



# National Park Service Paleontology Program

## *Oral History Interview – Ron Kerbo*

Natural Resource Report NPS/PALEONTOLOGY PROGRAM/OHI—2019/002



**ON THE COVER**

Ron Kerbo, retired NPS Cave & Karst Program Manager. (Photo – Diannia Kerbo)

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The National Park Service, Paleontology Program publishes a range of reports, plans, oral histories and other documents that address a range of paleontological resource topics. These reports are of interest and applicability to a broad audience in the National Park Service and others in natural resource management, including scientists, conservation and environmental constituencies, and the public.

The NPS Paleontology Program disseminates comprehensive information and analysis about paleontological resources and related topics concerning lands managed by the National Park Service. Given the sensitive nature of some paleontological resource information, such as the specific location of fossil sites, some publications are intended for specific audiences and are maintained as restricted access. When appropriate, sensitive information is redacted from reports in order to allow greater access to these reports by NPS staff, partners and the public. This work supports the advancement of science, informed decision-making, and the achievement of the National Park Service mission.

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## Background

Interview with Ron Kerbo: This interview was conducted on the afternoon of Thursday, November 14, 2019. The primary speakers are interviewee Ron Kerbo and Vincent L. Santucci as interviewer. Ron is a retired National Park Service employee who served as the cave resource specialist for 15 years at Carlsbad Caverns National Park, New Mexico, starting on February 29, 1976. In 1991, Ron became the servicewide lead for NPS Cave and Karst Resources, beginning this role in Sante Fe and then moving to Denver when the NPS Geologic Resources Division was established. Ron retired from the NPS in 2007.

This interview was conducted over the telephone from Ron's home in Colorado and Vince was at his home in Gettysburg, Pennsylvania. At the time of the interview, Vince was the NPS Senior Paleontologist and Paleontology Program Coordinator. The interview was recorded on a digital audio recorder and a mp3 file was created. A written transcription of the interview was produced from the digital audio recording and this document contains the discussion during the interview. Ron signed a release form for the National Park Service for the preservation and use of the interview in the future. If present, PII has been omitted.



Ron Kerbo, retired NPS Cave & Karst Program Manager, is the keynote speaker at the 2007 National Speleological Society Convention. (Photo – Russell Kennedy)

## Transcript

[START OF INTERVIEW]

Ron Kerbo: Hi, Vince.

Vince Santucci: Hey Ron, how are you?

Ron Kerbo: Pretty good. How about yourself?

Vince Santucci: Good. Sorry about that. I got the number wrong.

Ron Kerbo: That's okay, I do that too sometimes.

Vince Santucci: Very good. Is now still a good time for you to chat?

Ron Kerbo: Sure, yeah.

Vince Santucci: Excellent. I really appreciate it. This is in conjunction to the work we're doing at Carlsbad Caverns. We're doing a paleontological resource inventory specific to that park. Wanted to interview you and I'm not sure it'll take that long, but it sounds you're available to do this now.

Ron Kerbo: Yes.

Vince Santucci: Okay. Appreciate that very much. Is it okay if I record the conversation?

Ron Kerbo: Sure.

Vince Santucci: Okay. I just want to begin just with a little introduction so that whoever transcribes this will know who is actually speaking. Today is Thursday, November 14, 2019. I'm Vince Santucci, the Senior Paleontologist for the National Park Service. And today I'm interviewing Ron Kerbo a retired National Cave and Karst Program Manager who lives today in Littleton, Colorado.

Vince Santucci: This interview is in conjunction with a paleontological resource inventory being undertaken for Carlsbad Caverns National Park. Anyways, are you ready to begin Ron?

Ron Kerbo: Sure.

Vince Santucci: Okay. I'm going to just ask a couple of real basic background, general context questions to start with. When and where were you born and where did you attend school?

Ron Kerbo: I was born in Hollis, Oklahoma. Our parents left there when I was eight years old and moved to Lovington, New Mexico, southeastern New Mexico. And that's where I went to school until I didn't anymore in 1962. And I went to work in the oil field and as a commercial

diver, which I did until 1976 when I went to work for the National Park Service as the second Cave Specialist at Carlsbad Caverns National Park.

Vince Santucci: Very good. And do you recall how you first got involved with caving?

Ron Kerbo: Yes. I started diving, scuba diving in 1959 and the first dive that I made was in some karst features in a park, a State Park called Bottomless Lakes State Park. And the rumors were completely unfounded then still repeated today that these gypsum collapse sinkholes were connected with Carlsbad Cavern and I was fascinated by that.

Ron Kerbo: And the real first diving book that I ever read was *The Silent World* by Jacques Cousteau where he wrote about diving in the spring at Vaucluse, which of course was the entrance to an underwater cave system. And from that moment on in 1959 since I was already diving in karst features I was very excited by the idea of diving in caves only, not in dry cave exploration.

Ron Kerbo: But as time went on, I was writing for a diving magazine, simply titled "Dive", which has been out of publication for some time. And after I had four stories in that magazine, I started looking for places to dive. I'd already been in Carlsbad Cavern, but I didn't know much about the area. And my insurance salesman of all people told us about a cave in the high Guadalupe Mountains. One of my wife's brother-in-laws and I went looking for it finally found it.

Ron Kerbo: And at that point I was stunned that stuff that I had seen in Carlsbad Cavern huge column and the stalagmites were just in the daylight of this big cave entrance. From then on I was still interested in diving in caves, but I was also now very fascinated with the dry caves. We were also at that same time in the mid '60's, early to mid '60's exploring and mapping gypsum cave along the Pecos River Valley, a lot of gypsum in there. And one thing led to another and that's really sort of a short story of how I started caving. I still dive and I still cave, but I don't cave dive as much anymore.

Vince Santucci: Very interesting. You already stated, but I'll just ask again. When did you join the National Park Service and what was your position and role?

Ron Kerbo: I joined the National Park Service on February 29 1976, which is a rather odd day to start. The position was a physical science technician with duties as cave specialist, which was primarily to look for caves, get our known caves in the park on a map and to survey what needed to be surveyed, and coordinate all the activities dealing with the cave science, exploration, conservation, protection.

Ron Kerbo: And a person before me was a ranger by the name of Charlie Peterson hired as a fire aid. But Charlie was sort of handicapped in that very few people would go with him. Since we were already caving in the area, Charlie knew who we were, my brother and I and another friend from Lovington. He would invite us to come with him just to make up a safety group of two to three cavers because they told him he shouldn't go alone. That was my introduction to caving on the park was at the invitation of Charlie Peterson, the first cave specialist there.

Ron Kerbo: The biggest difference between myself and Charlie was Charlie wanted a career in the Park Service, so he finally moved on to Buffalo National River, where of course there are a lot of caves. And I was never interested in a career. I didn't even know what that meant. So I just kept working with caves and never, never tried to do anything else.

Vince Santucci: And so how long were you working at Carlsbad?

Ron Kerbo: 15 years.

Vince Santucci: And then after Carlsbad, your next position—

Ron Kerbo: Was in the regional Southwest regional office when we still had such a thing in Santa Fe, New Mexico. And I was acting as a sort of the service-wide cave person. Some people were happy with that and some people were not. At that time, John Cook was the Southwest Regional Director, a very powerful director in the Park Service, I believe. I don't think people would argue with that.

Ron Kerbo: And that's why he brought me up to Santa Fe at that time and kept me from getting shot down at Carlsbad because of my stand on wilderness, which was pretty strong. I said things that should've gotten me fired, but they didn't and I continued to say them throughout my career. Even to the point of telling a Congressman who was chastising me and told me I needed to change my attitude. I told him, "If you're not interested in the conservation of this planet, maybe you should go to another one."

And finally, out of the old mining and minerals group here in Denver, they formed the Geologic Resources Division and I became the first SME to be hired by them. I didn't know what that was until two weeks before I retired. When this lady wanted to meet with the SMEs and I found out that means subject matter expert.

I came up here and then it really legitimized my dealings with the other parks, park wide. It wasn't questioned anymore: what the hell is this guy think is doing. We don't care what John Cook says. And that really helped the position get to more widely accepted once I was moved to GRD.

Vince Santucci: When you moved from Carlsbad to Santa Fe, do you remember what year that was?

Ron Kerbo: 1991.

Vince Santucci: 1991. And then—

Ron Kerbo: That was exactly five years almost to the day. And I came here in '96, January of '96.

Vince Santucci: What year did you retire from that position?



Ron Kerbo: 2007.

Vince Santucci: Okay.

Ron Kerbo: March 1st because I wasn't going to wait for another leap year.

Vince Santucci: Very good.

Ron Kerbo: I know I'm weird that way. I like things to have finality, but that was too much and 31 seemed a good number.

Vince Santucci: Okay. We're going to focus mostly on Carlsbad, but I did want to talk a little bit more about your position at Santa Fe and then your position ultimately at GRD. When you were serving this service wide role for cave and karst, you had opportunity to visit lots of parks throughout the system?

Ron Kerbo: I did, yes. In Santa Fe, I was working under Regional Chief Scientist, Dr. Milford Fletcher. And I had known Fletch from years ago before I ever started with the Park Service. I knew him simply as a caver, had no idea where he worked. He pretty much agreed with the idea that I would travel and upon request, of course, only one time did I go to a park in that 31 years that I ran up against some opposition.

Ron Kerbo: I didn't know that the Superintendent had not asked for me or allowed me to be asked for and she was not happy with my involvement with one of their caves. And her Resource Manager admitted that he did it all and she didn't know that I was there.

Ron Kerbo: Anyway, because of my work at Carlsbad, I sort of did a little of everything dealing with caves that included a vertical evacuation search and rescue. I was among the first group to go to Albright and be certified to teach the "managing the search function" it was called at that time. And I was also a diver, I was in the, I did a lot with the SCRU unit, Submerged Cultural Resources Unit. And on my own time at Carlsbad I cave dived as well.

Ron Kerbo: Anyway, it wasn't just the caves, but all things associated with the caves. And Dr. Fletcher was being a caver himself. He was not opposed to any of that work that I was doing.

Vince Santucci: Excellent, thank you. During your time in Santa Fe working for Cook, do you recall any of your park support projects, did they involve paleontology?

Ron Kerbo: Only as a by the way, examining caves to see did they need a paleontological inventory, mineralogical inventories, understanding the geology better, surveying. But nothing that I recall right now, Vince, that was specifically come out here and tell us about this and who should we get to come and look at this.

Vince Santucci: Okay. And then when you joined the Geologic Resources Division, were there any projects that you were involved in that included paleontology?

Ron Kerbo: One that comes first to mind is Oregon Caves. I went out there with the – Oh my God, the Ozark Underground Laboratory. What is his name? Remember Vince, I'm 75 years old.

Vince Santucci: You're doing very well.

Ron Kerbo: I barely remember that there's a tree in my backyard and only because I can see it right now.

Vince Santucci: You're doing very well.

Ron Kerbo: Anyway, that cave has a lot of paleo material in it. Later on, besides that first trip I was out there with – what was his name? – Greg McDonald. And Greg and I went there specifically to look at the paleontology, you probably know about that.

Vince Santucci: Yes.

Ron Kerbo: Because they were talking about older routes and maybe reopening some of those routes. And the problem of course is that some of that went right over paleo material. And I don't think that they're stopping taking tours there had anything specific to do with that, but it did help a lot, especially to get Greg involved out there. And then of course, there was always the very first project that I was involved with at Musk Ox Cave in Carlsbad Cavern.

Ron Kerbo: I'd only been working a couple of months, March, April that we started working at cave and I believe it was April, it could have been late March, laying the groundwork with Lloyd Logan. And of course he got the Smithsonian involved. And it was early on particular to paleo materials. And I had also of course seen a lot of that in the Lincoln National Forest working with the Cave Specialist there Jerry Trout things like Pink Panther Cave. Which of course it wasn't a panther anyway and the pink caves are because of the color of the rocks, not because of anything in the caves.

Ron Kerbo: Paleontological materials and considerations and concerns were always a part of what we were doing and including even knowing that the so-called giant Indian in the entrance passage of Carlsbad Cavern was in fact a sloth and not a giant Native American down there that had died in the cave.

And now most of the time since, like a lot of other things that I had to deal with, anytime paleontology come into consideration was just for me to say, "You know you need to contact these people because I certainly have no specific expertise in that field." Just as I have no, today someone was talking to me on messenger and I said that, "The only thing I've managed to do is not get caught in the last 50 years because I really don't know anything. I just know a lot of people and I'm always living in fear that somebody's going to catch that I really don't know anything."

Vince Santucci: Other than Carlsbad, did you ever have an opportunity to visit a cave locality with a paleontologist? Just curious if you had the opportunity to work with any paleontologist

other than Greg in your career?

Ron Kerbo: I might be able to think of some and send that to you, but right now it just completely escapes me.

Vince Santucci: Okay.

Ron Kerbo: I worked more with biologists and geologists than anything else in Hawaii with the burial caves, which is really not paleontology. Although, there are some extinct species out there in the caves, but no one that was specific to that. Did I ever work without there. Burials, Yes. But not real paleo material. And as you probably know, they're so sensitive out there.

It was really difficult to do anything in Hawaii because of the sensitivity with NAGPRA and just the aboriginal population being very sensitive to their ancestors.

Vince Santucci: Very good. Then if we go back to Carlsbad, then you have the most experience. The first question is, in general, how would you describe the fossils from Carlsbad?

Ron Kerbo: Well, if we're talking about – now, it depends on what we're talking about. If we're talking about megafauna there's just not a lot of that. There is on the Forest more than on the park. But then if we're talking about reef material, brachiopods, et cetera, gastropods there's a lot, I mean a lot everywhere because of the makeup of the substrate in which the caves form.

And I would say that there have been times when we have in the past maltreated that for people who simply want to put the material that came from Carlsbad Cavern National Park in their report rather than some obscure cave that no one's ever heard of. That always bothered me in especially doing cores in speleothems for paleo climate work. There's only one reason to do that in Carlsbad.

And that was not my decision to make, but I was always opposed to it. Although, I did help with it to try to protect what was there. Things in the canyons... Material, there's a lot of fossiliferous material all up and down and of course, they use Walnut Canyon because it's easy to get to. We don't want to bust our butts actually getting somewhere. Let's take the line of least resistance and then all the bat material, the fossil bats.

I did finally get to see where the cores were taken for the extinct *Tadaridas* there in what is now called Slaughter Canyon Cave. Luckily we had a map that Denny Constantine had marked specifically where those came from and they were still just in a side passage and out of the way up in a little corner of the room. They were exactly, yes as they were left when they had removed that material a long time ago.

I guess that's the best that I can say, is that it was the reef there and the fossil material and the reef that was always in the forefront of paleontological material in Carlsbad Caverns as it was with my job anyway. And of course, there was always the odd flowstone covered raccoon or some other creatures such as that.

And then of course the important sloth caves on the West side of Guadalupe Mountains National Park. And it was there and in some of the big pits on the East side of the range down in Guadalupe Mountains National Park that I was working with at the request of Charlie Peterson. And then Llyod Logan was involved and because my friend and I had a lot of vertical experience already, this is before I ever went to work for the park.

We were helping him look for material in any of the big vertical caves down in Guadalupe Mountains National Park. This was when he first started working over there and he camped a lot on the West side. You probably already know all this.

Vince Santucci: No, it's good to hear. Assume I know nothing.

Ron Kerbo: Well, you can assume that I don't know anything too, that's for damn sure. Anyway, and of course that's how we got him involved because Charlie knew him. Charlie Peterson knew him from Texas Tech and that's how he first got involved in Musk Ox. And of course, you will know that the cave was misnamed from the first bones that were found in there.

And because I knew where the cave was, I had not been to it, but I had a location and I gave that location to the Cave Research Foundation. And the funny part of that is my good friend now, longtime friend Jim Goodbar, BLM Cave Specialist, he joked too when they went out there that he was going to find the Musk Ox and he did just that. He was the first one to see that in the cave.

Vince Santucci: Let's see. Again, assuming that I don't know anything, can you tell me a little bit more details about what was referenced as the giant, but actually were sloths remains, was that an—

Ron Kerbo: It's in a lot of the old early guidebooks and reference materials that when Jim White first went into Carlsbad Cavern, that on the way down toward Iceberg Rock, in fact in an alternate passage underneath and in the lower part of the Main Corridor that pops you out into the Underground Lunchroom. That's where some bones were discovered down there in that lower passage.

And right now the name of that passage escapes me. I've been in it a number of times, but it's sort of, I've lost the name of it. And it was in there on a rock where these bones that were thought to be human and their best guess was that it was Native American and that the reason they were so large is because they had been coated and saturated with water, which made them swell up.

And luckily when they were excavated and taken out of the cave, they were put into the collection. And then later identified as a sloth. And Greg was the first person that I know of who was a paleontologist, because my job at that time also made me the museum person - responsible for the museum curator, which was John Roth, who was up at Oregon Caves if he hasn't retired. And Greg knew that we had those, he asked permission to come down and go through them and look at them and do a better identification of them.

I guess that's the story of that it was like Bottomless Lakes connecting with Carlsbad Cavern that

it was a Native America. It's just one of those things that somehow gets passed down from group to group and wasn't true at all.

Vince Santucci: Very good. Next question is that there are occurrences of what are referred to as mummified bats at Carlsbad. Have you seen those? And can you give me any thoughts about their distribution or conditions where they're preserved?

Ron Kerbo: Well, first of all, I've seen them all over the cave both mummified and encased in depositional material. One of the most obvious and easiest to see is right in the Papoose Room where it was, excuse me, died hanging over the top of a rather small white stalagmite and was encased in flowstone.

Ron Kerbo: And you can see the outline of the bat quite clearly. And one of the most exciting places I think to see those encased in flowstone is in the New Mexico Room all alone beautiful, almost pristine, and thinly translucent. And "thinly" I say meaning that the top layers of the depositional material, the newer stuff is quite translucent.

And there's nothing more beautiful than shining a light away from it and then have it glow underneath the bat and you can see the entire bat and the fossils, the mummified bats are sort of all over the place, especially in the Lower Cave. Of course, it's well known for the what's called the Bat Cave section, but the bats are everywhere from Lake of the Clouds now still living there to a lot of other places in the cave that they don't really frequent much, but they are there from time to time.

I'll never forget being in the Big Room one time and a group of bats just come flying. If you use the idea that the Big Room is developed as a crossing joints, the long axis runs sort of East to West and then the lesser joint development is East to West or West to East or whatever you want to call it. And these bats come flying down the main passage and then turn toward Lower Cave and disappeared and bat guano has been found all over the cave.

Some of it of course like the famous bat guano in Carlsbad, I mean in Slaughter Canyon Cave, upon being looked at in fact was more clay than guano. If the cave had been filled with water at an earlier time, then that material was all mixed in with silt in the cave. Yes, there are all those fossils, but buried bones in the so-called guano pits, which they were mining guano out of there, but it was as much clay.

I'm sure nitrates were high throughout the thing, but it was for a time productive to keep extracting it from that cave as well as across the canyon Ogle Cave, which also had a mining operation for some years and there are a lot of dry dusty caves like Goat Cave where you can find a lot of mummified bats.

The distribution of those things is all over the park in the caves and as well as all over Carlsbad. But no specific place was more of than another. It just depends on how closely you looked and how you know what you're doing at a particular time.

Vince Santucci: This is going to be a hard question, but can you estimate based on your

recollection the total number of mummified bats, would it be over a hundred or less than a hundred?

Ron Kerbo: Oh, hundreds.

Vince Santucci: Hundreds?

Ron Kerbo: Yes.

Vince Santucci: Okay. And—

Ron Kerbo: And sometime in groups, meaning they're hanging up here and they probably succumb to starvation and just sort of fell off the ceiling.

Vince Santucci: And I understand that you're saying that they're not just within the main Carlsbad Caverns, but some of the other caves have mummified remains as well.

Ron Kerbo: That's right. It's correct.

Vince Santucci: Very good. And then other than bats, you had mentioned a mummified raccoon. Are there any other mammals or vertebrates that you are aware of that are mummified?

Ron Kerbo: Ringtails. I'm digging through my brain. There are more modern things, skeletons for instance. Just in the entrance of Carlsbad and these are not mammals, but owl is famously in a hole looking into the main entrance of Carlsbad Cavern. And if you look up to the left, there's a small solution hole. And I one time climbed into that, I'd heard some rumor that there was something in there with big eyes or something.

I'll remember who told me? But I managed to, it's not hard at all to traverse around to that thing and crawl in there. And there was the owl skull as well as its other bones and I took them out and sold them in El Paso for \$2. Oh, no I didn't! Anyway, it was quite common they come upon bats, mummified skeletons of other more recent creatures and just dispersed throughout like Jim Goodbar in Oso Cave. In Oso of course are bears, short face bears in there dead at the bottom of the long drop.

That was pretty common. And that's getting away from humans that were found Indians, real burials or accidental death or something in the caves. Omega Cave on the Lincoln National Forest had human remains or skeletal remains in it and other caves around there. Especially, a lot of that was a matter of discussion when we were just down there.

I just came back Monday or Sunday from Carlsbad and the topic was brought up about some of the material that was in the old so-called \$1 million museum at White City, that now has been, I think it all now has been returned to various tribes because they were mummified; an infant mummified wrapped in some kind of material, probably fur, a skin hide and most all that stuff has been returned because of NAGPRA. But early on I think there was just a lot of things like that that people stumbled across.

Vince Santucci: When I spoke to Rod Horrocks, he indicated to me that he believed that there were probably around 43 caves within the National Park boundary at Carlsbad that had identified paleontological remains. I'm not—

Ron Kerbo: Yeah, go ahead.

Vince Santucci: —I'm not sure if that number is something that's consistent with your thinking, but other than the primary main Carlsbad Slaughter Canyon and Musk Ox Cave, can you think of some of the other caves that stand out to you that you recall fossils being contained within Carlsbad Caverns?

Ron Kerbo: Not really. No. I'm surprised by that number, but I don't doubt it. But have you also arranged to talk with Dale Pate?

Vince Santucci: No, I'm going to do that probably as a follow up.

Ron Kerbo: Yeah you should because remember now my recollections are from many years removed. '91 was the last time I was there well to the end of '90. And then January of '91 is when I moved to Santa Fe. You're talking to a guy who who's not on top of everything like Rod would be, or Dale even. Dale's only been retired for a few years. I've been gone from there a long time.

Vince Santucci: Well, very good. One other question that I had is that I wanted to talk to you once again about Musk Ox Cave. You shared with me probably 20 years ago a very passionate story about your feelings about the collection of the skull that was beautifully preserved in Musk Ox Cave. Are you able to share that story in detail with me?

Ron Kerbo: Well, Vince, I don't want to – as I'm sure you know over all these years I am very much in favor of science and science-based work in any discipline that we do in the Park Service. And our group that went in there, there's some Cave Research Foundation people went in with me after Jim had discovered the skull. And again, mostly because I ran in the early years they're the same thing that Charlie did was finding people to go with me to the caves because of this silly thing that we had about how many people should be with you. Sort of like when people talk about cave diving and the buddy system.

As Dan Linehan said, the best thing about buddy system when diving in caves is when you get up and one of you is dead, the other guy can say, "Yeah man, I looked over there and he just kind of shook and then that was it. He was dead." It was kind of confirming yep, he's dead. It's kind of morbid, but that's sort of the truth.

But I obeyed all the rules that we had at Carlsbad and it was amazing to see that skull that's probably the greatest fossil or any kind of – what am I trying to say here? Any kind of ancillary material associated with any cave, which would include even seeing an Aboriginal skeleton in a completely flowstone encased in a cave in Australia, and then seeing a lot of burials in Hawaii.

But when I looked at that it was just stunning. It was just something else. And too bad, we don't

have good 3D photography with lasers to have photographed that when we first saw it. And of course without any kind of consultation at all, really and not that I was in a position to say, "Wait, stop. Let's think about this." Even though that's really what I was hired for, there was no question that it was going to be removed.

And being in the cave the entire time seeing what is hammering away with a broad chisel to bust up the flowstone material. Not that he didn't do it sensitively and he knew what he was doing. I'm not saying that he did anything wrong. In fact, he did it very well. But then as more material started coming out of there with the dire wolves and it was exciting that a dire wolf skull was underneath the brush ox now, I guess is what we're calling it.

You can speculate that it was chased into the original entrance a big sinkhole a few hundred feet up above or at least 150, 180 feet up above. And as this progressed, I just had this strange feeling that here we go to a lot of trouble to preserve secondary material in caves, flowstone, stalactites, stalagmites, soda straws and all. We would just be ripped if someone come into the cave and started beating it up like they do in China and taking out whole sections of the cave to sell to somebody to put into foyer of their bank or office building.

And the more I watched us doing that, not that I did any of it except remove the material when I was told to, because remember sort of spacewalk is so what a mechanic could do the same damn thing. That's no big deal except that they're floating around in space, but they're still just nothing more than construction workers. My job was to make sure that material was well packaged, which the Smithsonian was going to do. Lloyd did very, very well.

And then as we come out with it my job was to make sure that we got it out of the cave without having it, having further damage to it. And I just got to thinking about it and you are the victim of my first opportunity to express that in the book that it would've been just as valuable I think there and work could've been done on it there, especially with the kind of avenues that can be pursued now as opposed to back then in the '70s.

I've always regretted that as one of my biggest regrets while working for the National Park Service is that what did we really learn that we didn't already know except to change it from a musk ox to a bush ox to a brush ox and that's about it. If you want dire wolves you can go out to La Brea Tar Pits, they got tons of them out there. And sure, we did find some, a few other undescribed fossil material out there, a fossil vulture and various things.

But anyway, it's pretty lame as I'm talking about it with you a paleontologist. And again, I'm not anti-science, I'm not anti-learning; very much for that. That's why this present administration gives me heartburn every time I see them on TV. And if you're recording this, yes said it. If you're a Trumpnista what the hell, shoot me, or run over me. I guess that's about it. That's about the only way I can express it.

Vince Santucci: I appreciate that.

Ron Kerbo: You've heard me say that before. And it was just the visual impact, when you go to a place like up in Hot Springs, South Dakota at the mammoth site. There are some things that just



when you look at it, it's like, good God, look at this thing. We may never pass this way again. And how have we really left that, I've been in the cave since we removed it, but I'd never been back down there in the area where the skull was and I don't want to go down there.

Vince Santucci: Was that pretty much a vertical entrance to get in and out of Musk Ox?

Ron Kerbo: Oh yes. Very tight, very, yeah, really tight entrance. For instance, it's gated with one bar and two perpendicular bars to that single bar. And you cannot get, you might be able to get a leg in there, but no matter how skinny you are, you're not going to get in that entrance with that gate on it. And it was difficult to exit the thing because as you're coming up the only way we could rig the rope was so they'd come up into a notch. When you got up close you had to maneuver yourself and shove your body over. I believe it was to the left and then climb on out.

It was a very tight entrance and as soon as you dropped down there to the bottom a hundred, I can't remember now, 130 feet or something. You had to climb up the wall and then traverse and then climb down again and make a right hand turn into the passage. And then another right hand turn and descend some flowstone to get down to where, to where the skull was.

And throughout the rest of the cave because I'm sure all of the material was associated with that former entrance that was open. But as we got further back into the cave it's a very vertical cave. And as far as I ever went to what we called the Lake Room, just magnificent white stalagmites, flow stones, stalactites. We didn't see any fossil material back there because it would have been trapped I think long before it got back there because there was no manifestation on the surface of any other former entrances that had been closed up.

Anything that fell in was there at the entrance that we used. And then of course the big sinkhole entrance where the brush ox fell in. And I just didn't see any other material in there. And I don't know that there have been any large paleo finds in Lechuguilla cave so far. Again, except for a ringtail or something of that nature that I don't think any of that just because it's flowstone covered doesn't mean that it's been replaced. That has been truly fossilized, if that's a fair statement.

Vince Santucci: Oh, definitely.

Ron Kerbo: Like those bats I was excited about and it is something to see, but of course now I doubt also that they have been replaced. I think they've just been covered up with depositional material, mineralogy

Vince Santucci: So it was Jim Goodbar that discovered the fossil locality and Musk Ox Cave?

Ron Kerbo: That's right. It was him.

Vince Santucci: Do you keep in contact with Jim?

Ron Kerbo: Oh yeah. We don't sleep together anymore, but I'm in – well, that's a joke started back in the cave management symposium at Big Sky Montana when he was freezing his butt off

with another caver trying to sleep in a damn VW bug and snow almost burying that bug. And they came knocking on my door for the first time and Ron can I sleep in your room. Sure Jim, he slept on the floor he had a sleeping bag and many, many times since then we're very close friends. I just saw him down at Carlsbad.

We were all down there for the memorial to our very good friend, Dr. J Michael Queen. Mike was a geologist, and a superb caver, collector of antiques, a wonderful big format photographer, all manner of things, philosopher, you name it and he was part of it. They spread his ashes out in the Lincoln National Forest it was his favorite overlook out there. Jim rode out with someone else, but then came back with my daughter and I and two other friends from Albuquerque. Yeah, I'm in touch with Jim all the time.

We talk probably every couple of weeks we talk. He was on that group that went out there and no one that of any consequence has ever ask how I knew where that cave was because it was supposed to be a secret. But I'll only say this, that the rumors were that they hired me because they looked at the applications and pick the guy who looked like he had made the most illegal entrances on the park, decided to make him honest.

Vince Santucci: That's a great line.

Ron Kerbo: That's all I'll say about that.

Vince Santucci: Hey, one last question. Were you involved in the bill that led to the National Cave and Karst Resource Protection Act?

Ron Kerbo: National.

Vince Santucci: The cave protection act?

Ron Kerbo: Yes. I was reviewing and so on. And I was also, I even made one person who was very, very supportive of that cry when I said that we didn't need it. And it was a big mistake because it does not mention karst. The National Cave Resources Protection Act. And it does not mention karst at all. Now, of course, the National Cave and Karst Institute was very much involved, but the original bill was written from quotes that I made to Senator Bingaman and they misquoted some of it. They misunderstood when I said, "the best exposed fossil reef in the world." They said "the most exposed," which is not true at all, but the Federal Cave Resources Protection Act has.

And the reason I get focused on that and I didn't mean to make the lady cry, but you can't, that'd be like saying, "Well there's a lot of paleontological materials in this cave, but what we should do to prevent something like that from happening again, you can't take it, but let's go all the way back in time and kill the creatures that are now fossilized.

And I mean that without the karst in the majority of what we think of is caves there's no mention of watershed protection, drainage patterns of infiltration rates or any... Nothing like that. It doesn't even, it's like caves just popped up like my former daughter-in-laws said when she asked

me how caves got here and I told her sort of a short story of how caves formed that she looked up at me - her father was a Church of God minister - and she said, "Bless your heart." You really believe that, don't you?

And I said, well, "No, I don't believe it." These things could be demonstrated the rate of solution of limestone and gypsum. And she shook her head and walked away from me. I maintained that every little crack and crevice and joint and fault needs to be protected as much as the stalactites and stalagmites. We do a good job of that. If you take that stuff, we're going to get a laser and a lightsaber and cut your hands off.

If you take paleo material we're going to cut your eyes out. But if you're going to build a refinery and have the runoff go down into the karstified area and kill everybody downstream or some kind of God knows what chemicals didn't, it's like, okay, go ahead and do that. Is that enough of a rant?

Vince Santucci: No, that's good. I like just letting you – listening to you. My final question is, did I forget to ask anything? Is there anything else that you want to share that I didn't specifically ask about?

Ron Kerbo: Well, I don't, I don't think Vince, you were pretty thorough. I just wish my memory was a little better, but it has been some time. But if I do think of anything else I'll just email it to you because I have your email.

Vince Santucci: Sure. Appreciate that.

Ron Kerbo: I'll do that. The only thing that irritated me yesterday when you asked if I was still available, I said yes, Vince. Hi, Vince or something and the damn auto-correct kept saying Vincent and I would backspace over and put a comma and then move forward and it would pop up Vincent again. Delete my comma. That's why I said Vincent, sometimes these freaking machines are just too damn smart for their own good.

Vince Santucci: Yeah. I don't use that auto correct at all. It frustrates me.

Ron Kerbo: Well I don't, but it just kept doing it in the email.

Vince Santucci: That's strange.

Ron Kerbo: Oh yeah. It was very strange. My daughter said, "Dad, what's wrong with you?" I said, "Oh, Nothin'. Leave me alone. I'm just pissed off here." It'll be okay in a few minutes.

Vince Santucci: Very good. What I'm going to do is I'm going to get a transcript of this and once I get that I'll send that to you. It'll be a word document and you can have that. If you see any errors in it or corrections certainly let us know. But I can't thank you enough. I really appreciate it and it's always good listening to you. You've got great stories to share and your memory is good.

Ron Kerbo: Well, fairly good anyway.

Vince Santucci: My daughter is an undergraduate in parks and resource management at Slippery Rock University. And she's very interested in wilderness and she's very interested in search and rescue and maybe sometime I'll have her give you a call.

Ron Kerbo: Sure. Anytime Vince. No problem at all.

Vince Santucci: Sure. Appreciate it.

Ron Kerbo: That the only thing about that kind of thing was one time I forgot what I was supposed to go for EMT, I think refresher and someone was talking about it and they were telling me what an opportunity. I said, "Yeah, but you live on a park and it's out of town, you've got to be a structural firefighter. You've got to be a – a wildland firefighter." And I named off all these things that they certify us for and I said, "Hey, you can just end up doing nothing, but taking refresher courses."

And that's something I've thought against not doing it. I wanted to contribute in every way I could. But once in a while I was like, Hey, remember I'm supposed to be doing cave stuff. And not that the experience wasn't wonderful. It was great experience, but we could certainly get ourselves into it in the parks in a good way.

Vince Santucci: Absolutely. I've shared this with you before, but I have tremendously admired you and looked up to all the great things that you did when I was early in my career I said to myself, I want to grow up and be just like Ron Kerbo for paleontology. And you've done such a great job ahead of us all that I just wanted to thank you for that.

Ron Kerbo: Well thanks. Thanks a lot. I appreciate you saying that. In my doddering old age here it's a nice to hear since you know the loss... as I now have lost my companion of 54 years. And sometimes I think back on some of the things though that I did that she didn't participate in, but we had to do it and I wish the hell I could go back and redo some of those things.

Vince Santucci: Well, I enjoyed looking at your posts and your dedications for your wife and you had a wonderful life together, that's for sure. And lots of good things to remember.

Ron Kerbo: Well, lots of it. 54 years and 25 days we were together.

Vince Santucci: That's amazing.

Ron Kerbo: The only reason I don't know the hours is because I didn't, there's nothing about the actual time that we got married.

Vince Santucci: Okay.

Ron Kerbo: Not like, I know it was dark. That's all I remember outside mountain time in March. Well okay, Vince. Always and please just feel free to give me a call or have your daughter give

me a call and we can always set up a time to talk about various things.

Vince Santucci: Really appreciate that.

Ron Kerbo: And I'm glad that she wants to do these things. What else can you do? It's sort of like I was saying to somebody about diving. One person said something about diving for the Park Service and I always remember Bob Garber, Robert Garber, he was the facility manager at Carlsbad Cavern said that he gave up diving in the Park Service at Lake Mead because he just could not fetch up one more little girl with her Easter dress on that had drowned.

Vince Santucci: Oh boy.

Ron Kerbo: But then the other side of that is since I was a diver and involved and had been a commercial diver when I was also a Park Service diver and I was a state police mission initiator or coordinator. How could I not go when I would get a call that someone had drowned in the Pecos River and at night with the families crying.

Ron Kerbo: And you have to do that, you can't say, "Oh sorry, I'm busy here, I'm watching Gun Smoke." You'd have to go. And so that's one of the things that has always driven me about these other facets of our Park Service involvement is that you do know these things. And I think it behooves us to do the best that we can for whoever

Vince Santucci: And you sure have done that. And again, thanks for all you've done.

Ron Kerbo: Well, thank you for saying that then.

Vince Santucci: Great talking with you and look forward to next time we chat.

Ron Kerbo: Yeah, me too. Take care of yourself. How is it up there today?

Vince Santucci: I'm in Gettysburg today, I'm working from home and it's

Ron Kerbo: Oh, in Gettysburg.

Vince Santucci: Yeah, it's cool today, but no snow at this point.

Ron Kerbo: Yeah. Well, we still have some from the last snow and we're supposed to get some more Saturday. Our furnace wasn't working for five days when it was 18 outside.

Vince Santucci: Oh no.

Ron Kerbo: We finally got well done. Everybody trying to get we pay for this thing called Xcel Home Smart and the guy came out as quickly as he could, but it was on a Friday after being without heat since the following Sunday.

Vince Santucci: Wow.

Ron Kerbo: We use those little space heaters, little, tiny things, which was pretty nice. All right, Vince.

Vince Santucci: You keep warm and I look forward to chatting with you again.

Ron Kerbo: Yeah, me too.

Vince Santucci: Thanks, Ron.

Ron Kerbo: Bye, bye.

Vince Santucci: Bye.

[END OF INTERVIEW]



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