the steep block as I had thought after our frustration last fall. He got down all right and directed Bob. I came down last after tying my rope to a bush and using it for an extra grip at some of the awkward spots. Bob also held my foot for me as I groped for the bottom. I could very likely learn to do this without a rope, but I would prefer to have a friend along to give me the help that Bob offered. The rest of the way required some route finding, but there was no real difficulty when we followed Al's lead off the low ridge to the west down some breaks and along a ledge to the north and then down to the talus by turning south. He built some cairns that can aid one in route finding. The Hermit to the north of this place is covered by large broken blocks of Coconino. Jim and Ellen were waiting for us on the broad saddle below Pollux.

An interesting feature of the saddle is about the biggest mesal pit we have ever seen. Only a couple of hundred yards away from the first was another fine one.

Jim and Ellen had had the thrill of coming on a fine bighorn ram at close range, about 40 feet. It was so startled that it jumped about 15 feet out and down before taking off.

We found that Al had not taken the easiest way to the top of Pollux. There are at least three easy and interesting ways to get through the bottom crags of Coconino at the south end and above here just to the east of the crest, the walking is easy up a slope covered with small blocks and slabs of the sandstone. Al led Bob up a harder place farther north along the east side in an effort to find the place he had used on the first ascent. I found a simple walk up, and Jim and Ellen found Al's former route where one crawls through a hole behind a block. There is just a bit of difficulty and route finding to get up the summit block of Toroweap. It was a marvelous viewpoint and it was my fiftieth named summit in the Grand Canyon.

For the return we exchanged routes and Bob and I found the going tougher in the slot. Bob got a scare when a large chunk gave way when he had his foot on it. At one place we had to chimney up for several feet. Two and a quarter hours each way.

Snyder Mine and Bighorn Trail Canyon
[February 14, 1970 to February 15, 1970]

Jorgen Visbak was eager to see my surefire way up the Redwall at Mile 217, so he met me Friday evening at Peach Springs. After eating at the cafe, we drove down to the mouth of Diamond Creek. There I had the pleasure of running into Vern Taylor and quite a group of Prescott College students who were going down the river to Pearce Ferry in two days starting Saturday morning. There were no kayaks this time, just open rafts about ten feet by six. They didn't relish the upsets of the kayaks in the 45° water.

I took Jorgen across directly without going above the riffle as we had felt we should when the water was high. We had thought we would sleep where we landed the boat, but both of us thought that it might be better to make some progress on our trip by moonlight. There was some water in the cattails at the base of the cliff upriver from the wash at Mile 225.4, right bank, but we got past the jungle and started up a bit east of the steep and shallow ravine. We know for sure now that this is the easiest way to the top of the inner gorge. (I now prefer to go up to the base of the Tapeats inside the side canyon and then go out on the north side to use this place.) When you near the Tapeats Sandstone, you have to go to the west again to the break. We walked until 10:30 p.m. although I had quite a bit of trouble with cactus balls from jumping cholla, but we reached Mile 223.5 before stopping. The night was just cold enough to make my down bag comfortable. There was a slight threat of rain, and when we were ready to move on in the morning, it began to come down but not heavily. In less than an hour it was dry again and the rest of the day was fine, cool walking weather.

A snack was eaten at the mouth of Trail Canyon (a real lunch for me), and we were ready to proceed by 10:30 a.m. I predicted that we would be at the top of the great slump block in two hours and at the top of the Redwall in less than another hour. After my experience in the area three weeks before, we knew enough to go up the northern and larger slump block keeping away from loose rockslides. The way up the rest of the Redwall still looked good enough for a burro, but when we got to the top of the talus material and around a big block just below the solid cliff, we were in for a surprise. There were several places where we had to use our hands to go up broken cracks almost straight up between several of the ledges.

Burros, to my judge by the droppings, do not go higher than the talus. There was no bad exposure nor precarious places where the packs were in the way and we came out on top in just less than three hours from the time we left the beach at Trail Canyon.

It seemed reasonable to climb to the top of the ridge of Supai Sandstone to the west, and from here we could see the mine as well as one of the finest panoramas of the canyon country. Wishing to keep our altitude and walk on the level as much as possible, we followed the curve of the ridge to the north and then to the west toward the mine. As we got nearer, we had to drop down and cross some shallow valleys and finally climb up to the mine through the brush. All this took longer than I had guessed from map study, two and three quarter hours.

From a distance the mine is rather unimpressive, and I thought that it might only be some open pits. Upon examining it, we found that a lot of work has been done. One horizontal shaft is about 50 yards long and as straight as a string. There are other shafts and they have been connected by ventilation holes. The matrix in which the copper ore was found is peculiar, not solid rock at all but rather clay cementing limey modules. I was afraid I might sleep cold out in the open, but when I bedded down well into the largest shaft, I was too warm most of the night. Where I first spread my bed there was quite a thorn sticking up in the water deposited clay, and I ruined my air mattress before I discovered it. Another feature was that I wasn't aware of daylight and I first heard Jorgen getting up after seven on Sunday.

After reaching the mine about 4:15 p.m. with three quarters of a gallon of water, I decided to look for more down a nearby wash. Our plan was to move out early Sunday morning and go along the base of the Hermit Shale south to the break in the Redwall that I had found last year with Packard. We had seen that this sort of travel would be slow, and I was not sure how much water we would find at that level. Quite soon in shallow pockets of the polished Redwall in the bed, I came to water left by the rain that forenoon. Jorgen's feet had been hurting some, and he did a short reconnaissance around the mine while I continued on down the wash to see whether I would come to a barrier fall. Jorgen and I left the mine hoping to find the mule trail starting up to the rim, but the slight trail we found going southwest soon disappeared in the blackbrush. He stayed at the same level and went to the bed of the wash to the west and was rewarded by finding the trash of the main camp where the miners must have lived. There were some signs of occupation at the mine itself, a steel woven spring bed and a heating stove. He didn't find a recognizable trail going to the rim. Since one could ride a horse in any direction we figured that they hadn't taken the trouble to do much trail work. Down the bed of the wash I found a more and more impressively narrow canyon. Quite abruptly I came to what I had been expecting, a high dry fall. As I looked down from the brink, I saw something like a trail below, and then I noticed a way to reach it by going up out of the bed to the right. Here I saw rock wall construction for a trail and even two steel drill points. Since I had told Jorgen that I would be back to the mine by 5:30 p.m., I turned back feeling that I had discovered the trail of Trail Canyon. I found some more switchback retaining walls and followed the old trail above the streambed and up a different tributary that led directly toward the mine. On the return I passed about the biggest mescal pit I have ever seen. Since our primary interest all the time was to find the trail down Trail Canyon, Jorgen was more than ready to try returning down the canyon rather than to go along the high route back to the river. After an 8:10 a.m. start Sunday morning, we were soon down along a ledge so narrow that no loaded burro could pass. We figured that they would have to carry the load piecemeal past this place and load a burro above it. Almost directly below the dry fall we found a well built cairn and no

more good trail beyond. Behind the cairn was a neat but short cave with a clear pool of pure water 18 inches deep and several feet across. I figured that this must be Shanley Spring that Beck had heard about. There isn't enough flow to run even a few feet below the pool, but it is so well protected from the sun that we figured it to be a permanent source of water.

I thought that this would be the end of the real trail, but I was game to go on down and gamble that Trail Canyon should have a route past the big fall in the Devonian that had stopped us last April. Jorgen and I both figured that if we could reach the top of this fall, there should be a possible, though precarious route along a bench to the right that would take us to the descent where he and Shough had gone up and down six weeks ago. We had already gone so far in this direction that a return by our route of Saturday would mean a very late moonlight walk back to the boat. We guessed that the immediate route below the spring should be to the left, mostly because we could see that the right would be hopeless. After continuing along this bench around a point or two, we found the necessary breaks and had no more trouble reaching the fall above the easy bed of the lower canyon. We could get up on a bench to the left, but we both thought that it must pinch out and went up to the right. After just a bit of progress to the south, we came to a clear cairn. It wasn't clear whether we should go on south at the same level or go higher. If we could have found a safe place to go down a 100 foot cliff, there was a good talus to the bottom, but we found no way down at all close.

About here the poor footing began getting on my nerves and Jorgen did the scouting ahead at our level. His report was that we would have to climb. We soon had the encouragement of finding a scanty bighorn trail. This brought back some confidence and we soon found ourselves approaching the place Jorgen and Doug had come up. When we came to a good talus to get down to a lower bench, we took the chance and still found the bighorn trail. Soon Jorgen recognized the route down and we were using a strikingly steep but safe climb down to the gravel ridge where there is another well built cairn. This is not easily seen from the bed below and we think it is not to be confused with the three cairns Aleson found many years ago. They were probably taken by a flood.

I was most relieved to be back to routine walking and the knowledge that we could reach the boat and the truck at Diamond Creek before dark. We felt that the trip had been one of our best, two more routes through the Redwall and the mystery of Trail Canyon solved including the location of the spring.

Letter from John Nelson to Doc Marston
[1948 IX 3] (copied as written)

Peach Springs Ariz
Sept. 3rd 48

Mr Otis Marston
Berkeley
Calif.

Dear Mr Marston Your letter received some few days ago.

Have been unable to find any of my records back further than 1931, but met one of the men that was in party whom has lived on this side of river for quite a while but had not seen for quite some time, as he had just came back from Colorado. Roy Dickerson is his name and was camped at Winter Camp with Slim Warring for whom he was working, the Winter camp was known as Dinner Pockets. they are large pockets in a lime stone canyon catching rain and snow water. their location is around 3 or 4 miles South West of Joe Price Peak on North rim of Cannon. At Winter Camp we organized three mounted parties of two men each. Party No 1 Jim Hudson and Roy Dickerson went south from Winter Camp leaving north rim at Kelly Point via Kelly Spring onto red wall as they were unable to get off red wall their search was made on red wall from six or seven miles below or rather they came up six or seven miles to about opposite mile 227 on map returning back and leaving to top rim via Kelly Point. Party No 2 Slim Warring & Ross Mills came off Snyder Trail to river at a point between Mile 219 & 220 on map. Going down river on tonto bench which runs from nothing around Mile 221 to around seven to eight hundred feet at Mile 228 at about which point they turned back to Mile 221 waiting there until we arrived from up river. Party No 3 Jack Spencer & My Self left North rim on Old Indian trail South side of Joe Price Peak reaching river at a point near or between Mile 206 & 207 We were able to follow along bank of river most of the way down only having to leave river bank in a few places for short distances just above Miles 210 on map we found, which was no doubt Hyde's last camp, river being very low and had fallen around two feet since they had camped.

(two lines of illegible hand written notes)

found at camp tracks in sand bar where two people had camped one small track and a man's track. tracks showed very plain where the sand had been damp at time they were there in the blow sand they were very dim and unable to tell much about them could see very plainly where they had tied up boat to a boulder and prints of boat or scow was very plain in sand bar they had built a fire and was no doubt an overnight camp as they had cooked a pot of Lima Beans no doubt as where they had picked or washed them we found several baby Lima beans, which Mr Hyde identified as bean he had raised on his farm. Also found a No. 2 1/2 can opened of tomatoes or canned fruit I can't recall which, which we took along with beans to St George Utah which Mr Hyde said was the brand purchased at starting point. We then went on down river to Mile 221 where we met Warring and Mills at which Point we camped that night. Next morning returning to North rim and Winter Camp via Snyder trail leaving river between Miles 219 & 220 on map. Next day returning to St George Utah

My Self or Dickerson could not remember the exact dates but was some time after the first of year as he stated they had just returned a short while before to the Winter Camp after spending the holidays in St George Utah.

in your letter you ask of some men by the name of Bund being with us there was not. that fall of winter I understand that Hyde returned to St. George and had some men go with him and they entered the Canyon on north side of river at mouth of Canyon above Pierce ferry going a horse back as far as they could into Canyon there could of been some of the Bundys with this party.

A few years later at Whitmore Wash quite a distance above Parashont Wash there was a boy drowned while swimming at the mouth of Whitmore wash whom I believe was a Bundy or a near relative of theres as there was a Bundy and party spent quite a while in Canyon along the river searching for the body. In our visit here I was telling you about the two boys from Boulder City one of which was drowned. in looking back over my notes I ran across the notes I made of that search On June 23 1931 James R Ervin came into Peach Spring at 8 A. M. accompanied by Chas McGee a Hualapai Ind boy. Charlie stated this boy had come to his camp early in the morning.

(Camp being five miles North of Peach Spring in Peach Spring Canyon)

Ervin being in bad shape from hiking no water and nothing to eat after giving him a little nourishment about all he could get out of him was his partner was some where behind him but did not believe he was able to get out of the Canyon. on talking to the boy about all I could get out of him was the same as above, and that he had left the river about ten miles below diamond canyon.

Organized a party of seven men and two cars we back tracked him to where he had come off rim into Peach Spring and go around head of Canyon about 20 miles where we picked up track trailing him across Milk weed Plains to Hindu Canyon leaving cars, trailing him across Hindu Canyon, onto bench of red wall, (being only two places between diamond Creek and Bridge Canyon a man can rim out a foot.) on getting late and from track it looked as though he had come up the lower one we took a short cut and found where he had scaled red wall. we then returned to

(Apparently there is another page to this letter that was not included in this copy of Harvey's logs.)

Saddle Canyon rappel

[February 28, 1970]

I had been considering going for the camera which had dropped out of my pocket when I was hanging upside down at the end of the rappel rope before Christmas. When Brad Lynn, a colleague teaching police science, asked me about such a trip and said that he would be free to go with me on February 28, we set that as the day. He took his two nephews, Howard and Doug Lynn, in his Bronco, and Al and Jane Doty and Roma went with me in the Ford pickup. We reached the hunting camp a little before 11:00 a.m. under a rather threatening sky. There was plenty of snow on the slopes less than a thousand feet above, but only a little fresh snow remained in the shade at the level of the camp, and we saw no more close by when we had gone downhill to the east. We ate our picnic lunch and started for the descent into Saddle Canyon.

Jane and Roma decided to get a view of the operation from the rim. When we had walked for 30 minutes, I led the group to the deer trail off the rim with no fumbling. Here, among the junipers of the rim and below, there seemed to be more fresh signs of deer travel than there had been in late December. The day was cloudy and felt colder than it had in December, but there was no ice in the pothole near where you cross the bed. Once more I noticed the firewood I had gathered when I boiled soup under an overhang halfway to the bottom in 1965 and I pointed to the better overhang where I had slept through a very wet night. I also called attention to a rock pile that may have served to form a step below a long step down. We saw the women on the skyline and shouted back and forth as we were following the deer trail just

above the Toroweap along the side of the bed. There was no hitch in going past the place where the bed takes the big drop over the Coconino and around the corner into the bay. We had the usual easy time getting down to the rappel site in the alcove on the east side of this ramp. Brad was impressed with the scramble down the last bit of Coconino to the basin where I had tied the rope.

I had been wondering whether Al Doty would like to take my place in doing the actual rappel and climb back with the camera. I had been feeling a bit nervous about how well I would get back up. I remembered that Allyn had done his Prusiking quite a bit faster than I, and Al had come up the rope north of Cape Finale faster than I last summer. Al had been practicing recently, and I suggested that he might like the honor and the experience from the present rappel. We had brought his 150 foot climbing rope and his rappel rig as well as my more primitive equipment. He accepted the offer to be the one on the rope. His brake bars and nylon webbing harness work fine and he was down in a smooth continuous descent without taking long enough for any spinning to get started. He had a bit of trouble getting the rope straightened out at the bottom before he could get down the last two feet. The camera was still in the plastic bag apparently none the worse for 70 days in the open. Al went down and around to look at the other sides of the old slide, but he came to my conclusion. There is no way to climb here without a rope.

Coming back up using my Jumars, even, was not easy. Al made two false starts and had to go back down to tie his ropes differently. To prevent spinning we used Al's 150 foot rope as a belay from 20 feet north of where the main rappel rope was set at the top of the cliff. He tied the end above the knee of his right leg. With a few pounds of tension in that rope, there was no spinning. He had a chest sling tied to one of the Jumar clamps so that he could lie back and rest occasionally. For some reason he preferred the waist band around the Jumar sling ropes rather high on his body. He rested three or four times in doing the 75 foot ascent, but he came up the last 25 feet against the Coconino cliff in fine style. I had been worried as to how he would get along when he was through with the overhang and came to the edge of the Coconino at the ceiling. I fixed the other end of the belay rope down far enough so that he could clamp onto it if the rappel rope was too tight against the cliff. However, he had no trouble getting one clamp off and fastening it higher up.

There had been some fine rain while we were doing this, and the women on the rim were in some snow. The return to camp was uneventful except that Al picked up a broken arrowhead in the junipers about ten minutes from the car.

Granite Park Creek

[April 3, 1970 to April 5, 1970]

Ever since giving up the descent of Granite Creek last August, I had been keeping it in mind. It would be a real help to have rain in the potholes but one needs a fairly dry road for the approach. This Easter, the last weekend in March, I took my wife and grandchildren to the beach in Mexico. This was just as well because there was another big snow over northern Arizona. Jorgen and I had planned the Granite Creek descent from the time that we found the route down from the Snyder Mine, and the weather cooperated beautifully. The road was still a problem but the walking was mostly cool and pleasant. We still had no sure information about the route at the lower end of the trek. Bill Belknap, Jorgen, and two park service men had talked to an Indian living in Prospect Valley about 1954, but at that time Jorgen hadn't heard

much about the area and he wasn't even aware that the hope was to get down Granite. Belknap says that they found a trail suggested by the Indian and made some progress toward Dr. Tommy Mountain, the large mesa south of Parashant, but that they didn't get very near a real descent of Granite. Some students who walked up from the river in Granite when they were on a boat party last September said that one should be able to descend the first tributary from the south as you go up Granite. This was what I had intended when I gave up because of the heat last August, so I told Jorgen that we should try this route first.

After an early dinner at Grand Canyon Caverns, Jorgen and I covered most of the road out through Frazer Well and through the ravine cutting the Aubrey Cliffs by daylight. The lights were on before we crossed Prospect Valley and we parked on the low ridge at the head of Granite Creek. I might have saved some walking time at both ends of the trip by driving down the road into the upper valley, but I was leery of its condition and especially as to whether I could turn around if I came to a bad spot. We used our lights to go down through the junipers to the road, but even with only starlight we made good time down the road to the Supai Sandstone rim in the bed of the wash where the road forks. It was still before 9:00 p.m., but we decided to sleep there because there is no recognizable trail any farther. I was carrying a car altimeter and we found that we were about 1100 feet below the car. We had just a trace of frost, but I got cold and was awake before daylight. Jorgen's three pound bag as well as his metabolism kept him comfortable and he had a beauty sleep while I did a little scouting ahead to get the blood warmed up.

When we started on before breakfast at 6:40 a.m., I disregarded what I had just observed and led Jorgen around the rim to the south instead of taking him right down the wash. This south rim route was in accord with what I had remembered of a marked trail, but we didn't locate the trail and scrambled down the rocks and through the brush figuring that on the return we would follow the bed more directly. We bypassed the falls in the lower half of the Supai by going around to the north and then went down the bed past the tributary from the south to the spring near the first showing of the Redwall. Here there was sunshine and we ate breakfast in comfort about 700 feet below where we had slept. The spring was running about as much water as I had seen last August, a mere trickle through three shallow pools on the rocks. Still it supports a small grove of willows.

Geologists could study the Granite Creek region at great length before they would learn all about the earth movements and the various sections. Up near the spring there is clear evidence that the Redwall was deformed before the Supai was deposited but the major faults that extend for miles show that the Supai was already in place when they occurred. One feature that may never have been charted is a graben paralleling the river but about two miles to the east. One enters the Redwall at an elevation of about 4300 or 4400 feet and finally leaves it at about 1700 feet. After the creekbed has cut through about 500 feet of up tilted Redwall while dropping not more than 250 feet, one comes out on a little Supai Sandstone again. This pattern of going through upturned Redwall and then going south in a fault valley is repeated about three times before the creek enters the graben and goes down to the north through the relatively undisturbed limestone. The whole landscape is cut by faulting, mostly north south, but there are plenty of anomalies that don't fit the general pattern. One sort of rock that aroused our interest was a conglomerate of pebbles ranging in size from walnuts to apples cemented in a brown matrix. What seemed odd was that it was uniformly about five feet thick in an extensive sill. I thought of a volcanic magma penetrating a layer of water worn and deposited gravel, but I would need a professional opinion. A geologist who could

account for all the features of this region would need months for the work.

Below the spring one walks through a trough at first shallow and sunny but soon very deep and narrow. Just a week after our storm there were plenty of potholes with rather clean water. We soon came to the place where I had been able to chimney down between a smooth chockstone and the wall about eight feet last summer, but now there was a pool over a foot deep right below. Rather than go down, take off our shoes and wade, we elected to test a bypass up on the steep slope to the right. It worked but climbing down to the bed beyond the fall was as difficult as the alternate procedure. We probably could have done the wading faster. Near the end of this spectacular narrow gorge, there were a couple of holes in the gravel holding water. I recalled that they were about the same last summer, so they may be permanent. There were no burro signs about, but the gravel was surely pushed up around the holes, presumably by bighorn sheep. We found one muledeer skeleton with some of the hide attached lying in the bed but there were far more bighorn hoofprints and droppings than deer sign all through this country. Just beyond these pools in the gravel we noted the cairn and the trail I saw last August. On the return near here I saw the only horse manure west of this Redwall gorge. After a quarter of a mile or more in the open south trending valley, the bed cut west again through another Redwall upheaval. There were places where the creekbed broadened even before getting through this upthrust. In one of the narrow places I examined a cave a few yards up from the bed and found a stout stick wedged between a ledge and a hole in the ceiling. I have seen similar artifacts in a cave in Salt Water Wash and one near the ancient platform of poles in Marble Canyon at Mile 43.3.

In the next fault valley the bed goes south farther before cutting through another range of up tilted Redwall. When it gets through there are hundreds of feet of Redwall cliff to the east and Supai Sandstone quite close to the bed on the west. Soon after the creek enters another narrow gate to the west it comes out into another short valley. Then the bed turns west again and after a few yards one comes to a real impasse, the 40 foot drop in a narrow slot with bigger drops below. We repeated what I had done last August and climbed up out of the bed to the south. The elevation had been 2750 feet in the bed, but after going up, down, and finally up to the west of the main bed where I had camped last August, we ate lunch at a commanding viewpoint at 3400 feet. We could see the snow on all north facing slopes along the rim to the east. All the rim from the point above Diamond Peak to the mouth of Parashont was visible across the river. Tommy Mountain and the rim to the north of Granite Creek formed the horizon to the north and northeast. We could see Diamond Peak as a pygmy among the giants behind it.

When we first left the bed we had to climb about 250 feet and then descend to cross a minor canyon. As we were looking for a good descent, we saw a cave that I had not investigated last summer. When we reached the bed it only took a few minutes to inspect the cave. It was bigger than I had supposed, going in far enough to require a flashlight. One had to crouch nearly everywhere and going on all fours was bad because the floor was covered with cactus spines in the fluffy cave dust. Indians must have used this cave because I found my first projectile point lying on the bank below the cave. Small stalactites and draperies were present and still forming to judge by a couple of drips from the ceiling.

After our lunch on the high point west of the main canyon going down to the north through the graben, we had to go south to get down into the tributary canyon closest to the mouth of Granite Creek from the

south. There was a broad valley in the Supai rock and then the bed steepened sharply as it entered the Redwall. There were good bypasses for all obstructions except at two places well down in the depths. At one place Jorgen led me down beside a big chockstone and then under it on footing that was invisible from above. At the lower difficulty Jorgen led again. This time we removed our packs to get down the last few feet to safety. It would be a real help for a sole traveler to have a rope along for letting the pack down. There was still some uncertainty as we continued on down through the impressive Devonian formation, but there were no more real barriers. It was nearing 3:00 p.m. when we reached the bed of Granite.

After walking a few yards toward the river, I decided to drop my pack and scout upstream in the main canyon to see whether we should try to go out that way on Sunday. Jorgen went on to the river and took his time to record the area on film. He had a very short and very cooling swim in the muddy Colorado and put on his trousers in time to wave to a passing boat party. I had set myself the limit of one and a half hours up Granite if necessary to check the route. I hurried along with my canteen and camera through one of the most impressive and continuous narrows I have encountered. At one place hard and polished limestone forms the lip of a ten foot fall that is shale below. At another the current has cut a cave under one wall. When I was beginning to recognize landmarks on the high walls where the canyon goes up to the south through the graben, I came around a curve and saw the largest chockstone I have ever encountered. It was as big as a small house and completely filled a broad gate at the top of a fall. However, I found a narrow ravine that could be climbed and used for a bypass to the west. If I had worked on it, I could also have found a bypass to the east, but this would have been harder and longer. At the top of the spur I could look down on the steep bed above the huge chockstone and I saw the advantage of proceeding at the high level until I would reach the bed on my level. This walking wasn't too difficult and quite soon I was just above the bed and could have gone on to where I had slept last August. It took me only an hour to go back from here to my pack and a little over 50 minutes to go from there to the river.

Granite Park is a fine place to camp especially at this time of year. There were no ants nor mosquitoes and the wind didn't blow the sand. We remembered where we had seen the mescal pit three and a half years ago and had noted an overhang that makes a good rain shelter. This time there was no threat of bad weather and we spent a perfect night. I happened to wake about 4:45 a.m. and casually looked at the sky. The comet was making a beautiful show in the eastern sky and I had to awake Jorgen to see it. It was the only time I could remember seeing a comet so well except for the one discovered by the two Japanese several years ago.

When we were walking out via the main canyon on Sunday, we noted that last August I had been only 1400 vertical feet from reaching the river. It took us two and a half hours to walk to my campsite carrying our packs. We also found another way to get down the Redwall. At the north end of the graben along the eastern break, a slide covers the joint. One could go to the north at the fall in the slot where I first saw the bighorn last summer, follow the rim of the Redwall, and come down this slide north of the giant chockstone. This would probably be faster than the way we came out which in turn is certainly easier than the way we went down. If I had just scouted a bit more last August when I felt so washed up in the heat, I would have slept at the river as I had hoped.

When we were walking out on Sunday we began to believe spring was really here. There had been no wasps out the day before when we passed the waterholes, but they showed in force on Sunday. Birds were singing and the redbud trees were just beginning to show their blossoms.

There was one modification in our route out besides the major one of coming up the lower gorge through the Redwall to my old campsite. At the top of the Supai just below the road fork, we stayed in the bed more closely. We went up beneath the top ledge to the south and then had to climb next to a chockstone at the last real impediment. The bed along here was particularly interesting and there was even a slow seep spring. It has been a most enjoyable and successful trip. Jorgen saw something also interesting when we were about one third of the depth of the Supai below the road on a flat north of the bed of the wash. There seemed to be an old trail for a short distance and then Jorgen found an enamel ware pot.

Redwall gorge of Beaver Canyon
[May 2, 1970]

Over a year ago I was given a report of a successful climb through the Redwall up and down Beaver Canyon by Tom and Connie Crowley. Then I heard that Donald Weaver had climbed out that way and last October Jim Sears and his friends had done the same trick. Also last fall Norvel Johnson and I had been steered away by the chockstone drop above the junction of Little Coyote and Beaver. I wasn't sure that the Crowlys had come this far up, but a week after Norvel and I were there Sears and his friends succeeded in getting up here. One girl needed a push but one girl got up herself. This made me all the more eager to see the place again.

I had four very able companions. Allyn Cureton and Al Doty are known both for their hiking stamina and for their climbing agility. Bob Packard can climb about as well as I can and he can out hike me up the hills as well as on the level. John Ovrebo also has good wind and he had taken the trip over to Clear Creek and back from Bright Angel Creek just the week before. We went in my truck to the head of the Beaver Canyon Trail without incident using the turnoff from the Supai road that is 2.1 miles north of the turn to Camp 16. It is about 19 miles from the road to the trailhead. We left the pickup at 10:45 a.m. and reached the spring at the Redwall rim at 12:05 p.m., far faster than my math prof friends from Tucson and the Sierra Club group that Allyn guided last October. There was water in several rain pockets and the two springs were flowing well in the Supai.

After lunch we went down into Little Coyote Canyon and looked at the chockstone difficulty. As we had expected, Doty and Cureton went down with no trouble and one of them came back up. Ovrebo, Packard, and I went down with a belay. At one move Ovrebo lost his footing and put tension on the rope before he regained a good stance, but if one is careful the rope is unnecessary. Below the upper chockstone one can go down the rest of the way either to the left or right. One can crawl through a hole on the right with no feeling of danger, but on the left there is a good hand hold where you can let yourself down safely too. We agreed with the others who have come up this way that Norvel had talked me out of a good thing. All the rest of the bed was pretty much routine. Almost all the bed is easy gravel or boulder hopping. At a few places one has to go to the side around blockages in the center. There is one place where there is a bare and polished step of limestone bedrock that calls for hand grips, but this place is only about five feet high. Very close to the end of Beaver there is also the need to climb up to a ledge on the left side (northwest).

One can make good time and we went from Little Coyote Canyon down to the mouth in 80 minutes. We seemed to be hurrying much of the time but we came up just as fast without racing. There was water in rain pockets as well as at one seep. The spring about halfway through was running well and it kept water in the bed for over 100 yards. Three of us got along all right without bringing our canteens away from the packs which we left at the spring above the Redwall.

The upper part of the route just below the chockstone descent is about the most strikingly narrow Redwall slot I have seen anywhere. When you look ahead at the curving stream course, the walls sometimes cut off the view of the sky while there is still a spot of sky showing through lower down. There are caves of various sorts, some like little Redwall Caverns on the order of the famous one in Marble Canyon and others high on the walls. At two places we could look up to the west rim and see big curving holes that go clear through mostly in a vertical direction. Seeps in the wall support maidenhair ferns. It is truly a beautiful trip. Even if one didn't want to strain to get up the hard place in Little Coyote it would be worth coming in from the bottom and returning the same way.

One thing of interest in the upper Redwall narrows is that the present gravel bed is about six inches lower than it has been. There is a band of lighter gray wall up to a mark that high where the gravel must have been carried away by a flood not too many years ago. The same kind of band shows on the bare rock walls in Dragon Creek where the flood removed the terrace in December, 1966. It is possible that a flood could scoop out the gravel to bedrock and leave the sort of pool that James reports. We looked at the place where Bob Dye and Donald Weaver must have climbed out, one quarter mile up from the spring. It looks wild.

Havatagvich Canyon and Moqui Trail
[May 9, 1970]

Al and Jane Doty met me at the junction of US 180 and Arizona 64 before 7:00 a.m., and we proceeded along the Topocoba Road after a short stop at the ranger headquarters. I turned off just beyond the cattle guard on the road south past Akaba and Big Tanks. Indians were branding horses near the latter. We had problems opening and shutting a tight wire gate. It took some straining for both Al and me to manage it, and on the return Jane put the wire over the pole while Al and I stretched the gate. If I were alone I believe I would now have to drive south at Pasture Wash and hope that there are no gates this tight along that route.

The road was dry and dusty, quite a contrast to the problem with mud I faced last September. I made the mistake of turning to the northwest at the first fork and found where the game and fish people have built a catchment for rainwater. The next turnoff was the right one and it took us to Chikapanagi Tank by a reasonably good road which must be more recent than the map. I led the way past two small ravines to the west of the one containing the tank and we went down to the Coconino where I had come up last September, west of the Chikapanagi Wash.

Al and I first looked at the slot in Chikapanagi Wash where it goes through the Coconino. There was plenty of water in three potholes. With care one gets down to these two upper ones and then enters the sloping narrow slot. I strung out my rope as I had done last year, but this is really unnecessary even for

me. At the platform below this narrow ramp, there is a clump of redbud trees which is a perfect anchor for a rope. We looked over the first chockstone down about 20 feet. Then below that there is a big drop. I gave this up and figured that the other place I had considered a rappel site to be better, especially since the one in the slot has an overhang. We later returned to this slot and tried to study it better. Both of us went down to the lower shelf below the first chockstone. Al could do this freehand but I was glad to use a body rappel on the way down and the Jumars for a few yards on the return. Al leaned out and could see that my 120 foot rope didn't reach quite to the bottom. We could have used the rope he brought to extend mine and we could have rappelled down, but there was still a much shorter drop in the bed below which might have been easy to bypass. Since there wouldn't have been time to have me go down and walk around to the Moqui Trail and reach the truck by 3:00 p.m., we gave that idea up.

Between our two investigations of the slot, we moved over to the place to the right and north where the edge of the Coconino is weathered into a broad ramp through a third of its depth. I could see that the big rock lying on the slope would be a safe anchor but it would shorten the useful part of the rope unduly. Closer to the edge I saw a little juniper and a shrub growing in a bit of sandy soil. I figured that they should have roots in cracks in the rock beneath the soil and decided to trust them. Still when we threw the rope down the cliff, it didn't reach bottom. If we had brought a 150 foot rope or had extended mine with the other rope, it would have been adequate. One point of interest that Al noticed was that there is a ledge cut from the cliff where one could rest from the rappel if desired. I believe I would prefer this for doing a rappel rather than the slot with the overhang. If I would drive to the road end and spend the night ready for an early start, I could go through with this project. We ate lunch at the truck and then drove one and a half miles southeast along the road but were still not as close to the Moqui Trail as we could have been. We could see by the way loose rocks had been kept clear that the Indians maintain this trail. Al and I went as far as the spring while Jane turned back when she had seen the beautiful route through the Coconino. Many redbud trees here were starting to bloom and the wrens were singing. A date of 4/13/70 marked in charcoal on the wall and initials and other dates show that this trail is still used. We guess that the spring is a help for the ranching that is being done in this area.

I drove back to Flagstaff in less than three hours, using the road that connects the Topocoba Road with Moqui Lodge. It is five miles across here and does save time.

Vishnu Canyon, Sheba, and Solomon
[June 2, 1970 to June 4, 1970]

After last summer when Jerry Thornton and Joe Hall had shown me that Clubb was right about the route down from the Cape Royal Citadel going without a rope, I figured that I could do it alone with the help of a rope for lowering my pack. I went to the north rim and arrived early Monday afternoon. My permit said that I would be out by 6:00 p.m. Friday, but this was mostly to keep them from worrying. I was told at headquarters that George Beck had moved into his cabin for the summer and that Donald Davis and his friends were down in Nankoweap checking some caves. I couldn't find Beck right off so I went out near Bright Angel Point and experimented with the route for a descent. It was just like following a deer trail down through the woods to the Coconino and there is a forested ravine all the way to the bottom of that formation. This is on the side to Roaring Springs. I had understood that Sigler, Henderson, and others didn't use this safe but perhaps indirect way to reach Euler's ruin in the Supai. I think it would be faster to

go the easy way even if one had to walk around farther below. It was peculiar that the deer don't seem to use this way.

I left the campground well before six on Tuesday and was walking down the familiar route near the Walhalla Glades exhibit by 6:15 a.m. I still didn't feel absolutely sure of the best route through the Coconino in the ravine to the west of the wrecked cars, but I didn't miss the route by more than a minute on a blind alley. When I came to the first place to chimney down I let the pack down about 15 feet and then came down the way I had done it three years ago where I got chicken last summer. A few yards to the east was another crack where Joe Hall went up and down, and I noticed something that he had missed five juniper logs which had been placed upright at the bottom to form a step. There were also a couple of long slabs placed at the bottom of the crack I used and I take these as indications that this is a prehistoric Indian route. Clubb said that Lawes had told him this route would go and perhaps Lawes got the word directly or indirectly from an Indian. All I would say is that the chain of knowledgeable people was becoming rather thin when Clubb told me about it. Down at the ledge with a break in it where I had balked three years ago just before I would be on the sure talus to the bottom of the Coconino, I used the nylon cord in a single strand and allowed it to slip over a shoulder. Before the pack reached bottom 35 feet below, a strip of skin was pretty hot. Perhaps I couldn't have pulled the pack up with a single strand, but there was a shelf where I could rest the pack and use the cord doubled. It took me about one and a half hours to get through the Coconino with some wasted time getting the cord untangled.

On the shale I didn't see much deer trail on my way over to the Freya Saddle. This lap took 65 minutes on the way out when I was cool and rested. On the return I found more deer trail, but for some reason it took quite a bit longer. When I had looked down from Cape Royal last summer, I thought I had picked a way through the Supai, but now when I studied what I thought I had seen, it didn't look good. I could see that the part of the Supai directly south of the saddle would be easy for quite a bit of the way, and I now recalled that Clubb had said that he had probably gone down to the Redwall pretty much below the saddle. Three times in the Supai I came to drops in the center and found rather difficult bypasses to the east. The top one of these was about the hardest. I thought something of using the cord to lower my pack, but first I climbed down and back without it. This convinced me that I could go down with it on. On Thursday coming up, it was about all I could handle but it went. The middle bypass was not at first obvious since it was 40 or 50 yards to the east. I had been intending to follow the rim of the Redwall, but now the end of the gorge below looked hopeful. I was pleased to find that this route was easier as well as being more direct. There were only a couple of places that needed a bypass, and the route is obvious and simple. The gorge is first rate for scenery and a cave on the west side less than a mile from the head may be accessible from below.

A little below the junction with the arm from the Freya Vishnu Saddle there is a mesal pit. Several entrances to the same cave may be the explanation for a series of holes which may be accessible from above. These are west of the north end of Vishnu Temple. Another cave, more like an overhang, can be reached from the Redwall rim west of the ravine cutting between Vishnu and Krishna. There is an acre of cane growing on the wet shale slope well above the creek on the west at one promontory but the first real spring is in the bed at the contact of the Tapeats with the Bright Angel Shale. There are three cottonwood trees strung along below this water. There is no barrier in the Tapeats gorge that starts less than a half mile below and at a left turn there is a still better spring. This is where I camped in 1958 on my way back

from Asbestos to Bright Angel Creek. Where the creek makes a horseshoe bend to the southeast I climbed out and went to the north of Newberry Butte.

Near the junction of a minor ravine from the Newberry Saddle and the main wash east of Newberry is a mesal pit. I missed it on the way out but saw it on the return. An unusual amount of charcoal may mean that this was used more recently than most, but otherwise it looks the same as all the old mesal pits.

I hadn't seen the upper part of Asbestos Valley beyond the barrier fall and Billingsley had told me it is interesting so I kept fairly well to the north and looked down on this part of Asbestos. I could see immediately what he had told me about the spring not being where it is shown on the map, or at least that there is one in another place. I should have gone down the slope directly ahead into the arm without a blue line and coming from the north of the letter A on the Vishnu Quad map. I was afraid that there might be a cliff below, so I went back and then south to where I had been able to get down a rough slope into lower Asbestos in 1958. On Wednesday I came up this arm and found the bit of old trail Billingsley had seen and also saw that I had been headed right the first time. As it was I reached the bed upstream from the ruined mine shacks and then walked toward the river. Two seeps that had been running in April, 1958, were dry. I passed the shallow cave where I had seen a bedroll, quite new in 1958, and weathered a couple of years later. The sleeping bag was now gone, but there were still some cans and a lot of book type matches in a cardboard box. The tomato juice cans had corroded through and were empty, but a can of beans still seemed good.

I had still found no water for camping and I was rather hot and tired. After reading in the shade for 20 minutes, I decided against going to the spring in the upper canyon. It might also have no water on the surface at this time of year, and it would be a long climb. I started for the river trail figuring that I would use the Colorado water for camping. Within 200 yards I came to the best spring in the whole of Asbestos Canyon, at the contact of the red Dox Sandstone and the dark igneous sill. There was shade behind a big rock so I slept right in the bed of the stream.

By evening on Tuesday I realized that I had been careless in planning my food and that I would certainly have to use the instant rice to stretch my bread. Cooking it on Wednesday before starting on took a few extra minutes, but I was heading out by 5:40. I could have made better progress toward my main goals if I had gone up to the Tonto level through the ravine to the south end of Sheba, but I figured I had time to see the valley above the barrier fall.

Just south of the letter A in the side ravine there was a lot of cane and some water. I found the small section of constructed trail and then soon lost it and went much higher than was necessary to bypass the fall. The upper spring is in a short and steep ravine that has no blue line but is parallel to the northeast arm coming down from east of Rama. I scrambled up to inspect the flow and found it difficult to dip even a cup in the water because of the dense growth of willows. It was obviously impossible to get out to the east so I went around into the northeast arm which seemed at first sight to end in a 60 foot stairwell. However, there was one wall that sloped and had many small steps which I could climb. If I had looked down from above I would have figured that this was no possibility.

From here it was natural to go up and around the north end of Sheba. I had a definite impression that Newberry, Sheba, and Solomon all should be approached from the east but I didn't remember whether I should go to the middle of the east side before starting up. On the impulse I left my pack at the bottom of a ravine quite close to the north end. There was nothing to it. There were some steep places where I would need to find the same way down, but up on the ridge I could go south to that summit on whichever side of the crest seemed safer. Within 25 minutes I had gone from the shale to the top of Sheba. I built the first cairn but when I took pictures to record my ascent, I forgot to cut down the aperture and my shots will be washed out. I had been considering settling for Sheba and then going up the Redwall to the northeast of Rama and then descending to camp in an arm of Unkar, but now I had the desire for another first ascent and went after Solomon.

Although I left my pack behind a big rock near the base of Sheba it was still rather slow getting to the north of Solomon. I tried the system I had used on Sheba, going along a high bench above the top cliff of shale, but this time the bench ended around the angle. I had to retreat and go much lower before starting up again on a talus about the middle of the east side. There was a problem in route finding and the only way through a high ledge seemed to be up a chute. It ended in two vertical cracks both having chockstone caps. I picked the one that seemed a bit easier and was soon even with the top by bracing my feet against one wall while leaning my back against the other. More from habit than necessity I reached my right arm out and put a little weight on the chockstone as I often do. This was a mistake which might have been fatal. With no scraping this 150 pound rock tipped toward me and came down on my leg. At first I just held it thinking that I might push it back into balance, but in my position this was impossible. Then the weight of the load fell on my right side and I wouldn't have been surprised if I had felt some ribs cracking. If I had tried too move out I was afraid it would roll farther and take me down the cliff. When I couldn't stand the pressure any longer and did give way, I found that the rock had jammed lower in the crack and was supporting itself. There was one more worry. Perhaps my canteen strap was caught under it, but no _ the canteen came free and I was ready to proceed to the top with nothing worse than some very sore ribs and welts. The rest of the way took a little study but there was no real danger. I built the first cairn on Solomon too.

I probably should have gone on into Unkar and camped by water in the Tapeats where Beck had indicated, but I knew I could get a refill in Asbestos and then go back to camp in Vishnu for a shorter third day out. Wednesday was hot and after I had gone around the south end of Sheba and down the ravine I took a break of 20 minutes. There was now no problem of enough water, but still I felt pretty lousy in the heat. Salt helps me but still I lacked pep and my digestion was off. I decided to go up the old trail along the ramp formed by the top of the Dox Sandstone. It was a lot easier and it led past a USGS benchmark that I hadn't seen in 1958. Still the contours were time consuming and by the time I had climbed through the Tapeats northwest of Sockdolager, I figured I had taken longer than if I had gone back the way I had come. After crossing the Newberry Saddle, I stayed high and went down to the creekbed north of the Tapeats narrows. When I came to the spring at the two upper cottonwoods, it was 8:00 p.m., a good long day in the heat.

Going out on Thursday I decided that climbing through the Supai with a pack was harder than going up Sheba and Solomon. I had lost the nylon cord so I didn't have the option of pulling the pack up separately. Handing the pack to a companion would have been a relief, but I did make this part on my own. The

Hermit Shale was slower than when I was fresh on Tuesday but by following the deer trails better, I came to an interesting spring at the bottom of the Coconino about 100 yards west of the access ravine. It has a copious drip from the ceiling and a shallow pool below. I had to go to the truck for another rope to pull up the pack, an extra three hour chore. If I ever come this way again, I'll leave the rope here. (Flowers and birds great and it was cool on Thursday.)

Impressions from Lee's Ferry to Diamond Creek (observed by boat)
[June 8, 1970 to June 16, 1970]

Since so many people go through the canyon, this will be just a brief review of points that I would like to remember.

Opposite Mile 19 Canyon where one can reach the river from the right, there is a narrow slot through the Supai on the left. One could very likely get up through the Supai on the left. There appeared to be breaks through the higher formations downriver from this slot north of the route through the canyon at Mile 21.7.

The bank at Mile 19.5 is popular for camping on river trips. Not much chance for an Indian site to remain unmolested.

There is a Jug Handle Window through a fin of Supai right above our campsite at Mile 20 on the left bank.

I recognized the scene shown on page 239 of Powell's 1895 book but did not note the mile (Mile 34.5).

I paced the depth and breadth of Redwall Cavern and the engineer present did a mental calculation that 10,000 people could stand on the inner terrace. If one should include all the sandbar that would lie behind a plumbob tracing the entire overhang, Powell's figure of 50,000 would not be a far miss.

Ken pointed out the Bridge of Sighs at Mile 35.9 and we noted a less obvious window just south of it. No sky shows through it.

I was able to lead the party right to the Hopi Salt. There has been a pronounced change in the ledge on which Allyn and I stepped off the rope in December, 1958. There is an isolated bit of conglomerate still cemented to the wall but below the wall is bare. Now one would have to rappel several yards farther down. Sleight and his boatman, Cliff Rail, tell about meeting two Hopi Indians near here last year. They had left their burros at Palisades Creek and had walked the bank to the place instead of using a rope to get down. After performing some ceremonies in private at the salt caves, they accepted a boat ride back to the burros. Presumably they had brought the burros down the Tanner Trail as it would have been much harder to come in via Salt Trail Canyon, ford the Little Colorado River, and get to Palisades Creek. Sleight and Rail had not asked about their route, but they understood that the Hopi had gone up to the Sipapu on foot.

I was able to keep my bearings in the gorge from Sockdolager to the Kaibab Trail better than the pilots. Ken and Cliff passed Zoroaster Rapid without realizing it. I called the shot precisely for the turn that gave

us the first view of the bridge. I was also gratified that I recognized the base of the Grandview Trail at Mile 80.8.

The ruins west of the mouth of Crystal were not affected by the flood.

Another river party found a corpse in the water and left it for identification at the mouth of Agate. In addition to the drowned man who attempted to swim the river below Pipe Creek earlier this spring, there had been another very recently, about a week before the recovery of this body.

At Shinumo Creek we visited the pool and the fall near the river. I was unable to climb above the fall unassisted although there are those who can.

At Elves several of us climbed high enough to reach the wall directly beneath the Royal Arch.

Between Kanab and Havasu I watched the banks and benches higher up. Walking from one to the other would be very slow and require at least three crossings (?? Circa did this with no crossings).

At about two miles below Havasu Creek the immediate talus by the water becomes reliable for many miles. I can see why Fletcher needed to cross so seldom. His walk to Diamond Creek was simple but tedious.

About 15 minutes walk up National from its delta, if one can get up the first eight feet, he can go to the bench where Allyn Cureton and I walked out to look down on the river. A climber with long arms did this unassisted, but I needed a boost. I could have placed a driftwood log here and gone up alone. One can soon get back into the bed and walk to where Allyn and I left it. This discovery makes National a better access route to the river than Mohawk. Perhaps Indians used logs in Tuckup and connected National with Tuckup for a cross canyon route. The stream in National stayed above ground until the last quarter mile from the mouth. With the boost from a big man, I was able to chalk up another complete route from the plateau to the Colorado River.

The red slide west of Cove Canyon furnishes a sure and easy route through the entire Redwall. If one can get through the Supai in Cove Canyon, this would complete another route to the river on the right side (trail through Supai to mine).

I got a glimpse of the loose slope of broken lava at the head of the Prospect Canyon Gorge where Blake and Emery Kolb climbed out of Prospect. The basalt fragments slip much more easily than other rocks and this would be a miserable route for the ascent. Coming down might be hazardous but much easier. It would be better just west of Prospect facing the river (no).

There seem to be several ways to come down through the Redwall and lower rocks on the north side of Dr. Tommy Mountain, upstream from Parashant Canyon, around Mile 192.

One should be able to get through the same formations from the right side just south of the mouth of Mile 206 Canyon.

There were other rather direct routes down the same lower formations on the left, straight as though along faults. I recall one going down just south of Granite Park and one somewhere north of Mile 206. I should have made notes on the spot.

As I had noticed before, there are a number of ways to go from the river to the Tonto between Diamond Creek and Trail Canyon (east side).

At our stage of water, we went to the left of the rock that caused me trouble on my air mattress at Mile 99.7. The rocks where I had scraped my elbow were submerged completely. At several places in the Jewel Rapids, the waves were roaring from wall to wall. I realized I had passed through at a better stage for a mattress float if you want to walk the bank. Below Havasu Creek, the way looked easy for a long quiet float with access to a bank at any time. Every rapid would be easy to bypass on the bank, something which is not true again in the lower granite gorge below Diamond Creek.

Kirby Trail to Blank Tank Wash
[June 23, 1970 to June 24, 1970]

I remembered the way to drive to the head of the Kirby Trail almost perfectly. The dirt road to Hualapai Hilltop is marked now and one leaves the marked route just west of a big cattle pen by a pond to go to the ranch called The Well. It is still nine miles to the trailhead, over two south to a gate west through a north south fence. One more fork takes one past a metal tank and later a turn to the south at a crossroads puts one on the single track to the trailhead. I was still impressed by the amount of work that was put into trail construction. I had the mistaken impression that about halfway down all work ceases. It is true that most of the lower part has been wrecked by rolling stones, but there is still some construction to be found, and the same gentle gradient is maintained if one is careful to stay on the trail.

North of the trail end on the right side of the wash is a corral formed partly of stone and partly of wire. Farther north a wire fence was put across the entire valley. This must be the fence that caused the death of a number of cattle as mentioned by Casanova, but now it wouldn't stop anything. The spring is rather high on the left side just south of the fence. It comes out where some travertine shows, and it is not as high as the base of the Coconino. Someone built a cement basin with a pipe leading to it, but now the water misses the pipe. The wild Supai horses have to lap the water from the very shallow and muddy pool, but I could catch a steady stream by putting my hand on a flat rock and guiding the water off the end of my thumb. I was carrying the Williams 1/250,000 Quad, but I soon lost my bearings and didn't know where I was until I came to Cactus Canyon on the Supai Quad, the only big canyon coming in from the right. Until then I wasn't sure that I would reach Highwall Spring in good time. With the scale of the Supai Quad, I could recognize every bit of the rim and I saw the Kla La Pa Trail right on schedule. I had worried a bit about whether the Highwall Spring would be flowing since it had such a small volume in the spring. When I got to it, 18 horses were milling around in the bed waiting to get a drink or else to get some more water. The water surfaces for only a few yards and the whole bed was now smelling of manure and urine. The horses left and let me think over the situation. The nearest better water would be up Moki (Moque) Trail Canyon and I hadn't seen that for several hot dry weeks. It was 4:30 p.m. and I was good and tired, so I took one of the shovels that the Indians had left and tried to improve two puddles

so that I could dip from them with a cup. After 20 minutes I filled a canteen and doped it with Halazone. There wasn't too much taste, but the smell nearly turned my stomach. I remembered Gunga Din and made the stuff do until I got back to Kirby Spring on Wednesday. After a suitable rest period, I started on to see whether I could go up Blank Tank Wash to reach the place where I had been over a year ago. It took from five to six just to get to the junction. I used 25 minutes to get to where I could take a picture of my rope route last year. Even without my pack, I felt pretty shot when I got back to the spring and I ate food that needed no cooking.

My bed was under an overhang which may explain why I was able to use so little cover all night. Until midnight I needed only my underwear and then I spent the rest of the night in just shirt and trousers on top of my bag.

On Tuesday I noted the two ruins I had seen before between the Kla La Pa Trail and the spring, and while returning from Blank Tank Wash, I also saw another on the north side under an overhang about five minutes walk from the junction.

Walnut trees, box elders, and Hackberry trees grow at intervals in the bed. From halfway up the Kirby Trail one sees a fine natural bridge north of the trail.

Recovery of pots at Mile 43.3 (Eminence Break Route)
[June 25, 1970 to June 26, 1970]

I have pretty well covered this route in my logs for 10/12/63, 10/27/63, and 9/20/64. On rereading them I see that I was not moving as fast this time as I had before. Six years of age and the heat would explain this discrepancy. My time from the road to the river was 145 minutes and to go back up I took 220 minutes. The day was the hottest ever recorded at Flagstaff, but when I got down at 12:30 p.m., I sat in the water to eat.

The river seemed about as high as when we had come by the rock at Harding in the boat but it fell quite a bit by evening. I used a trail that seems to be stamped out by river runners to get to the campsite above the first fast water, about Mile 43.4. When I went up along the east side of the big rockfall, I noticed that river people have made a trail and I began to worry that someone might already have taken the pots. At the top of the rockfall I climbed one crack up to the next ledge and began to wonder whether I was supposed to go up a second. The pots were not over to the east at this level, so I climbed on up. My reaction to this climbing was that it was a bit harder than where Euler was turned back below the driftwood platform almost exactly across the river. When I went east along this higher ledge, I still didn't see any pots, and I began to get nervous. Even if someone had taken the loose pots, I ought to see the crack where the other three were wedged under a small rockfall. I began to understand how the men who discovered mines can manage to lose them. After looking harder at the lower level and taking a picture or two of the ruin down and to the west, I climbed back up to the second ledge. This time I looked a few feet higher and saw the outer pots. Then, of course, I found the inner pots but was unable to loosen the bits of rock and dirt that have fallen around them. The outer one is already broken and I was able to take a piece of it for study. If an archeologist wants to come in here with the right tools and remove the rock chips or perhaps break the

pots to get them out, that will be his decision. I got enough pictures so that it shouldn't be too hard for someone on a boat trip to find them and do the right thing.

Years pass between times when I see a chuckwalla, but I saw two on the way down and one on the way out. I detoured perhaps ten minutes this morning to check some minor cave openings. They were only five or six feet deep. There are some other openings that I didn't take time for. Davis might have a field day down this route.

After getting the pots on Thursday, I had a lot of time to read Time and wonder whether the place would be crawling with tourists about 5:00 p.m. They must have all come through on Wednesday. I had the place to myself, shade under a tamarisk clump until the sun went behind a cliff, then I got my soup cooked while I thought about the beauty of the area. The quiet water upriver beneath the bulging cliffs make it one of the finest places to stop. The river was running clear again. There were a few flies, but they didn't bother me as they had in upper Havasu Canyon. Sleeping only a few yards above the river level kept me just cool enough to enjoy all the cover I had brought.

In the morning the river had risen several feet and for the first time in my experience, water completely covered the rock in President Harding Rapid.

I missed my road on the way west. Well west of Tooth Butte there is an isolated outcrop of bare rock south of a fork in the main road. Take the north fork and don't worry when you go by a hogan on a rather obscure track. The old main road got washed out and they established a new one parallel to it. It should be only 21.6 miles from Cedar Ridge to the head of the Eminence Break Route.

Up Wotan like an Indian (almost)
[June 30, 1970 to July 2, 1970]

Compare with logs for June 1st, 2nd, and 24th, 1962. I have said more than once that the Wotan climb is one that I would like to repeat. It had become more interesting when I found that there is a nice little spring just beneath the Coconino about 150 yards southwest of the foot of the ropeless route down from the Sky Island Promontory. When I heard that two of Schwartz's student diggers had tried going to Wotan by this old Indian route, unsuccessfully, I was all the more eager to undertake it at this time.

I reached the north rim well before lunch and had a good visit at headquarters with Beck and Joe Hall. Then we drove out to the Walhalla Glades parking and I talked to Doug Schwartz for quite a while. His two hikers had made their way down the hairy part of the ropeless ravine, the one to the west of the car wreck, and then had had tough going along the Hermit. They had found the spring, but one of them had a very heavy pack and one took a bad slip on a slab of stone. When they came to a mean looking shale slope under Angel's Window, they turned back and they came up the same day they started down. I learned that Doug is going over to Wotan in a week or so by chopper with an entire day to explore the top for ruins.

At 5:00 p.m., I started down the familiar route which I had covered four times in early June. It was easy to lower my pack at the two worst places in the lower Coconino and I left the 50 foot rope tied to a tree at

the lower place. I have to move slowly and feel for the best holds, but I am getting used to the place that turned me back three years ago as well as the easier one where I flunked last summer. I reached the spring in 80 minutes from the truck. No mosquitoes wanted to bite, but there were lots of bats constantly dashing in under the overhang where I was sleeping with my feet about a yard from the water. The night was about right for my light down bag but for the first half I lay half out of the bag wearing thermal underwear above the waist.

My breakfast of bread and dates was eaten by the first light and I was ready to go by 4:45 a.m. fresh from the night's rest and with no heat to slow me, I got over the difficult slope to below Angel's Window in 70 minutes compared to the 100 it took at the end of the day. I used much the same route, up close to the base of the Coconino, both times. The shale slope beyond this angle is easier and I was ready to start up the talus near the northeast corner of the Throne by 7:15.

My memory of the route up the Coconino was very vague after eight years. I feel fairly sure that I followed much the same route for there seems to be no choice at several crucial places. One leaves the talus about 20 yards from its top. There are places where one needs to move slowly over sloping slabs and meager roughness and three cracks behind blocks. I had the same trouble locating the second of these that I experienced with Cureton in 1962, but the top one of these is the easier to miss on the return. The Indian rock shelter is about the third crack and I saw it both going up and on the return, but in coming down I still made the mistake of descending the easy dead end and slope below it instead of moving to the east. One completes the scramble up to the Toroweap Gate in the bed of a ravine.

The way to the west beyond the gate is quite exposed and meager and the break through to the top of the Toroweap seemed harder and longer than I recorded it before. This time I found an old rusty small condensed milk can on the ledge beyond the gate. To go around to the west end of the Throne along the north side, I stayed high close to the foot of the cliff. This time I looked especially at the north ridge where the Wood Party said they climbed to the top. I was wrong when I said that there is no way to get started up. Someone like Davis should try this as a route (Packard and Walters went up). It would remove a lot of my skepticism if this route toes, but there are other inconsistencies in their story. I felt that I was proceeding quite a bit slower than when I was eight years younger, but I reached the rim from the bottom of the talus in two hours and 20 minutes, just as in 1962.

This time I just walked to the point closest Cape Royal and returned to the Clubb cairn marking the descent from the rim by 11:00 a.m. After having lunch I got started down at 11:40 a.m. and reached camp at the spring by 5:15 p.m. The day didn't seem hot at my level and I had quite a bit of shade beside the cliffs on the return.

The top impressed me again as being quite dense with the pygmy forest and I noticed a great many thickets of buffalo berry bushes. Allyn and I had had the luck to walk right into two Indian ruins. This time I tried walking where I thought they should be, but I didn't see a thing on my way northeast. On the return I was somewhat farther south and I came upon one low wall that should be part of a ruin.

After almost 12 hours on the move, I was quite happy to lie on my air mattress and rest before dinner. Birds of several kinds were common near the spring and two with olive undersides perched upside down

to get a drink where the drops were forming on the ceiling. When I was half awake at one time of the night, I heard larger animals moving around nearby, almost certainly deer, but I don't think they got up their courage to approach me close enough to drink. Small rocks also fell within easy earshot. While I was eating breakfast, a three inch scorpion crossed the bare rock between the water and the nearest cover. This is the first one I have seen without having someone point it out.

Going back to the rim Thursday morning was all right except that I snarled the rope in some brush when I tried to throw it up while I stayed below to position the pack. It would have been faster if I had carried it up the difficult climb in the crack and had dropped one end down in the right place.

The trip was not as thrilling as if it had been my first attempt on Wotan, but it was satisfying to know that I can still do such things that discouraged the 20 year olds. To indulge in a little firstitis, this seems to be the only solo climb of Wotan and I am now six years older than Clubb was when he climbed Wotan last. He would have mentioned the spring to me if he had known about it. The chance to start fresh from the base of the Coconino and not have to carry a real pack on the second day makes a world of difference. I left the spring with a gallon of water and still was carrying a quart when I reached the spring at 5:15 p.m. This system will reduce the Wotan climb to mere routine for one who isn't upset by the tedious and precarious footing along the Hermit slope.

Second ascent of Lyell Butte

[July 25, 1970]

Jim Sears and Bob Packard went with me. If I had reread my log of 7/31/65, I would have been better prepared for the exhausting day that we had. Al Doty had also told Jim that it was a hard day to go up Lyell and get back. We used Al's route and left the Kaibab Trail just below the Coconino. One can follow a deer trail almost all the way from here to the east side of Shoshone Point. Near the Kaibab Trail we found a couple of hats and a few cans, apparently lost or thrown from the trail high in the Coconino. On the return I was lower and found a steel cylinder for compressed gas, perhaps lost from the pipeline construction job (others found a wrecked car and two dead bodies).

We were feeling energetic in the cool of the day and although the deer trail went up and down a lot, we got to a point above the end of the east arm of Cremation in one hour and ten minutes compared to the one hour and 45 minutes I needed along the rim of the Redwall. It was routine to go down into the valley on the east of Shoshone Point from the Hermit level. I was expecting rainpools when we reached the Redwall, but the only one we saw was thick with red mud. Bob was contouring along above the bed and Jim and I didn't go down into the Redwall as far as we could have. We joined Bob and proceeded toward the saddle at the southwest end of Lyell.

By 11:30 a.m. I had my first warning, a cramp on the inside of the knee. By 11:50 I had a feeling of unusual weakness and called the lunch break. It was only a little farther to the saddle southwest of Lyell where I left my day pack and one canteen. We started up toward the northwest side of Lyell because we could see a place that might be a break in the massive cliff. Jim got ahead and went up here. He reported that there were two possibilities above a ledge that was easy to reach, but he said that both were hard. I

felt sure that Al Doty's route was around on the other side. Jim managed to climb the easier of his two cracks with a lot of effort, a difficult feat with his summit pack containing a gallon canteen.

Bob joined me on the southeast side just after I found Al's route marked by a cairn. It was a crack behind a block, but it had a hard section requiring chimney work. The bother was that this is not wide enough to sit against one wall with the feet against the other. I didn't feel up to the real effort it requires for about a vertical yard. As we were considering this difficulty, Jim appeared above us. I had brought my climbing rope in the truck but had about decided to leave it there. Bob carried it for us in his pack, and now we tossed one end to Jim who tied it around a big rock above the crack. With the rope for a grip, Bob and I were able to go up.

This is the crucial place in the climb. We angled to the east up the slope and found a fairly easy way to get through the next small cliff. Immediately in front the summit block is impossible, but there are simple walk ups farther to the northeast on both sides of the top. Al had really built a fine big cairn. The bare rock surface toward the northeast end had a number of pockets with water in them. By this time my leg cramps were bothering a lot. We returned by the same route except that we tried the very base of the Coconino from Shoshone Point west. Jim and Bob liked this better than I did. There would be fine level clear sections and then lots of brush and rockfalls. After 20 minutes of this, I dropped down to the deer trail we had used in the morning. By now I was walking very slowly to try to prevent the cramps from getting worse. When Bob and Jim were about three quarters of the way from Shoshone to the Kaibab Trail, they also came down to the trail and were waiting for me. By the time I had rested and eaten a little, it was 6:50 p.m. We got to the truck before 7:30. Our water had just barely held out, but we had had the break of a cooling rain from 2 until 3:15. The day had been surprisingly cool for this time of year. I was feeling discouraged about my showing, but my log of the trip five years ago shows that I had more trouble then. It is a rough trip for one day.

Redwall west of the spring in Cottonwood
[August 1, 1970]

Joe Crano, a calculus student of mine, went with me. We were going back to Havatagvich to do the rappel, but I was afraid that we wouldn't have time to do it right and also get back in time for a bridge party, so I took Joe to Cottonwood Canyon to try to duplicate the climb Bob Dye made last spring.

The upper part of the Grandview Trail seems a little worse each time I use it. When the upper log crib finally goes, it will be rather hard to use. We could still move right along though, and we needed only 100 minutes to go from the parking lot to the spring in the wet arm of Cottonwood. We had at least as much trouble finding the water as Packard and I had last September. I had to dig down in the mud to make a pocket of water deep enough to pick up half a cupful.

We left all but a canteen at the spring and started to climb about 11:00 a.m. I figured I knew where Dye went up, the ravine in the Redwall about 200 yards south of where Doty and I gave up trying to climb the place that looks very broken from a distance. One can't see whether the ravine is hard or safe until he is right beneath it. Right at the top of the slope one has to climb vertically for 10 feet, but there are plenty of holds. Above, the ravine splits about three ways. We went up the place that seemed easier, the eastern

most ravine. After some talus walking we came to another vertical pitch where the holds seemed less adequate. I got about halfway up the 20 foot hard place and decided that it was a bit strong medicine for an old man. Joe went through the motions of having me belay him from below, but he was really on his own as he went up. If he had fallen, he probably would have stopped of his own accord, but he might have been badly hurt by the sharp edges that were sticking out everywhere. I used the rope as a handrail when I went up here.

After another scree scramble, we came to a chockstone overhang. It was not too hard to pass but again I put some reliance on the ropes after Joe climbed it. We found ourselves looking down on the outside of the cliff, but by going down a few yards we could go north to a bench that seemed to continue to another ravine leading out on top of the Redwall. One would either have to go up and get over another chockstone or stay lower and pass a place where the cliff was almost bare with a lot of exposure. I went up to look while Joe was coiling the rope properly. I might have found good holds, but I would have had to pull myself up and over the overhang. I looked at my watch and decided that we should be getting down to the spring. We were already a half hour behind my proposed timetable.

After a leisurely lunch we got started back about 1:30 p.m. I hoped to make it by 4:30, but Joe had more difficulty in walking out than I did. We were both out by 4:55 and Joe had been working so hard he had an upset stomach. I had been waiting for him and felt no strain nor any stiffness after I had been driving back. It is an interesting place, and we both feel sure that if we had had more time we could have made it up. I'll have to ask Bob Dye more about the place he climbed the Redwall. If it was where we climbed, I am not surprised that he was very willing to walk down to the west of the old miner's trail through the Redwall. It was more difficult to get down than up.

Trip to Siegfried

[August 24, 1970 to August 25, 1970]

Donald Davis and Robbie Babb had climbed Siegfried Pyre in June by the approach that I had found as a possibility for Harry McDonald to leave the rim of the Walhalla Plateau. I still don't have any absolute certainty that this was the route he used because the old cairn at the top of Poston Butte is the only bit of evidence that a man has even been this way before. There are two or three places in the lower Coconino in the bay west of Point Atoka that would be practically impossible for a loaded burro, but there is no sign that there was ever any trail construction here, and we have found no trees cut to allow the burros access through the dense woods northeast from the Coconino descent. On the other hand, the route down to Kibbey butte shows a broad trail cut into the soil at the rim and there is a definite piece of retaining wall built at one place in the Coconino which was found by Lange when he was studying Silent River Cave. Of course there are plenty of places lower down where trail construction would be needed, but a former artificial trail might have been completely obliterated in 70 years. The chief argument against the Kibbey Butte route is that it would be little if any shorter than the Nankoweap Trail for reaching the McDonald workings at the mouth of Lava Creek. On a real trail a man could go from the base of Point Atoka to the mouth of Lava Creek in one very long day compared to the day and a half required for the other routes. Jorgen Visbak didn't know the nature of the project ahead of time, but he wanted to do some hiking at this time. He met me at the Ranger Station just after 3:00 p.m. on Monday. We visited mostly with Ken Hulick and chatted with Joe Hall. I tried to find Beck, but he seemed to be away. Well after five we drove

my truck out to fire road E6 and started down. My system of reaching the rim rather soon and starting down within less than ten minutes of leaving the car worked fine. We didn't locate any good trails until we were well down in the trees, but I saw my landmark, a little tower of Toroweap rock, standing out near the end of the promontory to the east of the right bay. I went on the east side of the pulpit rock that splits the bay at the height of the top of the Coconino, but I didn't get a good enough look to see my own cairn near its end. Jorgen and I took only 35 minutes to go from the truck to the spring at the base of the route through the Coconino. We spotted a good cairn left almost surely by Davis and Babb at the base of the Coconino and the little dam that they built to form a small pool at the spring just west of the cairn was still in good shape.

We had a bit of trouble finding places level and smooth enough for our beds, but Jorgen scraped out a place near the top of a slope at the base of the wall about 50 yards west of the spring and I found a spot about 50 feet farther west and down from his. There were a couple of mosquitoes but I slept all right with my head under my jacket. Since the elevation is 8353 where we left our truck, it would be well over 7000 feet where we slept. My light down bag was just right.

About 10:40 p.m., after both of us had been asleep, I woke up to a startling sound. At the top of the Coconino, 350 feet above me, I heard a lot of rock coming down. Without stopping to think, I found myself, still in the bag, hopping seven feet and crouching against the wall with just a second to wonder whether the big stuff would pile down on me. I thought I heard some grapefruit sized rocks land in the brush about 15 feet away, but the biggest stuff that peppered my air mattress was from dust to the size of a silver dollar and about as heavy. I shouted to Jorgen that I was all right. He had awakened only when the chips and dust landed on him, but our only casualty was that my new air mattress was cut and the metal reel for my adhesive tape was crimped. This experience made me wonder about sleeping here. There is a little room under a protecting ledge near the spring.

In the morning we started down below the descent ravine as I had done before, but then we tried going up to the base of the Coconino like Davis and Babb. This route is better until you get around the point where you begin to see Gunther. Then we learned the hard way that the brush is so bad up high that one should go low. I have had quite a bit of experience with thickets of New Mexico locust, but I had never learned to love it. Jorgen decided that jumping cactus along the burro trails of the Western Grand Canyon is just good clean fun compared to the mess we got into. We took four hours to go from the spring to the saddle between Kwagunt and Lava. Jorgen's knee had been bothering him and here he suggested that I go on to the Siegfried without him.

I remembered manzanita as being quite bad on the south side of the "Little Siegfried" in the middle of this saddle so I went behind it on the way to Siegfried but on the return I took the more direct route on the south side. I believe the latter is a bit faster. The way to the southwest angle of Siegfried is much faster walking than what we had already done and I was able to get from Jorgen's viewpoint to the Davis Babb ravine in one hour. One goes up the lowest part of the Coconino just west of the bottom of the chute and then it is a walk up through over half the Coconino. I climbed up one pitch where attention has to be paid to hand and toe grips. Here, just below a split in the top of the ravine, I ate my lunch. I had promised Jorgen to turn back at 1:00 p.m., but I recall how I feel if I am waiting for another man, and I decided to go back early. I assume that the route above here leaves the narrow slot straight ahead and crosses into a

somewhat wider one forking to the north, the left, facing up (route to east). Progress might have been a little hairy for me alone. I ought to bring Al Doty or Jim Sears along. I went far enough to appreciate the accomplishment of Davis and Babb. I got back to Jorgen an hour before he would begin to worry.

Going down, even below some ledges of Supai east of Point Atoka and having to climb up again frequently was much easier than the brush. We went to the base of the Coconino again when we were west of Point Atoka and we reached our packs in 190 minutes. We saw the red and yellow columbines along here but on the return we missed two sources of water that we had seen on the way out. One was a little pool against the cliff which is less than an hour's walk from where we slept and the other was a trickle in a streambed in the next to last draw before we reached the Kwagunt Lava Saddle. A deer trail led to this water from the north, but we got into some of the worst brush of all after crossing this water.

We had an early dinner where we had slept the first night and then walked up to the rim. It was rather dark in the rim woods while we were walking to the highway and we slept on the fire road near the truck.

To give Jorgen's knee a rest we canceled our plan to attempt the Colonade and took on another project of mine, to see the lakes in the deep woods north of the Mogollon Rim. I found the mosquitoes bad northeast of Payson and the night too warm for staying in the bag, so we got up at 11:00 p.m. and drove up near Woods Canyon Lake for the rest of the night. After covering the lake in my kayak, we went on to have a look at Chevelon Canyon Lake. I had been warned not to go down the last grade to the lake without a four wheeler, but after I covered the top three fourths of the place that the Forest Service says is not maintained, I began to think that it would all go, and it was too late to turn around when I saw how bad the lower part really is. The problem is getting back up ledges of bedrock almost a foot high. I was really discouraged, but Jorgen insisted that we could build roadway with loose rocks. On the first try, I spun the wheels and flipped the loose rocks out of place. Then Jorgen rerouted me and indicated the right ramp with green weeds on top of his structure. I loaded about 300 pounds of rock in the back of the pickup and came up in compound very slowly. I just barely made it.

We were greatly impressed with Bear Canyon Lake and found that the only car approach to the water is from the northeast at the dam. One can't get a boat trailer to the water at Knoll Lake, but it would be easy to launch a kayak. The drive along the rim and across Clear Creek Canyon was spectacular. I certainly want to go back.

Redwall climbs in Cottonwood Canyon

[September 19, 1970]

The west side of the wet arm of Cottonwood Canyon had caught my eye for years. On 11/11/69 Al Doty and I had tried going up the broad bent Redwall that I had noted from across the canyon, but even the lower part of this seemed rather risky. On 12/13/69 I had gone up the Redwall near the point between the wet arm and the long south arm of Cottonwood while Bob Dye was coming down at the same place. Then I had gone around the rim to the west while Bob found a way to go up and join me. He talked me out of trying to come down from above where Al and I had gone up a short way, and he also didn't seem eager to take me down the route he had just ascended. We had gone down the horse trail into the west arm of Cottonwood. Then on 8/1/70 Joe Grano and I had tried going up what I thought had been Dye's route, a

narrow and steep slot that opens to the southeast and is not apparent until one is right to it. In going south from the slump area, we passed an open ravine that would be easy at the bottom. I thought it might be worth a try, but I had formed the idea that Dye's route was in the hidden ravine farther south. Joe and I ran out of time just as we came to the worst place in our rather hairy climb.

On the present occasion Al Doty and I got off to an early start and were walking down the Grandview Trail by 7:40 a.m. It seems perceptibly worse than on 8/1/70 and the upper part may fall out to where the Grandview will be classified as a daring mountain climb absolutely impossible for horses.

As we approached Horseshoe Mesa, I pointed to a climb down in the Redwall just south of a knoll before one comes to the bay on the west side of the neck. We decided to check it instead of following the trail. When we got closer, I confused this knoll with one considerably farther south. There is a large cairn, three feet high by one and a half feet thick, about 30 feet down where the going gets steep, so we took this as a good sign that the route would be possible. After getting down a chute we came to the hardest place, an almost perpendicular drop of 50 feet, but with handholds and some ledges. I did a body rappel for 12 feet using a juniper for my doubled rope, but Al went down using holds in the limestone. When I was down I went up and down the same way. This place is just a shade more difficult than the way I found through the Redwall on the east side of Papago Canyon. If we had been coming up we would have taken a turn to the south and finished by a simple scramble. There was just a little route finding necessary to get through the lower limestone. I had seen O'Neill Spring, dry at the time, only once 13 years ago, so I thought we had time to check it again. This time we must have never gotten on the right trail. We must have been too low after going down south of the spring. We did go north until we figured we were on the spur away from the regular trail, but there seems to be two spurs. We must have followed an old burro trail that led us farther south than the place we had come through the Redwall. We finally gave up the search and went down to the bed of the wash. I would still like to go down the Redwall where we had intended to and also follow the trail to the spring.

The spring in the wet arm of Cottonwood could profit by some channeling. It spreads over a bed several yards wide and is so sluggish that a lot of scum develops. We had trouble getting a hole deep enough to get clear water free of the oily looking scum. I found that I had led Joe Grano too far upstream for the best flow. Al and I ate a very early lunch here and filled our canteens.

This time we went up the ravine midway between the slump area in the Redwall and the ravine that Joe and I had attempted. Very soon we were sure that we were using Bob Dye's route. He had mentioned a short chimney climb and the idea that he could have found a bypass to the south for this place. Al and I saw this and used it. It is straight forward steep climbing with lots of holds. Just south of where we came out on a bench there is a small cairn which Bob had also seen. Instead of going directly up via a simple chute, we walked the bench to the south and looked down where Joe and I had stopped. Using the juniper for an anchor, it would be easy to rappel to where I had stood. Climbing up to our bench would be far harder here than where we had just climbed up to the cairn.

On our way back along the bench to the chute through the top member of Redwall I spotted an old shovel in a hole at the base of the cliff. Some dark red different looking rock seemed to be the attraction.

Al wanted to go back via Grapevine Canyon. Instead of going south and climbing up the Supai where Packard and I had come down, I led Doty along the Redwall to the north and showed him the old mining camp. It was noon so we ate the rest of our lunch. I found that I had left my can opener down at the spring and I opened a small can of peaches by stabbing it with the point of a pickax. Al and I were impressed with the kind of men who would live down in that place in a tent in weather cold enough to require a heating stove bringing in all supplies via the Grandview Trail, the Tonto Trail, and the horse trail up the west arm of Cottonwood. We wondered whether they really had visions of wealth or whether they just liked the life.

We had to go quite a bit farther north to get around the base of the Supai and it was rather slow going to follow the Redwall rim back south in Grapevine. I noted the twin hollows below the top member of Redwall where Art Lange had found the olla.

We began working our way up through the Supai and we ascended the ravine that breaks through the Supai wall about three fourths of the way from the bottom of the formation. Doty was leading here and we had a little trouble with loose rocks that he couldn't help dislodging. We noticed that there is quite a fault through this ridge with the Coconino about 60 feet lower on the south side of the break. Near the top I left the ravine and thus missed seeing a small rattlesnake just over a foot long. We had to climb through something like a third of the Coconino as we went along the ridge up to the trail. This route using the fault is probably easier than the ways I have been down through here before, but it would be better if one were alone and didn't have to worry about starting rockslides.

Left bank from Mile 30.4 to Mile 24.3
[October 3, 1970 to October 4, 1970]

Norvel Johnson came to our house at five on Friday afternoon as per agreement. Storm warnings were out and we took our time about deciding what to do. I thought about waiting until Saturday morning and then going to Grandview Point where the car could stay on the pavement, but by 8:15 p.m. the sky was full of stars and we decided to go to Cedar Ridge and turn toward Shinumo Altar that evening. We pulled off the dirt road about six miles from the highway thinking that we would have a quiet though short night. Trucks and cars kept passing at least every hour all night. One of them stopped and a young Navaho asked me if I knew where the squaw dance was being held. I hadn't been out to the head of the 29 Mile Canyon Trail since 1963, but I found the way with the help of the map. With no fumbles in the drive, we left the truck by 7:45 a.m. The head of the trail is marked by a large cairn, but when it went along a bench just above the bottom of the wash and seemed to end at the edge of a cliff, I was confused. Norvel pointed out that he could see the trail below and that we should go down to the bed. We soon saw that the trail went this way. Some of the immediate switchbacks are cut in solid rock with the aid of dynamite. Here is one trail that could be made impassable with one well placed stick of dynamite. The Coconino section had also been cut in solid rock, but it is quite possible that there was a prehistoric climber's trail through here. A horse might still get down to the bed of the wash at the Hermit Supai contact, but there is now no trace of a horse trail down the bed of the wash. There are numerous places where one has to scramble over large boulders with considerable use of the hands. Incidentally, the thickness of the Hermit Shale may set a record about here for it may well be 500 feet thick.

Near the top of the Supai, I recognized the place where Henry Hall and I left our packs in February, 1963. There was no water in the hollows of the bare rock on Saturday, but on Sunday there was plenty. The first water we saw on Saturday was down in the Redwall of 29 Mile Wash. There was a shallow pocket within easy reach and down in a steep sided hole was water several feet deep. One could count on this second pool, but he would need a 15 foot cord to let a pan down to reach the water.

We used 45 minutes to reach the bed of the wash from the truck and 95 more minutes to get to the first Redwall. After a pause we started on along the rim of the Redwall upriver and reached Tiger Wash in two hours, about noon. Norvel was feeling his lack of condition and called for a 15 minute rest, but still we needed only two hours to cover this lap. There were a couple of easily accessible water pockets and some ledges where we could camp. Norvel stayed behind for quite a while after lunch and found some bigger water pockets up the bed above where we stopped.

I went ahead without my pack with the understanding that I would return by 5:00 p.m. I had predicted incorrectly that we would be able to reach the river at Tiger Wash, and now I wondered whether we would be able to get down to the beach before Mile 24.7 at Stanton's Marble Pier. Opposite Tiger Wash we could see a sure way to get down to the river from the top of the Redwall on the right side. Walking the Redwall rim didn't average as easy north of Tiger Wash, but I reached the ravine at Cave Springs Rapid in 45 minutes. Here one could go down to the river and up through the Supai also. It is obvious that there is a sure way to get from the Hermit down to the river on the right side.

The whole route along the Redwall upriver from 29 Mile Wash shows practically no sign of any constructed trail, but we saw a couple of cairns north of Tiger Wash, the most obvious being just north of the mouth of the wash. When I had been gone for some time, Norvel started north also and he got past Cave Springs. I followed the riverbank more than I did the Redwall rim north of Cave Springs. There were, however, a couple of places where the water came up to the wall in spite of the fact that the river was quite low. A big red rock was well exposed in Cave Springs Rapid. The next rapid upriver had a rock showing now and then under less than a foot of water rather close to the center. Navigation at this stage would present problems.

After his trip through the canyon last June, Paul Martin, botany professor at the U of A, told me that he had seen a juniper growing near the river. I don't know where he had seen his, but as I was getting down from the Redwall rim between Cave Springs and 24.7 Mile Wash, I saw three growing about 60 feet above the river level.

There were several fissures through the Supai in this section on the right bank, but there was none that would surely give access from the Hermit down farther upstream than a talus opposite Mile 24.7 Wash. Someone once told me that Stanton's Marble Pier is really Supai but I would insist that it is of the upper member of the Redwall. I have wondered about the name pier. I would think that "turret" would be more descriptive. There may be a way up through the Supai to the east here also, but I would feel more sure about the broken area farther upriver. I am fairly sure that if one came down through the Kaibab and Coconino at Mile 21.7, he could go along the Hermit Shale for less than two miles before finding a place to reach the river.

When I had gone upriver to about Mile 24.5, I was beginning to think about my time limit. I was going along the sand beneath a fringe of willows when out of the thicket not more than a dozen feet away came two beavers, one not much more than a baby. They slithered into the water and I could see them swimming underwater for 50 feet or more. All the time that we were in sight of the river, the water remained as clear as a mountain stream. There are almost no mid bars now, but there are still plenty of clean sandbars. I sat still and watched for the beavers. The baby disappeared completely, but the mother came to the surface and floated in the slack water. She finally came almost to the landing near me where she had entered the water and then she turned and swam upriver to another, more remote landing.

On the return I saw Norvel's tracks and then overtook him soon after I had climbed away from the river opposite Cave Springs. We arrived at camp about 5:00 p.m. and had plenty of time to do the cooking and eating by daylight. It was so clear, although it had sprinkled about 11 that morning, that I put aside all thoughts of sleeping under an overhang. After I had had the first solid sleep of the night, I awoke with rain in the face. I merely got inside my tube tent and let it rain, which it did for another hour or so. My light down bag was plenty warm. By midnight the stars were out and the rest of the night was fine. Enough rain had fallen to put water in all the shallow pockets.

We walked back to 29 Mile Wash in about 110 minutes. Norvel decided he would like to see Vasey's from the trail along the rim of the Redwall. This section of the Bureau of Reclamation Trail is as well preserved as the trail to Clear Creek and one can make good time. When we were about to Mile 30.4, Norvel said his knee was bothering and he thought it would be good to stop at the place where we could get down to the water. Here I made a discovery. At one end of the lower sandbars, a fairly large spring is discharging about as much water into the river as flows down Clear Creek. It was not warm but it felt several degrees warmer than the river. I looked at the current at this slack stage and decided that I could swim across here if I didn't get too cold.

Both of us were impressed by the fault. I noted that the Simmons and Gaskill Guide gives the offset as 200 feet. I was estimating it as less, but it is obviously quite a throw.

On the return to our packs we saw a part of a pick handle and an empty dynamite box. After an early lunch we walked from the Redwall contact to the truck in two hours and 50 minutes. Norvel's and my pace up the grades at the end was evenly matched. We drove to the end of the various roads and got some fine views before starting back to Flagstaff.

Saturday afternoon we heard and saw a baloney going below. They shut off the motor and we exchanged a few remarks.

O'Neil Butte
[October 17, 1970]

Donald Davis heard that a British Columbia climbing party was going to attempt O'Neill Butte and then he was rather sure that he could see a cairn on its summit with the aid of binoculars. Last year Al Doty succeeded in climbing it solo and he reported a maneuver that was unusual. He tied a piton to the end of

his rope and was able to toss it over a stout bush. Jim Sears and some of his friends had also climbed the butte twice since Al had succeeded. They hadn't needed the rope over the bush.

Today we met Al and Jane Doty at the ranger headquarters and Joe Greno and I went down the South Kaibab Trail with him while Jane went out to Yaki Point to see what she could see. I couldn't leave home until about 10:00 a.m. since I had an assignment meeting alumni. We didn't start down the trail until 11:40. Al had already been down to Horseshoe Mesa Butte and climbed it getting back to the truck by 10:30 a.m.

We reached the saddle just south of O'Neill in 35 minutes from the parking lot and probably took about ten minutes to get around to the north side of the butte. Jim Sears had talked about an easier way than Al had found which involved getting into a crack which was wider inside than on the outside. Al saw the way he had started up, but we spent some time trying to find the way we thought Jim had used. To the west side of the north end we found a fine crack but when I came out at the top of this fissure, we were faced with a bare cliff, and we were no higher than we had been at the end of the easy walk. We looked at a couple of places that Al figured he might be able to scale and then decided to go up where he had been before.

With the rock completely dry this time, Al was able to use a crack on one side of the steep but not perpendicular pitch and then get across to the bush he had used for the rope. The rest of this pitch was steep but with good holds. About 30 feet up he fastened the rope and I went up with one hand holding on. Joe also put some tension on the rope on the way up, but on the return he free climbed down with only the rope for a belay.

We were on a safe bench and Al led us to the west 30 or 40 yards. The Sears party had built a cairn out on a prominent rock below a vertical crack. It was the same place that Al had used on his previous climb. For about 15 vertical feet, Al had to go up in an angle with a crack wide enough for a foot. A few small stones which were wedged in the crack offered a few grips. He made this with ease but again I put considerable pull on the rope as I went up. There were a few places for the feet so that I had no trouble in changing my grip when I had coiled the rope around one hand. I believe Joe also free climbed here.

The next place was where Jim and his friends had gotten into a crack wider inside than on the surface. As usual Al did this with ease, or so it seemed. When I got up about one and a half feet, I had a lot of trouble getting my knees and feet past the constriction about a yard above the ledge. Even with the rope to pull on, I had to ask Joe to give me his knee to stand on. This vertical crack had hand holds higher so that it was not a true chimney climb.

From the platform at the top of this good crack, we went a step or two west into a wide crack through which we could look southwest below the whole butte. The width called for chimney techniques with the back on one wall and the feet on the other. I didn't need the rope. There was one more difficulty and it caused me a bad moment or two. One had to lie flat on a ledge and wriggle around a corner with no head room. There was no space to use the knees. Fortunately there were some pits for the right hand to hold to and the left elbow could be wedged under the horizontal crack. I got rather stuck here trying to stay too close under the overhang, I suppose, and Joe had to brace me a bit from behind. As usual Al had gone by

with no qualms. The rest was a simple walk to the top through some brush. As to be expected, the views were terrific. I certainly would have balked at this climb without Al and Joe to help me.

Indian ruin below Bright Angel Point
[October 24, 1970]

In 1955 R. C. Euler used about \$5000 worth of helicopter time and found more than 200 ruins "new to the scientific record." Among his most impressive sightings was a complex of about six rooms and three storage bins under an overhang at the bottom of the sheer upper third of the Supai near the angle over the Transept. Contrary to the impression that I got from Larry Henderson, it faces Bright Angel Creek rather than the Transept. Rangers Henderson and Sigler had been guided down to the ruin by a young man working at the lodge. The college boys at the lodge had heard about it through word of mouth from Euler and had done the leg work of finding it. In still earlier years they had worked out the route off Bright Angel Point and had spent a day going down to the Kaibab Trail.

Al Doty, Bob Dye, and I had been intending to climb Siegfried Pyre this Saturday. I took them and Jane Doty as well as Mark Price and Bob Lejewski to the North Rim Campground Friday evening arriving about 12:30 a.m. After a short sleep we set out in the truck for Point Atoka only to get discouraged by the ominous clouds. After it was too late to think about trying the very long day of walking and climbing to Siegfried and back, the sky looked much better. I considered various shorter projects and finally settled on the trip to the above ruin. I had already scouted the way down through the Coconino last summer.

We left the black top walk to Bright Angel Point only a few yards back from the very end and had a sporty climb down with several abrupt ledges and one fairly vertical descent of 30 feet or more in a broken angle. I think that my route last summer must have been easier. Mark came with Dye, Doty, and me on this one and got separated from us right up here near the top. I fail to see how he got so far behind that he lost us not noting that at the bottom of the 40 foot descent we had stayed high near the crest of the ridge. He went on down the slope above Roaring Springs Canyon, and although he shouted and we shouted, we didn't get together. After a suitable wait, we figured that he had given up and had gone back to the top.

For much of the way along the ridge down to the break in the Coconino there is a clear trail, presumably formed by deer use. Henderson had given me the impression that they had gone down the Coconino on the Transept side, but I had found that the ravine toward Roaring Springs is almost a walk down, the principal hazard being loose rocks that are easily dislodged. There is a bit of hand and toe climbing at the bottom of the Coconino.

On the way out we descended the Hermit slope immediately below the Coconino ravine and then contoured the rim of the Supai southeast to the break in the next drainage. On the return, Doty led Dye up the ledges of Supai farther to the south. They got into one dead end and they considered our descent route as better. On my return after getting through the Supai, I went directly up the Hermit where it is forested and one doesn't buck the scrub oak and other brush. While contouring below the Coconino, one meets plenty of bad brush here also. The descent through the Supai is easily remembered since it is on the Roaring Springs side directly beneath the end of the Coconino wall. Mark eventually reached the Supai

terraces beyond this Coconino promontory and found a cairn near where he could look down to the right and see the ruins.

The clearest walking along the contour below the top 250 feet of Supai ledges seems to be along the lowest ledge rather than along the brushy slope beneath. One can get down where it cliffs out, and around the corner is a bay with the 250 foot red cliff all in one sheer drop. I was behind the others as we came around this corner, but I saw the ruins first. Al led us along the narrow ledge on their level where Bob and I had to crawl on hands and knees a couple of times on a meager shelf below projecting rock.

The ruins are among the best. The view across Bright Angel Canyon to Deva, Brahma, and Zoroaster is more effective at this level than from the rim. This seems like an adults only settlement because the toddlers would have to be kept on leash. The walls of several rooms are well preserved with much of the adobe mortar still intact. Many of the roofing poles are lying around where the wind has blown them and there are signs that the abandonment may have occurred when fire destroyed much of the roofs. There are also some things that we had never seen before at any ruin. The builders had split some large timber so as to form boards about one and a half by ten inches by eight or ten feet long. I saw two holes about as big as a little finger bored through one end of a plank. Besides one broken metate, there were three neatly worked rectangular slabs of thin dark rock, similar to slats, that must have served as doors either to the dwelling or to the storage bins. Vic Viera says that Schwartz found such pieces of slats at a ruin on the plateau and Schwartz said they had to have come from a distant quarry. Al noticed that someone, presumably Euler, had sawed off and taken a piece of a roof beam.

As we left along the same ledge, Bob Dye noted a tiny spring that even at this dry time of the year was producing a bit of water. Henderson had mentioned this spring and I was afraid that we were not going to find it.

The floors of two or three of the rooms could easily be tidied up and prepared for one's bed. With the spring nearby, this would be a great place to camp for a night, and we were considering the kind of people who built this settlement, whether they were lovers of natural grandeur or were getting away from enemies. There surely are better and more convenient places to live if they were thinking only of farming and hunting. We found no potsherds.

We also wondered about the nearest place for a helicopter to land. I'll have to ask Bob Euler whether he investigated this fine ruin on the ground. The location of this ruin is one of the most impressive evidences of the efficiency of the helicopter in exploration and also of the aboriginal knowledge of all possible dwelling sites in the Grand Canyon.

Marble Canyon, Mile 43.8 to Mile 41.8, and Shinumo Altar
[October 31, 1970 to November 1, 1970]

I started from Flagstaff with the intention of going down Mile 21.7 Wash, south along the Hermit, and then down to the river. I should have read my 1/14/67 log concerning the route. The Tanner Wash Quad is of very little use since there are so many reservation roads not shown. I drove off US 89 at the right place and took the proper right turn. I became worried when the road went north and even a little to the east.

Consulting the map made me think that I was too far north, and I back tracked to various and sundry roads south of where I was. They wound through the hills and ravines to various hogans and I got quite upset. When it was nearing noon, I decided to junk that project and take on another, get the remaining pots at the cache across the river from the platform of poles at Mile 43.3.

The drive out to Tatahatso Point went off with nary a wrong turn. I took the truck clear out to the cable to get the scenery. The rusty sign warns one not to tamper with this federal property. The engineers did an impressive job of cement work below the cable support. No doubt the car stopped at the level of the lower shelf. I wonder whether they got all the supplies for the establishment of the lower anchorage by winching men down the cliff. Perhaps some of the crew went down the Eminence Break Route and walked the Redwall rim to the lower end.

Recently the Indian Service has installed a rainwater catchment made of plastic sheeting not far from the head of the route off the rim. There was no water in the rubber lined basin.

On the return I again had trouble getting the truck up over the loose rocks and bedrock ledges, so if I ever go down here again, I'll leave the vehicle above the steep and rocky place below the hairpin turn. This was my 13th and 14th passage through the upper part of the route, so I was used to every move. I again noted the dogtooth spar in the cracks, the natural bridge formed by the tower falling from its pedestal just west of the route, and the big block of Coconino Sandstone with the fossil footprints. A section that I hadn't noticed before, high on the right, seems to be a mass of nearly overlapping depressions. I left the bed of the main ravine at the right ledge in the Supai to go across to the mushroom rock and down. On the return I followed the deer trail and came above the Redwall. The saving in altitude loss more than makes up for the swing out of the direct line. I reached the river from the rim in 115 minutes and came back out on Sunday in 155 minutes.

The river was perfectly clear and quite low. President Harding Rapid was only a good riffle. I could stay near the water on the sandbars most of the way to just below the pot cache. I detoured to see the Hansbrough grave and photograph the rocks on it.

This time I remembered very clearly where the pots had been and went up to the site with a lug wrench for loosening the rockfall on the pots. When I got there, I found them gone.

In the loose rocks just below the climb up the ledges, I saw my first rattlesnake for 1970. It was a small one and was just disappearing into the rocks without rattling. I had seen a black and white banded snake near the top of the descent. After being frustrated in bringing back the pots, I walked upriver far enough to get a good look at the Royal Arches. The night time temperature was just right for my light down bag supplemented by some clothing.

On the drive to the highway, I detoured and climbed Shinumo Alter. It takes about 40 minutes to walk the entire top from one end to the other. There is one pinyon pine along the west rim, and I could see six junipers near the eastern base. The lack of trees on Marble Platform is striking.

I saw one fine buck and plenty of tracks along the river. Also some beaver signs.