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Vincent Santucci's NPS Oral History Project, 2016-2024

# Dave Parris
# December 13, 2019

Interview conducted by Vincent Santucci
Transcribed by Teresa Bergen
Edited by Molly Williams

This digital transcript contains updated pagination, formatting, and editing for accessibility and compliance with Section 508 of the Rehabilitation Act. Interview content has not been altered with the exception of omitted birth date PII.

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Date: December 13, 2019
Signed release form: Yes
Transcribed by: Teresa Bergen
Reviewed by interviewee: Yes

# Transcript

[START OF INTERVIEW]

Santucci: So is it okay if I record this interview?

Parris: Sure.

Santucci: Okay. So I'm just going to start out by just an opening statement. And then what I'd like to try to do is proceed chronologically in terms of your career and your life. And so the questions will be designed so that they're presented things that occurred earlier. And then the more recent things would be later in the conversation.

Parris: Okay. Okay.

Santucci: So to begin with, I just want to state that today is Friday, December 13, 2019. We will be conducting an oral history interview with paleontologist Dave Parris from the New Jersey State Museum. Dave is of interest because he started his career in paleontology working for the National Park Service. And so we're going to try to capture some of that history. My name is Vince Santucci. I'm the senior paleontologist with the National Park Service. And today I'm in Gettysburg, Pennsylvania. We're recording this interview over a telephone. So, very good. So thanks so much, Dave. We sure appreciate your time.

Parris: I didn't have a long Park Service career. But my experiences with the Park Service have influenced much of what I've done throughout my life.

Santucci: Good to hear.

Parris: In particular, I always liked to interact with people in the Park Service.

Santucci: Great. Good to hear. Thank you so much. So let's just start very general. So let's see, when and where were you born? And where did you grow up and go to school?

Parris: I was born in McPherson, Kansas, where my parents were both students at McPherson College. And over the years, my father was a minister. They actually – much of my childhood – a few of the years of my childhood, they went on the mission field in northern Nigeria. So I got to travel pretty early in life. And upon returning to the United States while I was still quite young, my parents continued in that regard, their ministries in the Midwest.

And I went to school in Kansas after that. And after high school in Wichita, Kansas, I enrolled at New Mexico Institute of Mining and Technology. I always had an interest in natural history generally and besides biological sciences, I wanted to expand into geological sciences. And there I studied, and a woman who changed my life was there, was Christina Lockman-Balk, who was a paleontologist. And at that time, she was the only woman on a 55-member faculty. So she truly influenced me a great deal. And when I finally graduated there with a geology degree, she encouraged me to go on in paleontology. And I went to the South Dakota School of Mines and Technology. Got a master's degree there and continued.

While I was at New Mexico Institute of Mining and Technology, I took my federal civil service test and applied for jobs and was able to enter the Park Service under the old student trainee system. What that meant in those days meant that you could go to in college or university during the regular school year and you spent your summers working in a national park area. At that time, I believe, by that time I think it was confined to the western region. And 1963, I started at Sequoia Kings. And that was my entry to the Park Service.

The other aspect of my schooling was I ended up going to Princeton University. And after four years there, basically married a local woman, got a local job, and never left. I'm a New Jersey State Museum curator now. But my Park Service years, they were throughout my collegiate career pretty much and somewhat afterwards.

Santucci: Very good. So predating your Park Service days, do you recall one or some of your earliest encounters with fossils that may have gotten you interested in paleontology?

05:07

Parris: Well, yeah. I think when we returned from Nigeria with my parents, we stopped in London. And my father took me to the British Museum of Natural History. And I was so excited. I thought that was the greatest day of my life. I begged him to take me back there the next day and he actually did. I probably should have realized I was going to be a museum guy of some sort, Park Service and otherwise, from that day on. That was my first experience. But from time to time after we returned to Kansas where we lived, and also Iowa where my parents were both born, I had incidental discoveries of fossils and that sort of thing. So I did have some early experiences in fossil fields.

But I really, my determination to be a paleontologist really came in my collegiate years when Dr. Christine Lockman-Balk actually became my mentor in that subject. There are many points at which people make a decision. But I think studying with her was what really confirmed my interest in the subject. I'd always had interest in biological sciences. And I'd developed the interest in geological sciences there in college and put them together as paleontology.

Santucci: So you gained experience in field paleontology during your undergraduate career?

Parris: Yes. Yeah. It was very strong, the schools of mines environment to do fieldwork. And I went to the field with Christina Balk, had complete experiences actually in collecting and doing field geology. As the primary paleontology student in my class, I got quite a bit more perspective in studying areas around there than some of the rest. It was my first experience in the Cretaceous system, collecting in Carthage coalfield, and also in the Pennsylvania. Because the Madera

limestone outcrops in many areas right near Socorro where the School of Mines and Technology is located. So I got a lot of really good field experiences right there.

And then of course I entered the Park Service in ’63. And my first experience was in igneous and metamorphic terrain pretty much there in Sequoia Kings. But the following year they transferred me to Lava Beds National Monument in northernmost California. And although I didn’t get to handle things too much, the fossils were very fragile, they actually have a fossil cave site in that, even though it’s largely volcanic terrain. I wasn’t experienced enough to be brought in on the major decision making that accompanied fossil cave discussions, but I was brought in on it. And occasionally I’d get discussions of that sense. Somebody once asked me about repositories of fossils from Fossil Cave Lava Beds National Monument. My first recollection is, I believe at the University of California, Berkeley they actually have a proboscidean, a fossil elephant. I believe it may be mastodon. Which of course would be the west coast version of that. I don't know how many other things have been collected or protected in place in Lava Beds. But that was my first experience in the Park Service, 1964.

09:15

Santucci: So, back to 1963 in Sequoia Kings Canyon for a second. Are you familiar with any of the caves that exist in Sequoia Kings Canyon—

Parris: Yes.

Santucci: —that have fossils?

Parris: Yeah, that and [the Koya?] uplift, there’s actually an interpretive, there’s actually an interpretive cave that was then called Crystal Cave. And we actually gave tours around in it. I didn’t get too much experience with the fossils there. But as I understood, there was sediment, which we would explore occasionally. So I have no doubt that they had microfauna there. I didn’t get a chance to do much with it, other than looking in some of the areas that were non-public. They actually did have some other paleontological studies in the area, which I got to review. But they were such things as pollen studies and that kind of thing. Didn’t relate too much to what we did with the public there. But I got to go into Crystal Cave particularly, the public one, quite often.

Santucci: And so you provided interpretation/education programming?

Parris: Yeah. I was actually a tour leader in the cave a number of times. It was actually when the major portions of the public education operation, an interpretive operation at Sequoia Kings was that cave. It was very, very popular already, although I believe it had just been open a few years at that point. I hope that they did explore the paleontology more, because as I said, when crawling around in it kind of exploring with my colleagues there, I could see they had a lot of good sediment. And although you never did, rarely, I won’t say never, but rarely did you see bats in the cave during the day, they actually did occur if you went during the nocturnal period when you’d expect them to be out, a number of times they were actually observed flying in or around the cave. But at that point, it hadn’t been really explored much. I’m almost sure they did have cave fauna in the sediment in the depths. It wasn’t a popular thing to investigate in those days,

and we really didn't, I don't think we really had any funding for it. It was mostly open for interpretation, generally. And I certainly got plenty of that.

Santucci: Were you a seasonal ranger at Sequoia Kings Canyon?

Parris: Well, under the student trainee system, you acted like you were a seasonal. But instead of being a ranger naturalist as seasonals were then called, you actually were a park naturalist student trainee. You were a career conditional employee. At that point I had every intention of pursuing a Park Service career.

Santucci: And so how did you come to go from Sequoia Kings over to Lava Beds? Was that your choice?

Parris: No. That was an administrative decision. John Davis, who was a superintendent at Sequoia Kings, was, in my opinion, one of the great administrators of the Park Service history. And they apparently made the decision that a student trainee should get the experience in a number of different service areas. And Lava Beds was available. They needed somebody acting as a seasonal. And they also had a very good park naturalist at that point, Garrett Smathers. And I think they felt that he was a good person to instruct me in quite a number of other things I would need to know. Not only well, he was a field botanist, for one thing. And he wanted me to work on the, he actually wanted me to work on the living flora while I was there. He also was a very good photographer and gave me a lot of instruction in that. But it was again, I had some experience going into caves and that sort of thing. And they had plenty of lava tubes at Lava Beds National Monument for me to get into. And one of those, of course, is Fossil Cave, the one that I mentioned.

14:10

Santucci: Very good. And so then from Lava Beds, what was your next venture?

Parris: In the third year, I got sent back to Sequoia Kings. Again, I got to talk to the superintendent directly who was clear from the way he spoke to me that it had been, he felt like his intention had been met, I'd gotten experience elsewhere. He wanted me to work more independently. So there I was at Kings Canyon rather than Sequoia, and was part of a much smaller interpretive staff there. So I got to go into quite a bit of different types of things Park Service-wise in Kings Canyon.

Their interpretive staff there, seasonal, was only like three people, including me. And again, there was a very good naturalist named John Vanderspek who gave me a lot of good instruction. He didn't encourage me particularly to do anything that was paleontology. But they did appreciate the fact that I had that training. So we did things like bone identifications and other such things. And we had an active program in collecting living fauna there, too. So one of my colleagues, Jay Wright, instructed me in making study skins, saving and identifying skulls and other things that were really a good benefit for me in later paleological work.

And again, I think there was a lot that was general interpretation at Sequoia Kings. It had been a long-established park. So I got to see a much broader scene of living flora than I would

have otherwise got. So all these were pretty good interpretation of experiences, but they're also good background experience for a paleontologist to get.

Santucci: Great. So after Sequoia Kings Canyon, what was the next step?

Parris: At that point, the following year, I couldn't—it was 1965, 1966 I had to take a summer field camp in order to graduate at Socorro. So I took a leave of absence from the Park Service, which was a good part of my training. I'd put off this field camp until actually I was ready to graduate except for that one field course that I had to take. So I went back to New Mexico for that and was not active in the Park Service that particular summer.

And meantime, I thought it probably would be good to get a master's degree. And that was encouraged by the Park Service. So they gave me a two-year, what they thought was going to be a two-year leave of absence to get the master's. However, since I got admitted to South Dakota School of Mines and Technology and got paleontology, got completely into paleontology from there on, I applied to the Park Service and got my next seasonal experience in, it was actually a year-round experience, but I worked most actively in the summer, at Badlands, which then was a national monument. And that was a very, very expensive experience because I'd had a full year behind me at South Dakota School of Mines and Technology learning Oligocene, Miocene mammals, primarily. And now I got to put it into practice with the Park Service. So it was, that was where I could actually do extensive fieldwork in my own particular brand of science. And that was a very, very valuable experience. Yeah, I did my master's thesis on pro-Silurian rodents, which covers the whole spectrum of the stratigraphy of Oligocene and Miocene in that area. And I got to collect my own material. And as I said, I got to work quite a bit with both Park Service and people at the academic institution for those two years.

19:07

Santucci: And when you were at the School of Mines, who did you have the opportunity to work with that were faculty?

Parris: The two primary paleontologists were Robert Warren Wilson and Morton Green at that time. By then I also had met my long-time field colleague Jim Martin. While I was a grad student, he came in as a freshman at that time. And again, the experiences I got there were really important because Joy Keve Hauk who wrote *Badlands*—she wrote much of the natural history handbook—*Life and Landscapes*, that was published there. It's probably still in print. I'm sure they've reprinted it several times. I got to work both on, again, on both living fauna and the extinct fauna there.

And in fact there's a picture in that book of Jim Martin and me collecting together. It was a Dinohyus, a giant entelodont, so-called giant pig, which was discovered that summer in one of the outcrops near Cedar Pass. And Warren, Green, and Jim Martin came in and the three of us collected it together. It was kind of a stereotype looking thing. We had to crawl up on a cliff. I think the public thinks we climb up on cliffs to get fossils quite often. Which actually we don't. But that day we did. And we were extensively photographed hanging on the edge of this cliff pulling out this fossil skull. So I think it made an impressive picture, and they put that in the natural history handbook.

Jim and I worked together in later years. We had 25 years of joint experience in South Dakota in Park Service areas and other federal lands. And our students were always amused to see that picture of us years later. The picture was taken when I was 23 and I think he was 17 at the time.

Santucci: I'll have to look for that. I think I have that book somewhere. And I'm going to go back and take a look at it.

Parris: Yeah. I believe it's called *Badlands Life and Landscapes.*

Santucci: Yeah.

Parris: And it's Joy Keve Hauk, H-A-U-K.

Santucci: Very good. Any other comments about working with Morton Green?

21:51

Parris: I really felt at the end of my experience there that, I felt like I had to go on in graduate school. And unfortunately at that time, I don't think that was really encouraged. And I was pretty much in a position where I was going to have to leave the Park Service in order to go. Glenn Jepsen, Glenn Lowell Jepsen, who was in at Princeton, he was actually a native of the Black Hills. And he visited the school once and he invited me to come to Princeton to do further graduate work. So, in the situation, I was kind of forced to make a judgement. I decided that I would have to leave the Park Service in order to go to Princeton for further graduate work. In all honesty, I had every intention of returning to the Park Service. But there were shifting aspects of it. And in the meantime, I was offered, while I was still at Princeton, I was offered the position, my curatorial position here at the New Jersey State Museum. So I took that and decided to stay.

Other family circumstances came about. Like I said, I ultimately married a woman from the area. Had even less reason to leave New Jersey. Except the other thing that was very meaningful about it was that the Park Service was expanding here in New Jersey into the Delaware Water Gap National Recreation Area. And I was all of a sudden being able to be part of the natural history surveys, fossil and otherwise, at Delaware Water Gap National Recreation Area. My supervisor here at the museum, Raymond [Stye?], did a lot of the vertebrate biological surveys. And I was able to assist him with that, too, being a vertebrate paleontologist I could identify bones and owl pellets and other such things that could add to the biological surveys on behalf of the Park Service.

And my experiences with Park Service personnel there were generally very, very good. They provided us with a historic house, which we used as a field station. I got to spend extensive time at Delaware Water Gap doing both surveys of living fauna and fossil sites. We were given a grant by the Eastern Parks and Monuments Association to actually, the first year was to do Silurian and Devonian fossils, plus the Pleistocene cave faunas. And other potential Pleistocene sites there. And I'd been there at the New Jersey State Museum long enough to realize we did have really good, interesting Pleistocene fauna around here. So we surveyed that. We didn't find any new sites. But we did extensively go over the ones that were both on the New Jersey and the

Pennsylvania side. And we did a very extensive Silurian and early Devonian survey of sites known and discovered by us.

The association funded a second year and we did the upper part of the Devonian at that point. And that was very gratifying because there were some, we found something, some things that were more extensive in terms of the vertebrate fauna of the Devonian fossil record there. New Jersey actually has some of the earliest known fish, Silurian fish. And they are in sites that are within Delaware Water Gap.

And that interest has continued to this day. Barbara Smith Grandstaff and Rodrigo Pellegrini and I are doing studies of the paleohistology of these very early fish fossils that are found at Delaware Water Gap. It's based, though, we haven't had to collect new materials because we actually have a really good extensive collection collected under federal permit back when we did those surveys. So that's something that's still ongoing that came out of that. And it's based on areas in the National Park Service. The current work that the Park Service is doing up there is consolidating and reinterpreting some of what we did in those early years in the surveys when the Delaware Water Gap was still a pretty young Park Service area. But they're still doing it. And it's very good work. They've had a couple of in-house reports within the last year based a lot on what we collected. Park Service personnel have visited it and gone over the collections we have here at Trenton.

A year or two after those early surveys, they asked me to go back and do the Ordovician there. Which I didn't expect we would find a great deal because of about 150 years of surveys, they had like three sites for graptolites. But we learned how to collect them because we learned how to collect within metamorphic terrain, despite the slatey cleavage. We were getting stuff on the bedding plains. And we got about fifty sites where we actually found graptolite. It was a new experience. I jokingly have called them honorary vertebrates ever since. (laughs) That became a major part of our collections here at the state museum also is the graptolites that centered on Delaware Water Gap.

28:10

Santucci: Very good. So to just keep chronologically, I wanted to go back to Badlands and your time in South Dakota for a moment.

Parris: Okay.

Santucci: So when you worked at Badlands, what was your responsibility? Were you an interpretive ranger or resource manager?

Parris: They just about gave me across the board work. Some people would find stuff and get it reported. I could do evening programs. I could do visitor center inquiries for people. But I actually got to collect or arrange for the collecting of fossils, or the identification of material that came in. Occasionally the personnel would find something out there. They wouldn't know whether it was Pleistocene, recent, or Ordovician. Or excuse me, Oligocene/Miocene. And they would rely on me to make those identifications. So I got to do stuff more broadly within the field. And since I was doing thesis work in the area, that was also very helpful. They were really, they really gave me a lot of responsibility there for anything that had anything to do with bones

or shells. (laughs) You can collect fossils within sight of the headquarters there at Badlands. The outcrops are all around you. And that was excellent experience to get to do that.

That fossil skull that I mentioned that was in the handbook, in the *Life and Landscapes* actually was the basis of my first publication. It was a Dinohyus that was from an unusual stratigraphic position. And a couple years later, Mort Green and I collaborated and published on that one. And I still maintain, although I don't get to work on entelodonts, although we do have some here from New Jersey, I did maintain an interest in the subject. They're very difficult to study. (laughs) That was the first one. And like I said, based on my Park Service work, that was my first publication.

Santucci: Very good. And so do you recall your starting and end dates, the range of time you worked at Badlands?

Parris: I don't recall exactly what the dates were. In part, it was kind of vague since I was at the school and I was over at the monument frequently. I don't recall exactly what the beginning and ending dates of my service were. But it was basically a long summer when I was most active.

That was incidentally also met another person who was quite interesting there, George Fisher. George Fisher was – he was an administrator with the Park Service. And that was his whole career, basically, was in administration. But he happened to be an expert on Asian languages. In later years, after he had retired, he joined the American Numismatic Association in Colorado. And wrote extensively about coins. He and I actually corresponded about identification of stuff that we got, Chinese coins that we got in archeological sites here in New Jersey. So until his death, he and I kept up some correspondence and interest. I met him right there in Badlands. I lived next door to him.

32:09

Santucci: Do you recall who the superintendent was at Badlands when you were there?

Parris: It was Frank Hjort. H-J-O-R-T.

Santucci: Okay. So during the time that you were at Badlands, or even at the School of Mines, did you meet any other researchers who were working in the Badlands? Like John Clark or anyone else?

Parris: Yeah. I didn't know John, didn't get to know John Clark very well. But he did come in while I was there. And of course I got to see him in later years, because he had a Princeton connection, too. Although he was at the Field Museum. So yeah, I did get to meet him. Now Ray Alf came in with his crew from California, too. So I got to meet him while I was there. He had pretty extensive experience there. And the other people from the School of Mines that I was interacting with all the time would be out there occasionally. Robert Warren Wilson actually had a, when I arrived he actually had a project going there where he was comparing stuff that was found in Oligocene in place, and stuff that was found in reworked sediment. Just to see how those things would differ. So he actually had a project there.

Mort Green was collecting sediments all around the place. Not only in the monument, but also in the reservation to the south. And as I said, he and Jim Martin came up to work with me on that other skull. Got to see him a couple of other times around then. So there was plenty of action going through there.

There were a few other permittees that came in from one time or another. I believe the Davenport Public Museum had a fossil vertebrate permit at that time. And they actually were involved in what later ended, they were near the site that later became the big dig, that it was found to be quite extensive later. And of course the Park Service itself interpreted that.

The other interaction there was, I had a young woman apply for an internship with us out here at the New Jersey State Museum. She worked at Delaware Water Gap. And that was Rachel Carol Benton. And she worked with us here in New Jersey and then decided that she wanted to go to graduate school. She and I actually did publish a thing or two together. She went on to, back to my old stomping grounds in Rapid City. Got a degree there and she ultimately got her PhD. And of course at that point, Park Service was encouraging positions, PhD vertebrate paleontologists. And she stayed there at Badlands.

Santucci: Interesting connections.

35:23

Parris: I think she was one of the very, she was one of the really fine young people that I worked with in those early years. And I was really pleased to see her get a Park Service career.

Santucci: Very good. When Raymond Alf came to Badlands with his students, did you go out in the field with them at all?

Parris: I think I just went out briefly. But it was mostly I got to meet him in the visitors center. I don't recall exactly where they were working. But yeah, I was not a part of the major project that he had.

Santucci: And just curious, although his time at Badlands predated yours, Morris Skinner actually did work at Badlands during the '30s, at Cedar Pass. Did you ever run into Morris Skinner?

Parris: Not there. I met him later. I met him in his later years. I got to actually even go along on the field trip that the SVP took the year they had the Society of Vertebrate Paleontology meeting in Gainesville. I went on that field trip and he and I were together on one of the sites. Found a fossil horse skull. I got to meet him more that day than I did at any other time. But that was still a really good experience. Yeah, his time there long predated mine.

Gary Johnson, who was also a student at School of Mines, was a seasonal. I think he was not a career conditional the way I was. He was a seasonal the previous year. I got to know Gary a lot more in later years, too.

Santucci: Very good. During the time that you were in Badlands, and was that 1966?

Parris: That was, yeah. Well, I'd just started, I'd started at School of Mines in '66. So then 1967 was the summer I was there.

Santucci: At Badlands. Okay.

Parris: Yes.

Santucci: So that's just about the time where Agate Fossil Beds National Monument was established. Did you have any role? Or did you get down to visit Agate during that time period?

Parris: I worked with specimens that had been collected there. But I wasn't part of the establishment or the discussions there. One thing that did happen at Badlands when I was there is the opportunity to expand the monument, later the park, came. And John Stockert, as I recall, he and I, he was the naturalist. He and I extensively drove down and looked at some of those potential areas. They were later surveyed and a lot of fossils collected there by Phil Bjork and other parties. That was actually part of my Park Service duties was to go down and look at some of those potential acquisition areas with John.

Santucci: Well, that's very interesting. Do you have more recollection about that? And were there any particular sites that you visited?

38:56

Parris: I didn't really do that much except that there were a couple of things we did have to collect at later times that actually were in my second year at Rapid City. At that point, they were adjusting the boundaries somewhat. I think as I recall they did some swaps, land swaps with local ranchers. And it would have been spring of '68 a mosasaur was discovered by one of the local amateur collectors. And that one was actually, it was kind of an embarrassment in some respects because I don't recall the guy's name, but he didn't want to wait for the School of Mines personnel to investigate it further. He went out with a wheelbarrow, dug up the skull and portions of the interior body and brought it in in a wheelbarrow. By the time he got into the School of Mines, he had hundreds and hundreds of fragments. And we were discussing what to do with it. And we actually prepped it and studied the mosasaur skull. We didn't have any administrative capability because Robert Warren Wilson was then in – he was then in Europe on a sabbatical.

And George Louis Callison and I, George was kind of his periodic replacement, George and I went out and investigated the site. I don't recall whether we were able to determine whether it was in the boundaries of the park. But it probably was. However, nothing happened with it until 1998 when Gorden Bell and I returned to the site based on the notes that George and I had taken. I don't recall if they've collected further now, but we actually found a specimen twenty years later. By that point it was definitely determined that it was private property by then. I believe the Park Service had had it, but I believe they had swapped it. So whether or not they actually collected this specimen which would have required the landowner's permission by that time, I'm not sure. But that was the kind of thing that I would get, even though I was not on active Park Service duty at the time. They would entrust us with checking sites.

Santucci: Very good.

Parris: Yeah, we did collect a couple of the things on Sheep Mountain Table at that time under Park Service permit.

Santucci: Very good. So you've been to Sheep Mountain Table. Did you get out to the titanothere graveyards at all?

Parris: Yeah, a couple of times I got out to see that. At that point, that was then – the particular sites that I saw then were not part of the park. But I believe they've since been added.

Santucci: And you're probably aware that the South Unit was used as a bombing range for practice during World War II. Did you have any observation—

Parris: (laughs) Only too well. They were still actively using it when I was in the Park Service there. They were still, the evening would come, sometimes they'd be firing for rather long periods of time. There was a lot of racket would come from that. All of us had the experience of picking up all manner of projectiles and casings and everything else in the outcrop. In the course of prospecting, we'd find lots of those things.

There were quite a few people would come out there, too, for National Guard service and they would not be familiar with that type of terrain. So just about all the Park Service personnel at one time or another had to help people get unstuck from the gumbo. Completely against any advice they would drive off the road and get their vehicle stuck.

43:35

Santucci: Interesting. I didn't realize they were using that bombing range in the late 1960s.

Parris: I think it was really, it was probably restricted in territory by that point. But yeah, that was part of the summer experience was having the National Guardsmen out there. I don't think they were, I don't think it was as extensive a territory as it had been in previous years.

Santucci: And the other military operations were the missile silos.

Parris: Yep, that was actively being added at that time.

Santucci: So you were aware of their presence there.

Parris: Yes, we were. But yeah, the major activity there, well, yeah, we actually had some graduate students at the School of Mines who were officers there. So it was actively ongoing then.

Santucci: Any other thoughts or recollections regarding Badlands National Park?

Parris: Well, like I said, it was generally an excellent experience. I was so pleased that they had, some of the other things that they were doing then. We were almost experimental in that we were trying to restore the bighorn sheep and things like that. They had much more success in that after that time, which I was very gratified. I think that kind of thing was a great source of inspiration to future Park Service visitors to see those restorations.

And as I said, the Park Service really did encourage, their partnerships with the school of mines really did result in a lot of good research. One of my classmates mapped the Oligocene/Miocene boundary area in Sheep Mountain Table. So it wasn't just us collecting fossils. There was a lot of really good work going on between the park, the monument, and the school.

Santucci: Do you recall during that time period, was there a rivalry at all between the University of Nebraska paleontologists and the South Dakota School of Mines paleontologists?

Parris: There were differences of opinion and interpretation of the bed. Yeah. And the stratigraphy generally. But yeah, it was very civilized, I would say. But, yeah. It certainly, if I was looking to go on to a PhD program, I think possibly had I inquired about Nebraska, I might have been discouraged by the people who were in South Dakota from going there. That would be a mild statement. But I think it probably would be true. And of course the chance to, Glenn Jepsen being, the chance to study with him, a South Dakota native, was obviously foremost in the minds of the people in South Dakota when they were encouraging me to go to Princeton.

Santucci: Very good. When you were at the School of Mines, it wasn't long before that that they abolished the old Fossil Cycad National Monument. Were you aware of that site at all?

47:20

Parris: I was aware of it. Yeah, it was about that time. Several people asked me about it. And I was aware of it, but I didn't go out there. Yeah, that was just about, that was about the last times for it. As I recall, if you wanted to look it up, say in the World Book Encyclopedia, it was still in there. But nobody really talked much about it at the school. But they had specimens, of course.

Santucci: One other question. Any knowledge or observations regarding unauthorized collection of fossils during the time that you were at Badlands?

Parris: It was really hard to protect and really cover areas with the limited staffing that the Park Service had in the protective agencies. And to some degree, I'm sure that there was some fossil poaching. On the other hand, we were very conscientious about trying to prevent it. And I can't think, I can't remember a single case where anybody was directly apprehended. But with only four or five rangers and naturalists. Like Sheep Mountain Table is so far out there. Somebody would go out and patrol it in the course of the day. And if you wanted to catch a casual collector, it probably wasn't really likely to happen. On the other hand, I think, I know the Park Service was very serious about preventing fossil poaching. They had put up an interpretive areas, the Fossil Trail. And a lot of it was vandalized by people just trying to grab stuff. And it was pretty hard, even though that was right in the heart of the populated area of the monument it was still pretty hard to catch them. They wound up putting replicas in some of the empty cases which were damaged. They wanted people to see something there. But it was just pretty hard to prevent general theft. There was nothing I can tell you that happened during the summer I was most active. I don't think we had a single bad case then. But they'd had some before and I'm sure they had some later.

Santucci: One other general question is that you were there just about the time of the fiftieth anniversary of the Park Service, which they called Mission 66.

Parris: Yeah.

Santucci: Does that ring a bell to you at all?

Parris: It rings a bell, but I didn't have a lot to do with it administratively. I do recall it. It does definitely rings a bell.

Santucci: So was the visitors center constructed about that time period?

Parris: It was constructed before I got there by a few years, and it was extensively reconstructed later. It was just called the visitors' center then. I believe it's called the Ben Reifel Center now, or probably still is. Ben Reifel was active, he was an eastern South Dakota congressman when I was there. So I guess it was after he had left office that they named it for him.

Santucci: Okay. So you wrap things up at Badlands. You finished your graduate work at the South Dakota School of Mines. And then you left Dakota to go back east?

51:11

Parris: Yeah. It was at that time I decided I would have to leave my position to get a, to pursue PhD studies. So, yeah. But my interaction with the Park Service has continued since then off and on in several places. The other one which I got to experience, which you will recall, while I didn't do any fieldwork there, I did get to study part of the fauna that came from Port Kennedy Cave, which his associated with Valley Forge.

Santucci: Yeah. That's an amazing locality.

Parris: Yeah. Yeah. I got to study the turtles right there. That alone was really an extensive experience to learn. One of the northernmost *Geochelone*, that is tortoise occurrences, was in that cave.

Santucci: And as far as you know, all of the collections from Port Kennedy Cave went to the Academy of Natural Sciences.

Parris: As far as I know, that's where they are. Yes.

Santucci: Okay. And there's a lot of holotype vertebrate fossils from that cave, some described by Cope.

Parris: Yes. Yes. And that is to some degree still under restudy. Ted Daeschler and Earle Spamer I did get to study the reptilian stuff. And the turtles were, like I said, that was the primary thing that I got to restudy.

Santucci: And that's an Irvingtonian site, is that correct?

Parris: Yeah. Yes, it is.

Santucci: Very good. So, let's see. So, other than Valley Forge, you told us a little bit about Delaware Water Gap. Are there any other parks that you have been involved with from a research perspective?

Parris: No. I think that's it. I think that's the extent of it.

Santucci: Okay. And so you are continuing your work now at the New Jersey State Museum. And you had mentioned that you're looking at bone histology. And how's that work coming?

Parris: We're just getting started on it. Rod Pellegrini did a report on it at the International Symposium on Paleohistology, which we hosted in 2017. [unclear] two years. And he reported on that earlier this year at Cape Town. And it's ongoing. We're still, we're comparing it with another federal site occurrence in Wyoming, which is Bear Tooth Butte. We collected there under a Forest Service permit. And those are ostracoderms, they're early fish which we are doing comparative studies on. The stuff we have from the Park Service, then we got at Delaware Water Gap, we're comparing that with the Devonian early fish that we're getting from Bear Tooth Butte.

54:31

Santucci: Very good. Well, that's a pretty diverse and rich career that you've had.

Parris: And I've enjoyed every minute of it, I think. (laughs) I think part of it is that yeah, I have got to work with so many different kinds of fossils. And I very much appreciate that.

Santucci: Yeah. I liked your comments at the beginning in terms of how your experiences with the Park Service shaped your life and career. It might be good to just restate that here at the end, because I think that's worth hearing.

Parris: Yes, all right. Again, I think the fact that I got in the Park Service and got such a general introduction to natural history, in particular as it's practiced in the national parks, that enabled me to look at a very wide variety of fauna and even flora, both living and extinct. And that's one of the advantages of the Park Service is it's a preservational thing that they, and they preserve everything. And you have to be prepared to deal with all manner of things living and extinct. Living and fossil. That was a big advantage to me when I came here to Trenton to the state museum. I had a supervisor, Raymond J. Stein, who just encouraged us to continue with all that. We have general collections of natural history that are centered on New Jersey. And our curatorial staff have to be prepared to look at all manner of life, and biological and paleontological things. And living and fossil.

Santucci: Well, very good. Well, on behalf of us in the National Park Service and our paleontology program, we really appreciate you taking the time to share some of your experiences. And I'm going to go ahead and type up a transcript and I'll send a copy to you so you can have that.

Parris: Okay. Off the record, I would say last time I met a field trip up there, Delaware Water Gap, one of the staff members was leading a canoe trip. And they wanted to stop and see one of

the sites. I met them there. At that point I could say confidently to them, you can be old army and old navy and so forth. I feel like I'm old Park Service. (laughter)

Santucci: Well, very good. Well, that's a good way to end it. Any other last thoughts before we wrap up?

Parris: No. No, I think that's pretty much it.

Santucci: Well, thanks so much. And I'll be in touch soon with the transcript. And look forward to hearing about your fossil histology project.

Parris: Okay. I'll keep you informed.

Santucci: Have a great day.

Parris: Okay. Bye.

Santucci: Bye.

57:52

[END OF INTERVIEW]