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TM: Today is Thursday, May 23, 2019. This is a part 11 Grand Canyon oral history interview with Keturah Pennington. And my name is Tom Martin. Good afternoon, Keturah, how are you today?

KP: Great, thank you.

TM: Thank you so much for this incredible tour of Glen Canyon as you knew it with the benefit of your husband Phil's website that he built with a whole bunch of Glen Canyon images. Last time we got to Gregory Butte at mile 48 to 50, where the river makes a big horseshoe bend right around this towering butte. Couple thousand feet high, it looks like.

KP: I'm sure it's at least that high, yeah. Because the cliffs down below may be nearly that high.

TM: Yeah, so it's stunning. It just stands up all alone, this giant butte. The caption for the first photo is "Gregory Butte from the air over Rock Creek. West Canyon Creek enters the Colorado just to the left of Gregory Butte." This photograph from the air, was this on one of the shuttle flights?

KP: I'm sure it was. They wouldn't have been down that far when they were looking for the lost hikers.

TM: Up at Escalante.

KP: Yeah.

TM: Okay. It just gives us a small little hint of what it must have been like to look out the plane window.

KP: It was fascinating.

TM: Yeah, I just look at that and go "oh my gosh." And this picture shows a little bit of the wing overhead and a little bit of the door on the bottom of the photo and the wing strut. And in the distance is Gregory Butte, with the river wrapping around it.

KP: Right. You can see part of the river leading off to the right towards the upper right corner.

TM: Yes, yeah.

KP: Yes, nice country.

TM: It's just gorgeously stunning. And then from the river, the butte dominates the skyline in this entire area, it looks like, as you boat around it.

KP: Yeah, but when you're down on the river, it's narrow enough there that when we're real close to it, you don't see very—oh, the next picture down shows you—you don't see very much of it. Just the very top part. Yeah, that was fine country. Big country. And all of it beautiful and nicely stained and patterned.

TM: That's what this middle picture shows: blue, blue sky; white clouds... Gregory Butte dominating the center skyline and this big wall dropping right into the river with a bunch of green, green vegetation along the shore...

KP: And sand between the vegetation and the river, so there was camping anywhere you wanted it.

TM: Wow, nice. And then the third photo, it says, "Mile 38.3. Not Gregory Butte. In the slide/movie presentation, we say, 'as the lake rises the towering buttes of Navajoland become visible...' This is the example we used." Okay. Is that you in the kayak on this third photograph?

KP: Yeah.

TM: And is this-when would this picture have been taken?

KP: Oh, it could've been any of the summer trips, but I would guess—oh, no. I can tell. It's of September of '62. I can tell by the amount of junk that is not on the back of my kayak at this time.

TM: Okay, 'cause it looks like, you know, this an example of the lake rising up. And would that have been September '62 or would this have been September of some—'63?

KP: Well, this is far enough down that the lake was rising.

TM: Okay, there was a cofferdam that built upstream of the dam. And water was impounded behind that cofferdam and went into a tunnel—

KP: Diversion tunnel, yeah.

TM: —diversion tunnel that went around the dam site. So that might be what we're starting to see here, is the—

KP: I think in the picture above the one we're talking about with the kayak, you can see a bit lightcolored stuff just a bit above the water level. And I think that's mud that was left from that... You see, when we're up here, we're not very far up above the dam.

TM: That's right, that's right.

KP: And I think that white line, it looks like it's coming off from the point of the greenery and going to the right, is mud on the wall. So I really think the picture below is September of '62, but with no greenery to show, it could have been April of '63.

TM: Yeah, it's fascinating because look at the weathering, the patina on the rocks goes right into the water. And there's no up-and-down line at all there that you might expect to see, so it—

KP: Yeah, I could believe, now that I'm thinking about it, I could believe that it was April of '63.

TM: Okay. Okay, I'm gonna jump away to the Lower Map for a minute and... Face Canyon comes in from the south and it's past Meskin Bar. What do you remember about Meskin Bar at all?

KP: Phil mentioned it, and we boated past it and kept going.

TM: "There it is, over there!" Okay.

KP: Yeah, I can't even remember if there was, say, mining equip—No, we'd have gone over if there was mining equipment. It didn't make a big impression on me. Is there something special about it, maybe I can recall?

TM: No, I'm just asking. I think there is, but I can't say for sure what was going on there. So Face Canyon is at mile 44.6. So it's all the way around the big gooseneck around Gregory Butte, downstream of there. The first picture shows a bunch of ice on the river. And there are the foreign kids in the tandem kayak, it looks like?

KP: No, this was Margaret Yong and Jim Richards. This is the February trip—January trip, excuse me, January trip—of '63. And the foreign students were probably back in wherever they had come from by then.

TM: Got it. And it that you, further down in the distance in your kayak?

KP: Is that a kayak? I can't tell whether it's rafts or kayaks.

TM: I can't tell either. It just looks like there's something down there.

KP: Oh, it is a kayak. And in that case, it was I, because I was the only one with a boat like that besides Phil, and he's sitting in his.

TM: And gorgeous blue, blue sky. It must have been nice in the sunshine.

KP: It was always nice in the sunshine down there. I don't think we had a single day where we got rained on, so yeah.

TM: And this is—

KP: But obvious—

TM: Sorry, go ahead.

KP: Obviously, it was winter, though, because there's ice on the river.

TM: Yeah, it looks very cold. And this is looking downstream from Face Canyon. And looking upstream, the next picture down, it says, "Looking upstream toward Gregory Butte." And again, you can see the dominating Gregory on the skyline there. And what's really interesting here is... This second photo looking upstream, the riverside cliff is totally broken down. And that would be Meskin Bar there. And again, it looks like you can just simply walk right up this—

KP: Oh, of course. It wasn't anything that was on there now, it was how the river had cut itself around in that shape, yeah. That's right, that's—yeah. Talking about it brings back thoughts that I haven't thought for a long time.

TM: Like what?

KP: Well, like why Meskin Bar was on the map for us. It was because of that big sandbar there—that big sand hill, sand dune there.

TM: Did you get out over there and hike around, do you remember?

KP: No, I know we didn't.

TM: That's really pretty, with the reflection of Gregory Butte in the water and the icebergs floating in the water.

KP: Phil was very good at framing his pictures. He was an artist as well as a technician when it came to the camera.

TM: And then the next picture below that shows-

KP: That one is April '6—oh, it says it's April '63, yeah.

TM: "Mile 44.6. ... Just inside the entrance of Face Canyon. The reservoir is beginning to encroach. The odor of vanillin is strong..."—

KP: Vanillin.

TM: Oh, vanillin.

KP: The chemical in vanilla.

TM: "-from the decay of the cottonwood trees."

KP: And that part isn't true. It was from the cottonwood trees, alright, but they weren't decaying. It was from a sticky substance that coats their buds.

TM: Really? Okay.

KP: If you have cottonwoods and to a somewhat significant, a less extent, polars, but... If you have cottonwoods, the odor of vanillin is very strong in the spring and lovely, wonderful.

TM: I know that we smell that in the Ponderosa pines here, outside of Flagstaff. You just sniff the bark, and you smell this strong vanilla smell. And I'm like "That's curious. They share that with cottonwoods, I didn't know that." But this picture shows a kayak going in a tight little canyon, maybe it's 70 feet wide or so, and there's a cottonwood—green buds—just standing in the water there.

KP: So you know there used to be a sandbar there. The creek wasn't anywhere near as wide as it is now. This is up, what, 12, 15 feet, or so? So there used a nice, little green canyon. And it's getting drowned. It was in places like that that we would find various insects or lizards or whatnot clinging to whatever they could. And I would paddle over to them and rescue them if I thought I could. You know, where could I have taken them most of the time?

TM: Right, you could put them-

KP: If it was something that could climb the rock, if it were one of the lizards... And I rescued some beetles, for example, that could fly. And I would take them along with me till I would come to a place where I thought they might fly and find another place to land and then fly again. I expect I probably didn't do anything except postpone their drowning.

TM: Yeah, wow. Wow. Were you able to get up and get out of the boat and walk up Face Canyon at all?

KP: I don't remember anything particularly spectacular about it. But almost always, we would boat as far as the water went and looked to see. And sometimes, it really was a help to us. Sometimes we boated over what had been jumpups that we couldn't get over and then we'd get way along... We'll come to Labyrinth, and that is the most spectacular example of that, but it happened other times too.

TM: Okay. The next photo, the third photo on—fourth photo—on this page... It's titled, "Just below Face Canyon and four miles to the take-out point, Crossing of the Fathers." December of '62, icebergs on the water... And here there is a distinct white line on the cliffs as they get down to the water's edge. And I'm assuming that's from up-and-down—

KP: That's from the flooding. But the mud that was left when the lake started to rise and then went back down.

TM: Okay. And then the last picture on the page is a water shot late in the afternoon. It's a really pretty shot. Shadows are long. And this is September of 1962. "Nobody paddles much. We all know that when we take out we may never again get to experience the kind of experience we have discovered here." And who's in that photo there? Do you know who's in the kayak straight ahead?

KP: There were only—no, there was only, yeah, two kayaks on that trip. And that one, judging by the foam pad behind my back, is me. Oh—I was gonna say Sam's kayak is off to the right, but that isn't. That's a raft paddle, never mind.

TM: Oh, I see. There's a paddle and a little bit of yellow off on the far right side edge of the photo.

KP: Yeah, but the paddle is rounded on the end, so that wasn't a kayak paddle.

TM: Can you tell me about sunrises and sunsets? This just looks like it's calm and the cliffs are fire.

KP: Yeah. It was very pretty at sunrise and sunset. Helen McGinnis and I and usually Phil were almost on the river before the sun got up. And it was so nice to have the sun hit us and suddenly be a lot warmer, because the nights—you know, they weren't unpleasantly cold—but even in summer, they were cooler. And I'm very cold-blooded. I get cold real fast. And sunrises were wonderful, but often, at least Helen and I and Phil would have already been in and be coming out of a canyon by the time the sun finally got up. And so, you know, we'd walk out of a dark, cold canyon out into the sun on the river and the greenery and the sand and everything. It was really lovely. At night, we usually finished supper after the sun had set, because nobody would pull out before they had to. And then we'd make a campfire and sit around something bigger than our cooking fires for a little while, but we all hit the sack real early in the night because we wanted to get up real early in the morning.

TM: I bet. This sounds like-

KP: We didn't want to waste a minute of sunshine.

TM: They sound like very intense days. Lots of walking and exploring and...

KP: Yeah, and marvelous. I mean, the whole day was filled with absolute magic. Everywhere you turned, if you were walking up a canyon and then turned around and looked back, there was a somewhat different view and it was marvelous. That's the same as going up... marvelous. Great country. And I can see if I were looking at, say, something in Alaska that was as fantastic as this that was about to be finished, and knew I could never see it, I would be really angry. So I can imagine that people who are looking at these pictures, I know that they will never see what's in these pictures would be really angry too. So, I hope you learned something from it all. I mean, I hope all of us learned something from it.

TM: Indeed. Let's go down to Crossing of the Fathers, then.

KP: Crossing of the Fathers, right. I don't think this is the picture that Phil ends the slideshow with, but it might be. Anyway, yeah. That's about how it would look when we would come in, because we wouldn't get in any earlier than we had to.

TM: Okay, well this is interesting because I was aware of Kane Creek and that there was a road there at Kane Creek. I didn't realize there was a road here at Crossing of the Fathers at mile 40.5. And so I'm gonna read the text here, there's a gorgeous sunset picture. "Mile 41.5. Sept. 1962. Approaching Crossing of the Fathers, savoring the last rays of sunlight before we have to take out and head for home—knowing that this may be our last encounter with Glen Canyon. When we landed, we found many, many little khaki shelters scattered all over the bar. It was the movie production company making 'The Greatest Story Every Told.' Now, when we see that movie, the shots of John the Baptist at the

Jordan River brings back heart wrenching memories of that moving river, our gentle, living river—which we know as the Colorado River in Glen Canyon."

KP: Yeah. One of the times we were there, it was indeed covered with all sorts of little tents. And a whole bunch of vegetation that never ever grew there. The movie company had brought in palm trees, other things... They had a castle wall, or maybe it was the wall of Jerusalem, I don't know. If you look at it from one side, it did look, indeed, very much like a large stone wall. If you went back behind it, there were all sorts of two-by-fours and other bracing back there and a bunch of canvas and whatnot. So it was meant to be photographed only from the front.

TM: Interesting, yeah. Of course, the back side's all...

KP: Right. It was all fake. And there were a bunch of various other small buildings there, and one of them was labeled "Bethlehem Electrical System." I'm sure that inside were some whatever power generators and whatever else they needed to do the lights that they needed. There's a whole line across that's going up one of the gulches. This—All sorts of things that we have in the time since, tried to pick out in the movie. And sometimes, you know, we wouldn't have seen Bethlehem Electrical System, of course, but some of the other places, sets, that they had constructed we tried to pick those out.

TM: Were there cameras there? Were they doing active filming there?

KP: I think they probably, from the looks of things, had finished and just weren't gonna tear it down until they were absolutely certain that they were finished, but nobody was there then.

TM: Got it, okay. That makes sense.

KP: And they'd taken really good care not to put any tire tracks in places around, say, the wall of Jerusalem or whatever it was. I'm impressed by what a good job they did, of building Jerusalem and Bethlehem and whatever they were filming there. Because in the movie, it did look—I could have been convinced that it had been taken in Jerusalem and not down on the Colorado River.

TM: Interesting. Well, as we've been talking, I've screwed away to the map. And the map has helped me realize that the Crossing of the Fathers is at Kane Creek. And so that explains why there's a picture of a Volkswagen with two kayaks on top of it, parked right next to the river.

KP: Yeah. That's pretty much where we took out. The river has come up quite a bit since our first trip in the time this last picture was taken. But, yeah.

TM: Okay, yeah. It says, "This was the most common take-out point for float trips." And it says, "Here, however, we are putting in on a special trip to explore just Labyrinth Canyon. Afterward, we packed our boats across the desert, across the river from Labyrinth, to the Crossing of the Fathers road." Okay, that make sense. There's a picture here of the craziest looking boat. This is "[t]he Sierra Club raft after a float trip. On raft: Dick Norgaard, the organizer of Sierra Club raft trips." Did you know Dick? Was he a friend of yours?

KP: Oh, yeah.

TM: What do you remember about him?

KP: Dick, I don't believe, was ever on any of our boat trips, but he and I and Phil were together on a commercial trip down Grand Canyon at another time. And, you know, he went to school there, so through the Sierra Club, we knew him. I don't know, he's a very good boatman.

TM: Okay. The boat looks—it looks like... It looks like a piece of corrugated cardboard without the top and bottom layers.

KP: Right. I think they are military pontoons that are attached. I don't remember how they were attached. I was never on that raft at all.

TM: It's the curious—most curious—machine I've ever seen. It has a big tripod in the middle of it, which looks like it's holding up a stove. A pot-bellied stove of some sort, but...

KP: Oh, I have always thought that that was their water supply, but I don't know about... I think Phil has pictures of later years, '64, I believe, that we encountered them...

TM: So here's a link. It says, "See later Sierra Club raft trips on Lake Powell." So I'm gonna click that.

KP: Right, yeah. Yeah, there's that same...

TM: What did they call that thing? They have a name for it? It's this really crazy-looking boat actually got a motor on it, it looks like.

KP: I think they simply referred to it as "The Raft."

TM: "The Raft."

KP: And I'm pretty sure that those are pontoons from the military.

TM: Okay. So this is June of 1964. The caption reads, "Mile 38.3 We—one of the noisiest boats on Lake Powell because we have just discovered that if we open the throttle wide on our 3-1/2 HP motor-driven kayak catamaran, we will plane on the surface, go a lot faster, and save a lot of gas—are approaching the Sierra Club raft heading toward the Escalante River and Cathedral in the Desert." And that's the same picture, then, blown up. And it says, "Enlargement of above photo. The standing man on the left with a dark hat is David Brower, director of the Sierra Club. To his right, fiddling with his Sierra Club cup is Dan Luten, a chemist with the Geography Department at U.C. Berkeley. Below him, fiddling with the motor is Richard Norgaard the organizer of the raft trip and graduate student at Berkeley (later to become a faculty member in the Economics Department). The person with the camera taking a picture of us taking a picture of him is Terry Russell author, with his brother Renny, of "On the Loose."

KP: Do you know about the Russell brothers?

TM: I do, Renny and I converse about once a month, so I knew he was going, "oh, I've got to tell you, sir. This Renny. This is great!"

KP: That's right. We knew that they had been down in that country too, but, you know, we never encountered them.

TM: So "sitting in a red shirt and facing to the right is Barbara Brower, daughter of David (currently Professor of Geography at Portland State University—Oregon). Facing her, with a feather in her cap is Nancy Eberle."

KP: "Eberle."

TM: "Eberle," okay. "Walter Edwards, photographer from National Geographic doing a photo shoot of Glen Canyon for his magazine, is somewhere on this raft, possibly in the khaki shirt near the far left. Phil Hyde, who took the well-known photo of Cathedral in the Desert, and made several of the Sierra Club books, is somewhere on the raft heading for that shot in Cathedral in the Desert." Wow. That's quite a shot.

KP: Yeah, and you see how free and easy everybody is in this Sierra Club trip? It's a lot more relaxed than most of the commercial trips, I think.

TM: Okay. And then the bottom photo shows the raft. And it says "Richard Norgaard on the far left in motor boat. Phil Hyde, floppy tan hat, standing and facing us with his wife, Ardis, behind him and facing away from us. Next, standing and no hat, is Terry Russell. Sitting with red feather in hat, Dan Luten. Standing to his right is Bob Brower, son of David. Sitting at the far right with the dark hat, Ken Brower, son of David and author of "The Starship and the Canoe."

KP: Yeah. Dan Luten is the one I was telling you was up on the hydraulics of damming that river. He's the one that said we're in a dry part of the cycle and in 20 years, we're gonna regret it. What he meant that they would regret was taking measurements done whatever I said a moment about wet and dry cycles—scratch that. Taking measurements during the wet part of the cycle and thinking that that was going to continue was a big mistake and we would all regret it. And it turned out to be absolutely true.

TM: Yes. Yeah, the Colorado Compact was based on that—that error in water volumes, yeah. Well these are some great photographs, here, of the team there. I'll be sure to get that off to Renny. That'll be a lot of fun. He may have that photo already.

KP: Yeah. If they're trying to identify us, this is the two kayaks bolted together with two-by-fours that made a catamaran. As Phil noted in the one we had just—we were worrying about our gas supply. And we had just learned that if we revved it up and really went, we planed and we got a lot more miles per gallon planing than we had by chugging along. So we were very noisy.

TM: I'm gonna click the button that says "Return to Labyrinth Canyon"... at "mile 34.4."

KP: Now this is the one we had a long weekend. I can't remember why in January we had a long week maybe we just took a long weekend, because we knew that this canyon was about to go under and we had to see it. With a name like "Labyrinth", we couldn't miss it. But we couldn't come back up to Crossing of the Fathers to take out either, so Phil got the maps out and figured out how we could do it.

TM: Okay, and— So, it looks like—oh, some of this is in January of '63. So you're just a couple months before things really started going up.

KP: Yeah. That's why we went in January. We'd been there in December.

TM: So how did you do that? You drove down the Kane Creek road and that got you to the river. Then you could paddle down—well, let me go to the map and see how far it is. Wouldn't be too far a paddle, I suppose.

KP: No, it was a very short distance. It was the rafts. We—Phil and I could have paddled any time. The rafts could only go downstream. They couldn't go back up. So that was our problem. And this was a pretty big trip. I can't remember how many, but it was one of our bigger trips. Because everybody wanted to get down—and "Labyrinth Canyon," I mean, was a name... Why, and what we had seen before to compare it to, this was bound to be fantastic. Oh, we paddled down and the picture of the two canoes on the Volkswagen were there at Crossing of the Fathers. We put in, and Phil, then, drove back along the road. He'd taken the topographic maps and picked out where we going to land our boats on the river and how far we were going to walk carrying them across the desert. And he parked the car there. And let's see...

TM: And then how did he get back? Did he walk back?

KP: No, we had more than one car. We had a bunch of people. We probably had five cars.

TM: Got it. So he just did a shuttle.

KP: Yeah, and this is a short shuttle. I mean, some of the shuttles were more than a hundred miles and this one was five or ten.

TM: Okay. So is it Gunsight Canyon that you're gonna exit, or somewhere near there?

KP: Well, we paddled across the river as directly as the canoes could make it. Let's both go down to "Lower Map." We—

TM: So I see Labyrinth Canyon coming in from the south and it's about five miles, maybe four miles, downstream from Crossing of the Fathers. It's about a mile...

KP: Yeah, and from where we landed, after we'd hiked in Labyrinth Canyon, then we paddled as fast as the canoes could cross, across the river so that we were on the north side of the river.

TM: Straight across, okay.

KP: Yeah, well. Yeah, we tried to. And Phil had picked our route from along the river there up to the car and he had the topographic maps. There wasn't any chance of anybody getting lost. He's very good with maps. And we hiked from just a little bit downstream of Labyrinth up to wherever the road came closest on the way between Crossing of the Fathers and Hite.

TM: Well, that's a good idea... way to get down there.

KP: And shuttled enough people down to get the cars from Crossing of the Fathers to come back and get the boats.

TM: Okay. That's a great idea.

KP: When Phil gets determined, he can be very determined and very creative and logical... figuring out solutions.

TM: Nice. Well, this is a great way to do it. I'm just thrilled you guys got in there.

KP: So were we.

TM: So in Labyrinth Canyon—it's 34.4 miles from Lee's Ferry... So it's about 20 miles from the dam, at 14 miles upstream, more or less.

KP: Wow, is it that far?

TM: Yeah, still quite a ways.

KP: I guess it must—oh, I'm sorry, yeah.

TM: From—yeah. Lee's Ferry and then got to go start counting upstream to run up to the dam and then keep going all the way up to Labyrinth. "A short distance in, a narrow canyon leads to the left. That is the main branch of Labyrinth Canyon." So can you describe what we're seeing here? I'm kind of confused.

KP: We're standing with our backs to the river and looking at—across the sand and little patch of water—at the entrance to Labyrinth Canyon. And it looks quite narrow there and the falls are fairly straight-ish or whatnot. But then it opened up. As you came around the corner and turned to the left... Starting a little bit behind where the photographer was standing in this next picture with the sort of flattish-looking alcove with the big, black stripe running down it. It got green for a little. Broad, sandy, and green. And as I recall, we camped in that spot.

TM: The caption reads, "Jan. 1963 About a half mile in from the mouth. Photographed from a high alcove we used for camping."

KP: Oh, he says we camped, yeah. Right.

TM: Yeah. "That's snow on the hill. The striped alcove is a trade mark for Labyrinth canyon." Okay. And there's two kind of big flat rocks there, down in the streambed?

KP: Yeah. I didn't particularly note them when we were in there and I didn't pay any attention to them now, but yeah. Right.

TM: It's a funny kind of alcove that you guys are in. Looks pretty high. It's maybe, I don't know, 40 feet above the drainage bottom?

KP: That we're standing in?

TM: Yeah.

KP: I think... As I remember the canyon, Phil must've scrambled up a little bit. He was probably trying to get a picture of that flattish-looking alcove with the black stripe in it. And that's quite high. Very high. And the black stripe... oh, it was wide. Maybe a yard wide, maybe more.

TM: Okay. So that helps for scale, 'cause it's really hard to tell how big that is.

KP: It would've been... yeah. I didn't go up it. I looked at it, "oh yeah, big, black... That's shallow alcove!", you know. "Not interesting. Keep moving." Okay...

TM: And then the next one, it says, "The wide canyon continues for only about a quarter mile further." "'From where the girl is standing in the picture, we see...'" Oh, I see. That's—so is that you on the upper right? Somebody in...

KP: Yeah, looking up the canyon.

TM: "'From where the girl is standing in the picture...'"

KP: This is right where it got narrow.

TM: Okay, so this is where... oh my gosh. Alright, so "'From where the girl is standing in the picture," from there, "'we see'" the next picture down, which is a stunning picture of a tight little slot canyon with contoured walls, all different sort of colors and shapes, and striated sandstone. "'...this. From there, Labyrinth Canyon twists and turns seldom more than a few feet wide at its bottom.'"

KP: Yeah, Phil is standing almost exactly where I was standing in the previous picture.

TM: Okay. And is that you, then, up ahead?

KP: Yeah.

TM: Okay. And then the next picture down is an incredible light coming in. The sandstone is a wonderful rose kind of light orange color. "Occasionally sunlight strikes the walls making the canyon glow with a fire-like hue..." No kidding. And then there's someone standing there in the distance with this amazing...

KP: Yeah, that is I, again.

TM: Wow. "Continue in Labyrinth Canyon An ice jam in January, 1963." So...

KP: What did it say about the ice jam in January?

TM: It says, "Jan. 1963 Mile 32.8 The heavy flow of ice cannot get past the dam. About a mile below Labyrinth Canyon it is no longer moving downstream. Occasionally a small movement occurs with a large grinding noise, but the river is no longer flowing. Time and the river flowing have been stopped by technology." It says "'Time and the River Flowing'" is a Sierra Club book about the Grand Canyon. And yeah, so this is really fascinating. At the dam with the bypass tunnels, the water would have, then, sped up and gone through the tunnels, but the ice would have just kind of impounded back behind that and left a big arc and just sat there. And it froze up. That's just amazing. That photograph there. "Return to Labyrinth Canyon." So let's do that. And we were there. And then we're going to go to Wahweap Canyon. Alright, so Wahweap Canyon is really close. This is April of '63. So "Sentinel Rock at the mouth of Wahweap Creek and only 1.6 miles from the dam. The reservoir has just started to fill. We have just started to witness an incomprehensible tragedy—incomprehensible to all those millions who've discovered the staggering beauty and intriguing explorations of the reservoir without any knowledge of the experience of Glen Canyon. Now drowned." "The downstream canyons drown," so I want to see what that is, but "In April of 1963, we paddled, then dragged our kayaks up Wahweap Creek. After dragging several miles, we saw to our left a huge bank of gravel freshly bulldozed to form a hill above us. We climbed the hill and discovered the newly constructed Wawheap marina boat launching ramp. So we carried our kayaks up and became the first to use the Wahweap Marina for landing boats." Wow.

KP: Yeah, Phil was sort of pleased by that fact.

TM: Yeah. Okay. And "The downstream canyon—" Alright, so "Lower Canyons flooding." June of 1964, there's a number of aerial photographs here. "The Crossing of the Fathers Road" and "'Many will enjoy it, but few will realize what was lost...'" Water-skiers, yeah.

KP: I hope he has more from June of '64 about Labyrinth Canyon, because if he doesn't, that would be a bit... well, anyway. Okay. Mouth of Labyrinth Canyon.

TM: Yeah, these are aerial photographs that—so in June of '64... This has been a year and a year and some months of the reservoir backing up. And all the bottom lands are flooded and lot of the side canyons are filling in. And the reservoir is just taking over the slickrock country. Fascinating picture of The Crossing of the Fathers Road, coming right down into the water.

KP: Yeah. If you look at the one two above that, then you're back from, you know, Missouri, Indiana, or whatever and look up that, "oh, isn't that beautiful?" And it would be. I grew up back in that country and I know what we would have thought of that. It isn't, it isn't.

TM: Yeah, no—as you say, people will not have... "'Many will enjoy it, but few will realize what was lost...'" "June, 1963, the first summer of the reservoir. We encountered this boat. It turned out to be Royce Knight, the owner of Page Aviation and an old friend from whom we had been chartering airplanes. He had some advice for us. 'You should take a look at some of those side canyons up there,' he said. He told us we would be surprised at how extraordinarily spectacular they were. He had had no idea that those side canyons were the primary reason we had been taking all those trips. He had not

known about them. He had just discovered what little was left of them and was astonished by what he found. He will never realize what he had missed." This is really fascinating. Again, park service identified this land as worthy of park values, attempted to make a monument out of it, and was beat back by reclamation and the Utah congressional delegation back in the 1930s. So it wasn't for trying, it wasn't for lots of trying, here, to save this incredible place, which, thank heavens, you all did such an incredible job of photo documenting. Yeah.

KP: Well, we are going to get back to Labyrinth Canyon good.

TM: Yes, "Return to Labyrinth," and I'm... So where are... "Continue in Labyrinth Canyon," there we go. So this is Labyrinth Canyon series two.

KP: Oh no, wait. I don't know where you are, but I'm not there.

TM: Well, I went to main Labyrinth Canyon page, and... is that the main one? Yeah, it's the main one. 34.4. And at the very bottom, there's two links, and one says, "An ice jam in January, 1963," and we just went and looked at that. The other link above it is "Continue in Labyrinth Canyon."

KP: Oh. Well, I'm not...

TM: And the first picture is of a fire. Well, it's not a fire, but it looks like a candle flame. It's incredible. Orange light, sandstone, with a sandy bottom of this incredible canyon. It just reminds me of a candle flame.

KP: Yeah, that's the one...

TM: A gorgeous picture.

KP: Let's go to Wahweap Canyon and navigate together from there, if we can.

TM: I'm on my way. Go to Wahweap Canyon. Okay.

KP: Mile 16.6?

TM: 16.6. So can you—at the bottom of that page, can you—there's a link that says "Go up to Labyrinth Canyon."

KP: At the bottom of that page... Yeah, I don't think... There's some written in red. "In April of 1963, we paddled, then dragged..." etc.?

TM: Hang on, let me find that.

KP: Just go—it's near the bottom of that page, but up to...

TM: Yes, below there. Below there. That "In April of 1963," then there's "'The potential dams and reservoirs'" as a quote. It says "Read more here." And below that—

KP: That quote was one of the ones I wanted to tell you about Philip Kearney.

TM: Okay. Well, let's finish off Labyrinth if we can. Below that quote, do you see where it says "Go up to Labyrinth Canyon"?

KP: Oh, yeah. Right. Okay.

TM: So let's go there.

KP: "Go up to Labyrinth Canyon." Okay, I got the striped alcove.

TM: The bottom of that page... It says, "Continue in Labyrinth Canyon."

KP: Oh, okay. Oh, yeah. That's the flame picture.

TM: That's the flame picture.

KP: Yes. And this one was one that the reservoir gave us, that we couldn't have had otherwise. That's the only thing, the only nice thing, I can say about this reservoir, is that we got that picture. It was at the top of quite a high... probably 20, maybe 22 feet high jumpup. And we really, really wanted to get up it, but it was jolly high. The bottom part overhung slightly and the top part was five, maybe seven, feet of fairly smooth, rounded rock. And it just looked really bad, but Phil wanted up that so badly.

TM: How did you do it? How did you get up there?

KP: Normally, he would never have considered this, because it was a three-man shoulder stand with a fairly iffy climb above it, but he wanted it so badly. And I did get up it. And the boys tossed me the rope, and I tossed it down, and they came swarming up the rope, and dashed past me, because when I got near the top, I said I'm gonna go around another turn or two, because if we hit another one like this in 30 or 40 feet, it's not worth it.

TM: No sense in coming up.

KP: But I went back. I saw this picture and made exclamations and I got all sorts of hollers from down the rope. "What's up there? Get back here! Get the rope! Get us up there!" And so I got back and looked over the overhang and the guys tossed me the rope and I'd never seen them climb up so fast. And they went back, and Phil started photographing. And by that time, most of the rest of the party had caught up with us. But yeah. That's a nice picture. That's Phil's very favorite from all of Glen Canyon, I think.

TM: That's a gorgeous shot.

KP: And it was used as a Christmas card by some of the people in the Sierra Club that year. I can't remember who all. But yes, that's our favorite. So on we go.

TM: Well, and below that is a series of four, five more photographs of Labyrinth Canyon. And it's so dark now again, that the blue is popping out again in the...

KP: But you can see, it's very narrow. There's no place there that you couldn't touch both sides of the wall, and some of them, you couldn't walk forward. You had to sidle sideways.

TM: Oh, wow. Says "Labyrinth is always no more than a few feet wide at its bottom, but its not much wider hundreds of feet higher." So towering overhead. Quite the classic-type slot canyon. "It's generally a very dark canyon. The camera tripod is an absolute necessity." Wow.

KP: The next year, or maybe the one after that, it was flooded almost up to where one could walk out on the top. No—one could boat almost to where one could walk out on the top. And it was still so narrow that high up that a little bit before we discovered we were near the top, I was giving some thought to trying to chimney, not with one foot on one wall and one on the other, but with both feet on one wall and both hands on the other. It was that narrow. So that made it, what—maybe six feet?

TM: Yeah, or four, maybe.

KP: Even up very near, when you topped out onto the plateau. That was quite a canyon.

TM: "Continue in Labyrinth Canyon." Yet again. Alright, I'm gonna click that. And this is Labyrinth Canyon photo series three. And it says, "Flashlights are a must here, if only to examine the cracks to the side which often can be followed a bit." And this is a classic, really narrow sandstone slot canyon.

KP: There's a figure down there to give you can idea of...

TM: Yeah, it's just a little more than hip-width wide... and towers up overhead.

KP: All the way up to the plateau.

TM: "Voices are eerily echoed in these passageways." Oh, wow. There's a fascinating picture. "Spooky voices from out of the void can startle explorers in Labyrinth Canyon. They did this time anyway." And so there's a photo. Is that you up there?

KP: Yeah, and you can see the canyon's as wide as from my bottom to my knees.

TM: So Keturah has chimneyed up probably 30 feet? Up overhead. And she's kind of just parked up there in this canyon and there's a clear drop below her, all the way down to the canyon bottom. And there, she's just parked up there, just happy as can be.

KP: Well, I was waiting for someone to come under me and I had gone up high enough that I thought I was in the shadows and wouldn't be seen by anyone walking towards me.

TM: Oh, and they spotted you up there.

KP: Well, Phil did. I don't think he did. I think I hollered to him and he saw me.

TM: Oh really? Gosh.

KP: Yeah.

TM: You're just parked up there like a rock. That's very clever.

KP: It was a very narrow canyon and aptly named.

TM: "At a few of the widenings in Labyrinth, Moki steps led to places we didn't have time to explore." No kidding. That's amazing.

KP: Yeah. One wonders if maybe the Moki were explorers too and through all the work of cutting steps just to see what was up there.

TM: Well, that's true. They would've been, why not?

KP: Because it's a jolly lot of work to cut steps.

TM: Yeah, yeah. "The walls of Labyrinth are unusually varied." That's a pretty picture. Just really, sculptured—sculptured sandstone.

KP: Yeah, I say Phil was an artist as well as a technician.

TM: Okay, well that looks like the end of the Labyrinth Canyon series. Did you get up Labyrinth far enough to get out onto the slickrock?

KP: Eventually we did.

TM: Well, after the reservoir was filling up but before the reservoir had inundated the canyon...

KP: No.

TM: Okay. Because of jumpups that you would hit?

KP: Yeah, right.

TM: Alright, wow.

KP: We wouldn't have gotten as far as we did if it hadn't been for a three-man shoulder stand. And we came to another one and we couldn't do it.

TM: Well let's go down to Wahweap Canyon, then.

KP: Right. Wahweap.

TM: And I'm gonna read this here. "From a 1950s U. S. National Park Service Report on the recreational resources of the upper Colorado River Basin: 'The potential dams and reservoirs would eliminate for the few the thrills of boating down the untamed river, and reduce the apparent depth of the river canyons. They would be confined in the canyons of the Colorado and Green Rivers and have little, if any, effect upon the great recreational resources of the region. Instead the reservoirs would provide a means of access for the many to see the wonders of the canyons.'" It says, "I read that quote in my multimedia presentation made to show what we had found in Glen Canyon. The presentation became very popular and got requested hundreds of times. At about the fifth time I showed it, a gentleman came up to me afterward, waited until he could get a word in among the many questions that invariably followed the

showing, and said, 'You know that quote you read?' 'Yes?' 'I wrote it,' he replied." It says "Read more here." Would Phil—

KP: Maybe he wanted—Do you want to take time to read this now, or—

TM: I do. "'I wrote it,' he said. What followed took me several days to fully digest. Those hectic aftershow sessions were busy, answering all the questions, gathering the equipment together, carting it out to the car, trying to schedule the inevitable requests for further showings, etc, etc, etc. This is the gist of it: He identified himself as Philip Kearney, a park planner for the National Park Service. He had been given the assignment of assessing the recreation potentials for over a hundred reservoirs in the Upper Colorado River Basin. That quotation was not what he had originally written. While many of the potential reservoirs had great recreational possibilities, in his opinion, the flooding of Glen Canyon would be one of the greatest recreational catastrophes of all time. Glen Canyon Dam should not be built. He had explored Glen. He had, of course, discovered what we discovered: a place of unequaled, magical beauty and an experience of indescribable magnificence. He said so in his original report. The Bureau of Reclamation did not like what he said. They demanded the rewrite you see above. Kearney reluctantly obliged, and was then taken from his job in the West and reassigned to Washington, D. C. where he couldn't so displease BurRec. I checked the recreation report: one of its four authors was Philip W. Kearney. In 1997, Marc Reisner's Cadillac Desert shed a little more light on that recreational catastrophe. Blaine Hamann, manager of Hoover Dam, was quoted: 'He [Floyd Dominy, head of BurRec, whose greatest pride is Glen Canyon Dam] was sort of the role model for a lot of ways that the Bureau approached things. It was a sort of "Damn the torpedoes; let's get this son-of-a-bitch built." In Dominy's own words: 'I was a crusader for the development of water. I was the messiah! I was the evangelist...that went out and argued persuasively to develop our rivers and water supply for the benefit of people.' Furthermore, 'I think it's a shame that we haven't developed every single possible kilowatt from this renewable, non-polluting source of energy...I had no sympathy for those who felt that nature couldn't be improved upon. Now I admit that nature can't improve upon man. We're probably the supreme being. But in the realm of rivers, I think man can improve upon 'em.' Any opposition? Then, ...all I had to do was alert the White House that those people were twisting my tail and pinching a little, and it stopped. Lyndon [President Johnson] took care of it."

KP: Yeah.

TM: Wow. It's interesting. There's a picture here. I'm going down through this. Did you guys stay in touch with Phil, Phil Kearney?

KP: For a while, yeah. The whole thing heated up and Dave Brower was in Washington testifying before one of the congressional committees. This must've been... maybe '65. And Phil, one afternoon—Phil was still a graduate student at the time—and one afternoon, while he was over in his lab, he got a call from Dave. And Dave didn't ask him if he could, he just ordered: "Get Phil Kearney on a plane, and get him to Washington by tomorrow morning." So Phil did his best, but Kearney was in Hawaii at the time. So Dave, never one to be opposed and not fight back to the best of his ability, got somebody to call the Sierra Club office in Hawaii and get them to get a lawyer to file a suit and get it filed before five o'clock that night, because that was deadline for filing whatever kind of suit that was, and get it opened from Hawaii, and then he had his office over there let up Kearney into the staycation spot and hauled him over to testify by phone the next day. And that had an awful lot of effect, but it showed how hard Dave was fighting then. Unfortunately, it came too late. About that same time, there was a big gathering—I don't know what one called it—but all the conservation people were invited to come into something going on down in either Los Angeles or the San Diego area, I don't know what. We didn't go. Phil was a student. But he heard from someone who had gone that the Bureau of Reclamation was putting on all sorts of free air flights and dinners and whatnot—free—to anybody who wanted to come in and present their side of all of this. And the person who was telling Phil said that someone that he was with was told by someone who was viewing the Sierra Club's opposition to it, "You know, if you folks had had this out a year or two ahead of time, this never would've happened." So we were just a little bit too late. And that was very disappointing, but... The Sierra Club, once they got into it, really pitched into the fight and did their very best. This picture on this screen that looks a totem pole, can you see what—

TM: Yes.

KP: There were a lot of those in Lake Powell, Jewel of the Colorado. They're just a shoreline picture turned sideways. Phil had to say about them, but it wasn't complimentary. Oh, and Phil rather liked the quote to the left of the two pictures below, it says, "LAKE POWELL: To have a deep blue lake, Where no lake was before, Seems to bring man, A little closer to God." And Phil, who knew the elevation of the lake at that moment, would answer, "Yeah, 300 feet closer."

TM: Yeah, nice.

KP: Yeah. So, but... anyway. We better move on before I say something even more uncomplimentary.

TM: Yeah, you know, I'd just like to thank you and thank Phil—I know he's gone—for putting this website together.

KP: Oh, this is all Phil. My fingers never touched the keyboard when he's doing something on the computer. I'm the one who's in the pictures for scale.

TM: Well, it's just an incredible series of photographs and I'm just so grateful that you've taken the time to lead us through here and help us, today, get an understanding of what Glen Canyon was like before the dam—inundated. Inundated the area.

KP: Yeah. I'm glad as many people saw it as did. And it's a real shame that more camp now that may in another 50-100 years, it'll be back. Dominy brought a display to Berkeley and set it up in one of the mining buildings. And Phil, after the first day, also got permission—Phil was... his lab was in the mining building and he knew who to go to ask—and he got permission to put a display too. And I think Phil's was as appealing to the people as Dominy's was—athough Dominy's was a big, three-dimensional table that would let you raise and lower the water level and had big fancy posters and Phil's was just blow-ups of some these slides. But many people said that Phil's was at least as effective as Dominy's was in educating people and forming opinions. I think there's some of that somewhere in some of this. I don't know where.

TM: Oh, there's one more page to look at here. And it's the Glen Canyon Dam page, at mile 15.

KP: Oh, well maybe it's there. I don't know. Okay.

TM: Let's go there. This is the Glen Canyon Dam page, and there's-

KP: Go to Glen—yeah. Okay, got it. Okay.

TM: The photograph is looking downstream to the face of the dam under construction. This is April 1963. "The water rose very fast at the beginning because Glen Canyon was very narrow. The dam was designed to flood much of the existing narrow canyon so the reservoir surface would spread out onto the flat desert above and increase the storage capacity." So in April of '63, did you start at Wahweap, or did you start at Crossing of the Fathers at Kane Creek to paddle all the way down here?

KP: Let's see. April of '63. We probably put in higher than that, because in April... No, the only time we started at Crossing of the Fathers was for Labyrinth. So we started up at the Mormon crossing then carried our boats down the road there that—the once-road. And Hole in the Rock.

TM: Hole in the Rock, right. And then paddled all the down to the dam and then paddled back up to...

KP: It was only Phil and I who paddled down to the dam. And I believe that was from Labyrinth Canyon. Although we... Oh, it says April '63. Yeah, it does say April. Okay, it had been Phil and I who paddled down to the dam which we would—no... Jim and Margaret might have too. They had a full boat, yeah. But no, from the dam, we paddled back up.

TM: That's Margaret Yong?

KP: Yeah. I'm pretty sure that she's no longer with us either.

TM: Okay. And then the picture below that is photograph of the dam under construction with—the bridge is in place. And this is the start of construction in 1959.

KP: This one was taken from an overlook on the road down to the dam.

TM: Okay. The cofferdam is in place and the dam foundations are being constructed in this photo.

KP: Yes, it was about that time there were various rumors passed around about what might make a dam fail after it was finished. It included a whole lot of ping pong balls dropped into it before the cement set. But I never heard of any of them actually being tried out.

TM: And then there's a picture of the front face of the dam in April of '63 and this is clearly the same trip as the earlier April '63 photo from the reservoir side.

KP: Yeah, I'm sure it was.

TM: And then there's this wonderful picture of "Ticaboo 'Rapid' #2 ... June, 1962. ... Glen, about the only wind problem would be in the 'four-mile' fetch, when the wind was blowing parallel to it. On the reservoir, the winds frequently blow up waves that are orders of magnitude more severe than Glen's Ticaboo Rapid #2 or Bullfrog Rapid, the most severe in Glen. The winds are much more severe than had been expected, and the reservoir loses much more water to evaporation than had been expected, many times more." And then there's a picture of the power house, I assume, ready to generate. "...[E]lectrical power, a true asset of Glen Canyon dam. But human understanding of all things scientific and technological is prone to dumbfounding oversimplification, especially when concepts from the science of the past four centuries are key points. Electrical power, energy, the statistics of anything, including water resource availability are all matters of common, profound misunderstanding." "We can, and we must, do better than this." Quoting Dr. Seuss. Well done. There's a link here to Living Rivers page, "The End of Lake Powell." "Why are people concerned about dam safety?" How about that? Okay. Is there anything else you'd like to add to this? I think maybe this a good place to wrap up what will be our final interview, then, as we've gone through Glen Canyon.

KP: Oh, that link, The End of Lake Powell, you might want to look at before we close off.

TM: Okay, let me go to that.

KP: Yeah, I'd forgotten about this part. No, I hadn't forgotten about it. I just didn't know that it was in this series.

TM: So this is a page from drainit.org. The Living Rivers Colorado Riverkeeper. "The end of Lake Powell." "It's not a matter of if, but when." And this was last updated the 20th of July, 2004. "Why are people concerned about dam safety? Rivers are permanent; dams are not. Large dam-building technology is not that much older than nuclear power technology. Large dams have failed in the past, and will do so in the future. In 1983 Glen Canyon Dam nearly overtopped and experienced a near catastrophic failure of its spillway tunnels. This could have resulted in severe flooding downstream causing complete draining of the reservoir. The hydrologic conditions that brought this about were far from unique, and will occur again. Furthermore, the porous and erosive Navajo sandstone surrounding the dam may at some point give way itself. In fact, safety concerns about dams are a nationwide problem; three years ago, the American Society of Civil Engineers gave the US dam inventory a rating of 'D' in terms of safety."

KP: Yeah. I think the part on the left, down near the bottom, where it says, "What about the sediment?", probably says a great deal about it and gives us hope.

TM: Well yes, because the sediment is being washed into the reservoir, certainly behind Hoover Dam and behind Glen Canyon Dam. There's a couple paragraphs here for "What about the sediment?" I'll read that. "When Congress approved Glen Canyon Dam it was clear that sediment accumulation would force the decommissioning of the dam within 200 years of its completion. The reservoir won't entirely fill with sediment for 500 - 700 years, but because of significant storage capacity losses and potential safety problems that will materialize within the first 200 years, decommissioning will have to occur much sooner. In working to restore the Glen, the less sediment that accumulates beforehand the better, which is why advocates are calling for the restoration decision to be taken 'now.' Although photo documentation and geomorphologic studies have indicated that sediment will be rapidly flushed from the side canyons and the main channel itself, some sediment will have to be removed manually. The sooner this begins the better. Furthermore, the level of pollution and even radioactive material contained in this sediment will require clean-up at some point, again reinforcing the need to act quickly."

KP: Well considering that during that time when the diversion tunnels got blocked for a few weeks, and the river dropped about an inch of sediment on some of the walls, why, I can imagine how much is there now. But anyway... oh dear. I've kept you much longer than I should have today. I'm sorry.

TM: No, it's been a true pleasure to get a chance to tour Glen Canyon with you. I can't tell you how wonderful this journey has been, to get a chance to look at these photographs and have you talk about them as we've seen them. And I just want to thank you so very, very much for letting us do this with you.

KP: Have you shut down the recorder?

TM: No, I'm just about ready to wrap it up, and so I want to ask you if there's anything else you'd like to add before we turn it off.

KP: No, but don't hang up when you finish, because there's something else I wanted to tell you.

TM: Sure. Well with that, then this will conclude part 11: our Grand Canyon oral history interview with Keturah Pennington. Today is May 23, 2019. My name is Tom Martin, and Keturah, thank you so very, very much.

KP: Oh, my pleasure. Phil always loved to share his pictures and we both especially liked to share Glen Canyon.

TM: Nice. Well, thank you. Hang on a second.