

## AN EXAMINATION OF DEE SIMPSON'S ROLE IN THE DEVELOPMENT OF CALIFORNIA DESERT ARCHAEOLOGY

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### ABSTRACT

The surface archaeology of the desert West has been largely based on surveys conducted by archaeologists working with volunteers in the California Desert. Malcolm Rogers, Elizabeth W.F. Campbell and Ruth DeEtte Simpson have all worked hard to define desert archaeology using volunteers as their basic crew. This paper examines Dee Simpson's role in the development of a substantive body of archaeological knowledge about the early human inhabitants of the California Desert.

#### A Prehistory of Ms Ruth DeEtte Simpson

It is generally assumed that the first professional archaeology conducted in the California Desert was undertaken by Malcolm Rogers of the San Diego Museum of Man, under a series of federal antiquity permits issued by the Smithsonian Institution, in the 1920s and early 1930s. Rogers was attempting to define the archaeology within the greater southern California area and he attempted to order it chronologically into several phases of prehistory. The desert was a likely place for him to work since he had seen the collections which Harrington had gathered and knew that the Campbells were making systematic collections for the Southwest Museum. Rogers' collections remain at the San Diego Museum of Man; the Campbell collections are split into two parts, one of which is at the Southwest Museum and the other at the curation facility at Joshua Tree National Park.

While Rogers was all over the desert, the Campbells' primary work centered around the Twentynine Palms area. Campbell collected in the vicinity of the Calico site but it appears that Rogers never visited the Calico Mountains or Mule Canyon. However, Rogers did work in the vicinity in 1928, 1929, and 1930 and collected from sites such as Yermo Point, described as being a "1 mile strip of river terrace...with scattered camping and quarrying on the north terrace of the Mohave River" (Rogers 1930). He also visited and collected extensively from sites on West Cronese Lake, Newberry Lake, Lava Point, Black Canyon, and other sites within the general vicinity of the Calico Mountains. For Rogers the logical place to look for antiquity was along the shores of the dry lake beds of the western deserts and in the caves which occurred in the arid basin and ranges of the Mojave Desert.

In Rogers' report "Of Archaeological Investigations on the Mohave Desert Region During 1930" he indicated that with the personnel of "...the writer; Mr. F.S. Rogers, photographer; Mr. George Carter, field assistant; and Mr. H. Sharp, cook and assistant...and two roadsters, a Ford and a Chevrolet...they were able to negotiate the sandy areas and great difficulty was

encountered in keeping the other car up with the itinerary." Rogers found that his field research complemented Harrington's research in Nevada. He also commented on the difficult environment:

This area is part of the great Mohave Desert and presents a universally forbidding environment to man today and probably has for many years past. With the exception of the banks of the Colorado and Mohave Rivers, no part of it now seems capable of supporting anything but a few roving nomads, such as the Chemehuevi, who were found in possession of it in historic times...it is evident that the natural resources were never such that large permanent settlements could be maintained (Rogers 1930).

Rogers also believed that open sites in the desert "...are so greatly eroded that stratigraphical evidence is invariably absent." A final recommendation in the 1930 report was that the survey of the balance of San Bernardino County and all of Riverside County should be completed and that there was considerable unfinished work in the way of cave excavations which should be finished. We know that in during the rest of the 1930s Rogers excavated at the turquoise mines in the Halloran Summit area and then refocused his efforts on sites in Imperial and San Diego counties.

#### Dee in the 1930s

As a young woman growing up in the southern California area, Ruth DeEtte Simpson was enthralled with geology and archaeology. Her father was an amateur botanist and her mother an avocational archaeologist. As a high school student she had met Dr. Mark R. Harrington and Emil Haurey and volunteered her free time working on archaeological collections with them at the Southwest Museum. As a high school senior she planned to be a journalism student at the University of Southern California and to become a sports writer. All that changed on Career Day when she discovered that there was a

college major in Anthropology. Now her museum visits became countless volunteer hours working with Harrington on archaeological collections and assisting him in the field along with Edwin Walker.

In 1936 she entered the University of Southern California, where, as a freshman, she managed to be taken by Professor Fred Gros, a geologist, to a lecture for upper class honor students where she listened to and was introduced to Elizabeth Campbell. She began working with Elizabeth Campbell in the Pinto Basin, Twentynine Palms and at the southern end of Lake Mojave shortly after that lecture. All during the late 1930s Dee studied archaeology and geology and surveyed the archaeology of the desert with the Campbells, M. R. Harrington, Ritner Sayles and Gerald Smith. Her role was that of student assistant. In 1941 she received her B.S. from the University of Southern California but immediately enrolled in the Graduate Program under geologist Dr. Thomas Clements. Dr. Clements considered her his star pupil (Eldred 1995). Her studies focused on the Pleistocene epoch.

The war years reduced travel somewhat because of gasoline rationing. But the summer of 1941 was spent in the University of Arizona field school under the direction of Dr. Emil Haurey. Sometime during the late 1930s and early 1940s she met Dr. Gerald E. Smith and Ritner Sayles who were instrumental in recording the archaeology of the Mojave Desert.

She never met Malcolm Rogers. As she tells it, she tried, but Rogers' response was quite abrupt; he said that he was retired and had no time to meet. In 1942 she accompanied Sayles and Smith to Toomey Hill, east of Yermo, where she was first exposed to what later became almost a life's work—early man sites in the Mojave Desert. From what I can glean from the records, there were abundant surface manifestations of late prehistoric sites associated with the lake beds of Lake Manix. Evidence included projectile points, "sleeping circles," trails, and shrines. No grinding stones are reported to have been found. Ritner Sayles took Gerry Smith and Dee to some of these sites as well as to the apparently older, more primitive and distinctively different lithic material above the ancient shorelines while on that fateful 1942 trip to Toomey Hill. Sayles had also introduced Dr. Gerald Smith to the archeology of the desert area and during the latter portions of the 1930s and the early 1940s, money permitting, they recorded sites along the Mojave River drainage. Sayles was in constant contact with Simpson as he recorded the site locations in the desert.

#### Becoming a Professional in the 1940s

After she received her Masters degree Dee went to work for the Heard Museum in Phoenix from 1944 until 1946, gaining an appreciation for Hohokam archaeology. She helped Haurey at Pueblo Grande, bicycling each day to and from the site. Dee could not bring herself to stay away from California archaeology, though, and in the summer of 1945 she showed up at Borax Lake as a crew member for Harrington's excavations and also worked at the Stahl site. It was at the Lake Borax site that she met her lifetime friend, Dr. Charles Rozaire, who was then a senior in high school. That introduction changed

Rozaire's life; he was determined, after talking with Dee, that he should become an archaeologist. In the summer of 1946 Harrington had an accident which left him with a badly broken leg. He needed assistance, so Dee was hired by the Southwest Museum to come back to California to assist Harrington in his work.

Dee's appreciation for desert archaeology had a firm foundation. She knew what was needed and could compare California archaeology favorably with the archaeology of the rest of the west. In 1946 she met with the leading southern California archaeologists and it was determined that an archaeological organization was needed to foster an appreciation for archaeology in southern California. Dee became a founding member of the Archaeological Survey Association of Southern California (ASA), led by Drs. Hodge and Harrington, George Brainerd and Edwin F. Walker. The ASA at the time had the noble goal of recording all archaeological sites in southern California.

Due to the fear of urban expansion and of expanding alfalfa farms in the desert area, the ASA, under the guidance of the Southwest Museum, divided the desert into dry lake basins. The Benjamin Ernest McCowans took the Salton Basin to survey (Lake LeConte), Stuart Peck took the dry lake beds near Edwards Air Force Base in Los Angeles County, and Dee Simpson was assigned to survey the Lake Manix basin including Troy and Coyote dry lakes and the inventory of evidence collected previously in the Calico Mountains.

#### The Desert Years—The 1950s

The Lake Manix Survey began in 1954. As Dee states "numerous Indian and Paleo-Indian sites were recorded below the higher shorelines of Lake Manix. These sites range in age from 200 to about 8000 years. More ancient sites were recorded above the highest shorelines on the large alluvial fan east of Mule Canyon" (Simpson 1979:9) where Sayles had taken them. Dee concludes that the older tool assemblage included bifaces, chopping tools, large scrapers, and debitage and were generally primitive in form and workmanship. The artifacts form an assemblage of similar materials; most are percussion-flaked choppers, scrapers, bifaces, cores and waste flakes with a few hammerstones and blade cores. Dee named the assemblage of artifacts the Lake Manix Lithic Complex (Moratto: 1984:39). It is this assemblage of artifacts which has occupied a significant portion of Dee's life, although she has remained interested in all eras of prehistory as demonstrated by her work at Newberry Cave in 1956 (Smith 1957).

1956 was a special year for Dee. She took Lake Manix artifacts to Denver to the opening of the new Hall of Early Man in America at the Denver Museum, at the urging of Marie Wormington (Simpson 1995). There she happened to meet Dr. Kenneth Oakley who was impressed enough with the material to suggest that she should go to Europe and show the artifacts to Europeanists. Later that year Dee took some of these older-looking artifacts with her to the Congress of Americas in Philadelphia and showed them to African and European archaeologists, who were excited about the potential of early sites in America. In 1958 Dee traveled to Europe where she visited Dr.

Kenneth Oakley and excavated at Swanscomb, a lower paleolithic site with chopping tools and Clactonian and Acheulean artifacts.

During these years, the Coyote Basin and Coyote Gulch were also inventoried (Simpson 1961) and the ASA did considerable work in the Inscription/Black Canyon area under Dee's direction. The dry lake beds were further inventoried. By 1963 the Lake Manix site surveys were generally completed, with over 120 sites being reported upon, and were suspended except as related to excavations of the Calico Early Man Site under the direction of Dr. Louis S. B. Leakey and Dee. From 1958 until 1991 the Bureau of Land Management issued no fewer than nine permits for Dee and Dr. Gerald Smith to conduct these surveys, to collect specimens and to conduct excavations. After all of this effort Dee still feels that additional sites and data remain to be found in the area (Simpson 1995).

Dee was also no stranger to the Owens Valley. She excavated at Crowley Lake Cave, Portuguese Bench, Crooked Creek Cave and in the Bristle Cones. These sites all had late prehistoric, archaic, and some Paleo-Indian components. This work was undertaken with the Enfield family for the Eastern California Museum and the U.S. Forest Service. During the early sixties Dee began her work on Rock Camp in the San Bernardino National Forest, where she still is working, mapping the archaeological site.

Dee's association with Harrington continued. During the 1955 and 1956 field season Dee worked with Harrington, Peck, Kreiger, Touhy, Clements and Rozaire at Tule Springs, Nevada. Along with Harrington, Dee authored the definitive work on the site—*Tule Springs, Nevada with Other Evidences of Pleistocene Man in North America* (Harrington and Simpson: 1961).

While visiting Dr. Oakley and others in Europe in 1958, an event occurred which forever changed Dee's life and the archaeology of the desert of California. In Dee's own words:

Kenneth Oakley sent me to see people in various parts of England, and then one day he said casually to me you know it's too bad while you're here you can't meet Dr. Leakey, and I said well, yes that would be wonderful but I have neither the money nor the time. I can't afford to go to Africa and he said well, he's not in Africa, he's in London. The next day would be my last in England. I was to visit the College of Surgeons. That morning as I was getting up I had a phone call from Dr. Oakley saying bring your material and come over to the museum; there's a possibility that sometime today there'll be a little while when you can see Dr. Leakey. Well, I was there when the museum opened and went in with the materials and after an hour or so Dr. Oakley's secretary came in and said Dr. Leakey's appointment schedule is completely filled; you might as well go on with the schedule you'd planned for today, he hasn't any time to see you. I said no, I would wait, possibly someone wouldn't show up and she came in a little after one o'clock and said well you know there is about a five

minute period just before two o'clock and if you have your materials ready you can meet Dr. Leakey and talk to him for five minutes. So I had everything laid out in a tray and pictures of the sites, everything ready. She took me in to him at five minutes of two and he was interested in the material. At 5:30 the janitor came in and said that they were going to close the building and we would have to get out (Simpson 1967).

Leakey told Dee that he wanted to finish the conversation but he had a speech to give, and he would see her at her hotel later that evening. Again in Dee's own words:

So I went back to the hotel and was packing, getting ready to leave for France the next morning. It was my last day in London, and I told her (my mother) about Dr. Leakey and so we found some semi-clean clothes and got ready to go to dinner. Things were pretty much of a mess in the room by this time, and then there was no telephone call so we decided that maybe this was the end, that Dr. Leakey hadn't been able to get away or he'd decided that the material from America was far afield for his interest. Anyway he didn't come, so we went on getting our packing done. Just before seven the phone rang. It was Dr. Leakey, he was downstairs, he'd been there for the better part of an hour....he couldn't remember my name and finally he had gone over to the man who arranges tours at the museum...at the hotel and had asked him if there was any young woman from America staying at the hotel who had been consistently asking about archaeological sites and getting on tours that would take her to Stonehenge and places of this sort. He said, yes just one, and that's Miss Simpson; they told him the room number and he phones us. We went down, we had dinner, Dr. Leakey spent all of dinnertime explaining the flaking techniques of early man, breaking up the rolls and using them as demonstration material much to the displeasure of the waiters who sat around. And then when we were through he reached down and picked up a very large briefcase he had with him and said I have some interesting new material, new finds, I'm bringing the first evidence of it with me and said you find a place and we can go and talk about it and I'll show you the pictures. And so, my mother went all round the hotel and there was no place where it was quiet and she said give me ten minutes and you can come up to our room. So she went up and threw everything in the closet and under the bed—we never did find my hat—so in ten minutes we arrived. It was short of eight-thirty; at two o'clock he left and as he left the room he turned around and he shook his finger at me and he said 'you keep on looking, you'll find this material in deposit and when you do let me know and we will get money and we will have an excavation in America' (Simpson 1967).

## The 1960s and Beyond Calico Hills

The chopper/chopping complex-style tools recovered from above the Lake Manix maximum shoreline of 1780 feet ASL impressed Dr. Leakey. This material was so distinctive and impressive that Dr. Leakey was taken on a field visit by Dee to the Yermo fan in 1963 (Simpson 1980:7), which was the next time that Dee was able to see him. He suggested an exact location to test for evidence of pre-Paleo-Indians in the now famous Early Man site. With Leakey's assistance the San Bernardino County Museum was finally able to obtain funding from a number of sources for major excavation work at Calico. Sponsorship came from the National Geographic Society, the University of Pennsylvania Museum, and the Isotope, Wenner-Gren, L.S.B. Leakey Foundation, and Wilkie Brothers Foundation for work which began in 1964 and was funded until 1970. The six years of field work provided most of the data which is available today at the San Bernardino County Museum. However, some volunteer excavation still continues (Simpson 1995).

Dee took a leave of absence from the Southwest Museum for what she thought would be a six month period in 1964; twenty years later she retired as San Bernardino County Archaeologist. During the thirty years of excavation at the Calico Hills site Dee has served as mentor to thousands of volunteers who have dedicated their weekends and vacation time to assisting her in her quest to step outside of the traditional archaeological model which states that America was populated less than 20,000 years ago. As a volunteer, she continues to direct the Calico Project. She has persevered with humor and with passion for additional knowledge supporting her belief that answers to questions about the antiquity of humans and their ways of life in the New World can be found at sites like those above the ancient shores of Pleistocene lakes, including Lake Manix, and at buried sites like the Calico Early Man Site. Today she serves as Curator Emeritus at the San Bernardino County Museum, analyzing the materials from the thirty years of excavation. The site has become a tourist attraction for scientists the world over visiting the western United States and for the casual visitor driving by on Interstate 15.

### **The Calico Site**

I would now like to shift my focus to discuss Dee's premiere work, the Calico Early Man Site. The Calico site is situated in the central portion of the Mojave Desert above the Mojave River. Today's environment represents a significant transition from the climate which existed during the terminal Pleistocene and during much of the Holocene. Based upon nearly 30 years of research we know that the site was located above the terrace of ancient Lake Manix in an alluvial/colluvial deposit dating upward of 200,000 years overlaying the Miocene Barstow Formation which is 12-17 million years old. During the period of the past 200,000 years a large alluvial fan known as the Yermo or Calico Fan formed. The formation consists of a variety of materials which were washed down from the Calico Mountains, including andesite, dacite, porphyries, chert, and chalcedony deposits in the eastern Mule Canyon drainage. The

fan is separated from the rest of the formation by faulting. These terraces are roughly assigned to the Wisconsin glacial period and to the subsequent Little Pluvial and related period of mountain glaciation, the Hilgard. The third Sangamon interglacial was the time of the formation of the fan, implying an age of nearly 70,000 years (Clemens 1979).

Since the climate was wetter than today, it is assumed that the ecosystem supported larger plants, such as those found in a pinon-juniper savanna similar to conditions now present in the northern portion of the Great Basin. This increased rainfall and increase in vegetation also was responsible for larger quantities of biomass which supported larger animals than were present during the latter portion of the Holocene. Rancholabrean index animals including the large herbivores such as the mammoth, tusk fragments of which have been located at Calico (Simpson 1979), *Bison antiquus*, the extinct horse, camels, bears, puma, llama, mountain sheep, rabbit, sloth, pronghorn antelope, etc. are abundantly present in the local fossil record (Jefferson 1985). Jefferson also discusses the lacustrine conditions which are confirmed by invertebrates such as numerous accumulations of freshwater bivalves and gastropods, fossil bird species, etc., all of which, if they were present during the time period suggested for Calico, would have provided an abundant source of foods—as Dr. Emma Lou Davis would say, a paleo-grocery store. Those resources, combined with the abundance of good stone, would have made life relatively easy for the hunting/gathering migratory peoples who visited the area during those millennia (Davis, Brown, and Nichols 1980).

### The Excavation and the Artifacts

The Calico collection of the last 30 years consists of thousands of artifacts that have been recovered from the site from surveys and subsurface excavation. In 1979 and again in 1989 definitive works were published on the excavation and finally on a stone tool typology of the site (Schuiling 1979; Simpson 1989). According to Simpson (1980:14) archaeological evidence recovered from the excavation may be listed in the following categories:

1. lithic tools, fragmentary and complete;
2. workshop material including flakes, rejects, and markedly modified amorphous objects;
3. technically significant workshop material including flakes with bulbs and bulb scars, concavo-convex flakes, soft-hammer flakes, flakes with partial and totally obliterated bulbs, flakes and cores with prepared platforms, etc;
4. features such as an apparently artificial arrangement of rocks

In Simpson's 1989 report she divides the artifacts into a series of morphological types. These types are described as follows: 1) Core tools: picks, handaxe-like tools, choppers, anvils, hammerstones, and ovate bifaces; 2) Light duty tools: convex-edged side scrapers, straight-edged side scrapers, concave-edged and notched scrapers, end scrapers, multi-function tools on blades, utilized flakes, single-spurred graters, double-

spurred graters, light biface cutting tools, bifaced utilized flakes, serrated flake tools (denticulate and serrated flakes), light rotational tools, stout rotational tools, blades, and bladelets, and sharp flakes. If found in the Old World, this assemblage would represent a typical Middle Paleolithic site assemblage as defined by Bordes in the Middle Paleolithic typology used to distinguish Mousterian sites in the Dordogne Valley.

But, the site is found not in Europe or Asia but in North America, where dates of human occupancy of over 12,000 years BP are always suspect and rarely accepted. We see in the popular literature and in some scientific publications that the dating of Western Hemisphere sites is being pushed back further into the late Pleistocene. Examples come from our own western deserts where Drs. Dave Whitley and Ron Dorn are experimenting with various dating protocols to obtain dates from varnish on stone tools and petroglyphs of 18,000-26,000 BP. (Whitley and Dorn 1995). MacNeish's work in New Mexico and the ongoing work throughout South America are pushing the acceptability of early dates in the New World further back in time (Simpson 1995).

### Calico—A National Treasure

The Calico site is a national treasure. Where else in North America has a site been excavated for such a lengthy period of time, in such a precise, manner and is still available for research, inspection, and interpretation? Where else can questions related to the peopling of the new world be asked and maybe answered? Where else can an extinct ecosystem be studied where humans may have manipulated the environment tens of thousands of years ago? Where else can we access thousands of lithic artifacts which can be studied independently and ask questions about typology, form and function? Nowhere that I know of.

In 1972 the Calico Early Man Site was listed in the National Register of Historic Places because "the site is of scientific concern and public interest at a state, national and international level...present evidence indicates that it is the oldest known archaeological site excavated in the Western Hemisphere" (National Register Nomination Form, NPS: 1972). Because the site is located on federal land all of the collection and excavation has been conducted through an Antiquities Act Permit, Special Use Permit or a Cultural Resource Use Permit issued under authority of the Archaeological Resources Protection Act. Permits were originally issued by the National Park Service, then by the Bureau of Land Management. A special condition to all permits states that all recovered items are the property of the United States, which means that the Calico artifacts are officially United States government property and subject to all of the regulations governing any property of the U.S. In this case, the Calico artifacts are subject to the Uniform Rules and Regulations governing artifacts, the Native American Graves Protection and Repatriation Act and the Department of Interior Manual 411 on Museum Properties. The manual contains instruction and guidelines about museum property and its care, storage, accessibility, protection, etc.

In the case of the Calico collection, it is less likely to be subject to the forces of nature (decay, insect infestations, humidity problems, etc) because it is generally stone. So most of the guidance in the manual does not apply. What does apply is the fact that the collection is recognized as a government-owned collection stored in a private facility for the benefit of the American public. In essence, a national treasure stored at the San Bernardino County Museum and is available for inspection by the scientific public through coordination with the Museum and staff.

### The Calico Collection

This collection is the only large scale collection in existence which may answer questions about the antiquity of humans in the New World. As such, it is important that the collection be maintained professionally and be accessible. Many questions remain to be answered about the site and about the artifacts. Some of them that have been satisfactorily answered in the opinions of a number of scientists are the following (Simpson 1978 and 1989):

1. The specimens are artifacts and are evidence of human presence.
2. The artifacts demonstrate the presence of an early man lithic tool kit.
3. The diversity and quality of tools and quantity of definitive percussion-made flakes demonstrate the extent of human craftsmanship.
4. The subsurface deposit shows clusters of debitage.
5. There are used tools as well as quarried materials.
6. There is stratigraphic evidence of time depth at the site.
7. The diagnostic flakes are all of selective materials.
8. There is a non-random distribution of artifacts.
9. There are multiple examples of tool typology.
10. Bulb scars occur on interior flakes.
11. Patterns of behavior are beginning to show up in the relationship of the tools to the site.

The collection can also be used as a starting place to ask more questions of the site. What was its primary purpose? Are there other sites like it elsewhere in the Mojave Desert? Further excavations may reveal ecological materials that were not retrieved during the years of the major efforts at data recovery. The site exists so that we may go back with precise research questions. Simpson feels that additional excavation should occur and additional geological studies of the Manix Basin should occur. Certainly, money is needed for everything, and to conduct further research lots of money may be needed.

Emma Lou Davis stated that, "What Calico needs is an up-to-date, aggressive program of geomorphological investigations" (Davis et al. 1980). Davis framed all of her thoughts on the Calico site as a great California Desert Mystery Story waiting to be told. She wanted to see the tusks recovered from Calico dated to see if we can chronologically place the faunal remains in association with the stone tools.

I would also like to see the site kept open for the general public as well as the scientific community. In *The Management Plan for the Calico Early Man Site* (Budinger 1984) a series of major issues and goals was laid out, to be implemented by a partnership between the Friends of Calico Early Man Site, Inc., and the BLM. All of the goals were contingent upon funding which has been limited and sporadic; however it is important that these goals not be forgotten if Calico is ever going to be saved for posterity. The goals were administrative, developmental and maintenance, cultural/scientific, recreational/interpretive and monitoring. There is no doubt that the scientific data will continue to remain where it exists today for as long as the earth's processes occur in a predictable fashion. What will not stay stable unless money and effort is put into it is the exposed excavation, the buildings, the access, and of course, the visitor information. The collection will be maintained, but the physical plant will eventually need attention. The BLM plan calls for cooperation, but without money only band-aids can be put in place.

Since the excavation began in 1964, over 30 years ago, it is timely to rethink approaches on how to preserve the site. If all else fails, we do have the collection available for posterity, but the value of Calico goes beyond the collection, it goes to the very heart of science and scientific inquiry—to the very core of the nature of inquiry. Science for the sake of science is the core of the discipline of archaeology and is admirably exemplified by Dee Simpson's sixty years of tenacity and diligence. To seek knowledge from something unknown benefits not only our discipline but the general public as well. Undoubtedly this is what has caused the volunteers at Calico to contribute thousands of hours to the field and laboratory. My challenge to you is to attempt to explore new avenues which will help to preserve the site and to further our knowledge of

the peopling of America and the human in the ecosystem, activities that occurred in the Lake Manix Basin so many thousands of years ago.

In closing, I would like to state that we owe Dee a debt of gratitude for her six decades of work in the California Desert; for her perseverance when all hope probably seemed to be lost; for her dedication when she was on the California Desert Conservation Area Advisory Council representing archaeology; for her persistence in ensuring that archaeological resources were recognized as areas of extreme importance; and for the creation of Archaeological Areas of Critical Environmental Concern such as the Calico Early Man Site.

A final thought about Dee: "Getting along with people is such an important part of one's life that I just don't understand why it isn't a regular course in college, just as mathematics and other subjects are. Without that talent everything is impossible. You know that if one is a bore, people are going to run, no matter if he's a wizard at mathematics, archaeology or atomic energy" (Marx 1992). Groucho Marx said that. If you can't get along with Dee, you can't get along with anyone. I said that.

#### Notes

I sincerely appreciate all of the effort that everyone put into this session which honored Ruth DeEtte Simpson. I also would like to thank the Board of the Society for California Archaeology for presenting her with a Special Recognition Award for her dedication and diligence. She has made desert archaeology a more fulfilling field of endeavor. The enthusiasm and dedication which she has is contagious and I hope that it is transferred to future generations of desert archaeologists.

#### REFERENCES CITED

- Budinger, Fred E.  
 1979 The Calico Early Man Site: A Unique Outdoor Museum. In *Pleistocene Man at Calico* edited by Walter C. Schuiling. San Bernardino County Museum Quarterly Volume XXVI, No. 4, Summer 1979.  
 1984 Management Plan for Calico Early Man site. Ms on file with the USDI Bureau of Land Management, Sacramento, California.
- Clements, Thomas  
 1979 The Geology of the Yermo Fan. *Pleistocene Man at Calico* edited by Walter C. Schuiling. San Bernardino County Museum Quarterly, Volume XXCI, No. 4, Summer 1979.
- Davis, Emma Lou, Kathym H. Brown, and Jacqueline Nichols  
 1980 *Evaluation of Early Human Activities and Remains in the California Desert*. Bureau of Land Management Cultural Resources Publications in Anthropology and History, Eric W. Ritter, General Series editor. Riverside, California.
- Eldred, Ann  
 1995 Personal communication.
- Harrington, Mark R. and Ruth DeEtte Simpson  
 1961 Tule Springs, Nevada with Other Evidences of Pleistocene Man in North America. *Southwest Museum Papers No. 18*. Los Angeles.
- Jefferson, George T.  
 1985 Stratigraphy and Geologic History of the Pleistocene Lake Manix Formation, Central Mojave Desert, California. In *Geological Investigation Along Interstate 15, Cajon Pass to Manix Lake, California*, pp. 157-170. Compiled by R. E. Reynolds. Redlands, Ca., San Bernardino County Museum.

- Marx, Miriam Allen  
 1992 *Love, Groucho: Letters from Groucho Marx to His Daughter Miriam* Faber and Faber, Inc., Winchester, MA.
- Moratto, Michael J.  
 1984 *California Archaeology*. San Diego: Academic Press, Inc.
- Rogers, Malcolm J.  
 1930 Of Archaeological Investigations on the Mohave Desert Region During 1930. Letter report submitted to National Park Service. On file, San Diego Museum of Man, San Diego, CA.
- Schuiling, Walter C., Editor  
 1979 *Pleistocene Man at Calico*. San Bernardino County Museum Association Quarterly Volume XXVI. No. 4, Summer. San Bernardino County Museum, Redlands, CA.
- Simpson, Ruth DeEtte  
 1961 Coyote Gulch: Archaeological Investigations of An Early Lithic Locality in the Mohave Desert of San Bernardino County. *Archaeological Survey Association of Southern California Paper No. 5*. Redlands, Ca.  
 1965 *An Archaeological Survey of Troy Lake*. San Bernardino County Museum Quarterly. Redlands, CA.  
 1967 Oral Interview with Denny Dennison. Transcribed by Russell L. Kaldenberg in 1994.  
 1978 The Calico Mountains Archaeological Site. In *Early Man in America: From a Circum-Pacific Perspective*, Alan Lyle Bryan, editor pp. 218-220. Archaeological Researches International, Edmonton, Canada.
- 1979 The Calico Mountains Archaeological Project. In *Pleistocene Man at Calico*, W. C. Schuiling, ed., pps. 9-20. San Bernardino County Museum Quarterly, 26(4).  
 1980 The Calico Mountains Site: Pleistocene Archaeology in the Mojave Desert. In *Early Native Americans: Prehistoric Demography, Economy, and Technology*, edited by David L. Browman, pp. 7-20. Mouton, New York.  
 1989 *An Introduction to the Calico Early Man Site Lithic Assemblage*. San Bernardino County Museum Association Quarterly Volume XXXVI, Number 3, Fall. Redlands, CA.  
 1995 Personal communication.
- Simpson, Ruth DeEtte, L.W. Patterson, and C.A. Singer  
 1986 Lithic Technology of the Calico Mountains Site, Southern California. In *New Evidence for Pleistocene Peopling of the Americas*, pp. 89-103. Center for the Study of Early Man, Kampsville, Ill.
- Smith, G.A., W.C. Schuiling, L. Martin, R.J. Sayles, and P. Jillson  
 1957 The Archaeology of Newberry Cave, San Bernardino County, California. *San Bernardino County Museum Association Scientific Series 1, Quarterly 4(3)*. Redlands, Ca.
- Whitley, David S. and Ronald I. Dorn  
 1995 The Long and Short of It: California Archaeology, Varnish Dating, and the Peopling of the Americas. Paper delivered at the Society for California Archaeology Annual Meetings, Eureka, California.

## APPENDIX

### THE BEGINNINGS OF THE CALICO EARLY MAN SITE: AN ORAL INTERVIEW WITH RUTH DE ETTE SIMPSON IN 1967

Taped by Denny Dennison

Transcribed from the original tape By Russell L. Kaldenberg

December 1994

The main reason for going on this trip was to attend the Congress of Americas Conference in Philadelphia. I went there to tell about the work that had been finished at Tule Springs in Nevada. And while I was primarily working in Tule Springs, Nevada with Dr. Harrington in those years, I was also beginning the work out here at Manix Lake which had begun in 1954 and this being 1956 I had already had about two full field seasons of weekend trips to the Manix Basin. We had found many of the sites in the lower portion of the (Manix) basin and had begun to find materials on the high shore line and above. The first Manix Lake materials were re-

ally found on the New Years weekend of 1956, so by the summer I had quite a few nice specimens and I took an assortment of these with me. I showed these both at Philadelphia and at the various museums wherever people evidenced any interest in the subject. Any interest that was evidenced in the Manix Lake material was among the representatives of the foreign delegation at Philadelphia.

One of the interesting things at all of these major conferences in which foreign delegations are involved is the role that is played in these conferences by the missionaries. People

have the ability to get out into the back country and to explore and to get to see the early material and to know native people. And certainly one of the best examples of this was Father Gormes from Australia, whom I met at Philadelphia before I gave my talk on Tule Springs. He gave one of the first talks at the Congress. His talk was on the miniature petroglyphs in the desert in Australia. And after this was over we got to talking and he asked me why I was there and I told him I was from Tule Springs excavation and of course this was a well-known project that had been going on at varying intervals the better part of thirty years. Dr. Harrington had been there first in the early thirties. Father Gormes asked me if I had any specimens from Tule Springs; I told him no, but I do have some from my own work which is out in the Mojave Desert in California. So when he asked to see it I showed him photographs of petroglyphs. These were interesting but he wanted to see artifacts and I told him the artifacts are from I thought a very early culture and perhaps this wouldn't interest him and he said, "Oh, yes it does, because we have the evidence of some early materials just being discovered in Australia and I'm very much interested in the early materials."

So I brought the specimens that I had at the hotel to the next day's meeting and showed them to Father Gormes, then I gave my talk on Tule Springs. In the audience, when I gave my talk on Tule Springs, was Father Amphreon Favrio from the Belgian Congo, who understood very very little English, but Father Gormes had told him about the material that I had and he came to hear the Tule Springs lecture and then he joined Father Gormes in seeing the materials I had with me from the Manix Lake area. So this was an interesting part; Father Amphreon Favrio and Father Gormes both felt that this material was very different from anything they had seen in America and far more like the material that Father Favrio had seen in various parts of Africa. They suggested that my terminology wasn't the best in the world; that it was too bad I didn't have some sort of contact with foreign archeologists who could see this material and could set up a phraseology for me to communicate better with colleagues in other countries who were interested in this sort of material. That sort of ended it at the moment.

But Father Gormes in his travels around the country, after the meeting was over, let me know that he had learned that there was going to be a meeting in Denver in a short time at which Kenneth Oakley with the British Museum of Natural History was going to be the key speaker at the dedication of the new Hall of Early Man and American Archaeology in the Denver Museum. And he suggested that I should see Kenneth Oakley and discuss this material with him and see what he thought about it. In the mean time, Dr. Marie Wormington had invited me as a delegate from the Southwest Museum to attend these meetings; so I packed up my material from Manix Lake and went to Denver for the double purpose of attending the dedication and of seeing Kenneth Oakley. After the meeting was over at the new wing, we went over to Marie Wormington's home, spread out the material in her dining room and Kenneth Oakley was very much impressed with it and said that I should plan a trip to Europe to discuss this material with European paleolithic specialists. And I think that Kenneth Oak-

ley was a little surprised that there wasn't more interest in this country in the early material and that I was carrying out this work in the Manix Basin the way that I was.

It all began, really, back in about 1952 when the Archaeological Survey Association of Southern California established a dry lake survey. It was under the direction of Stuart Peck, who was very much interested in the early material and knew that through the use of the lake basin for farming and various other activities the evidence that was visible on the shore lines was rapidly disappearing. So he listed what he considered to be the important lake basins and among them was Manix Lake. Well, I had been to Manix Lake in the late forties with Dr. Gerald Smith with the San Bernardino County Museum and Ritner Sayles who was the, one of the first people in this area to be interested in early man material and who was the man who had given me my main field instruction. He was in the bottom of the first pit I ever jumped into up at Forest Lake, the first early man site that I was on. And Ritner had been out in this area in 1941 and had seen large tools on the hills and reported them to Gerry Smith and then in the later forties, he and Gerry brought me to the site and showed it to me and I liked it but that was all at the moment. While I was in college working essentially in archaeology, my interest perhaps even more than in academic archaeology was in the work that I was doing in my minor field which was geology when I was with Dr. Thomas Clements and when Dr. Clements realized my interest in early man he really began guiding my program of study. And during these early years, the late forties and early fifties, Dr. Clements more or less guided my study in preparation for dry lake study, dry lake surveys and the recovery of material in these basins. So, in my studies was a reading of an early geological report that said there was no evidence of archaeology in Manix Lake basin. So, when Manix Lake basin was on the list and I had already seen material here with Gerry Smith and Ritner it seemed like a real good area to come into. Not only that but [it was] just over the hill from Lake Mojave which lies to the East and where there was so much early material, and I really thought when we came here that this would be a good place to find Pinto Basin and Lake Mojave sites; that's what I really came into Manix Lake basin looking for.

The first trip was with a geologist, Fred Gross from Redlands University, and a small group of people. We went into the outlet area of Manix Lake down near Afton Canyon and found a partial Gypsum Cave point on one of the lower terraces there. Then, the first year of the survey, 1952, the survey was confined almost entirely to the area around the outlet of the lake—the lower part of Mojave River—for the simple reason that I thought that the terraces around the Mojave River were actually the shore line of the lake. I didn't realize what a monstrous basin it really was. Realization of this in about 1953 came with the help of Stuart Peck and we realized the Manix Basin incorporated Troy Lake to the southeast and Coyote Lake to the northwest and we began finding more and more Pinto sites and Amargosa sites. Then in January 1956 we began to find the bigger tools above the high shore lines of the lake. The material became known as the Lake Manix Lithic Industries. And so it was this material, then, that began to ac-

cumulate in the spring of 1956, which I showed Kenneth Oakley and which he said should be the basis for a trip to Europe.

Dr. E. B. Renault in Denver and Kenneth Oakley then developed my itinerary and made the contacts for me with the paleolithic specialists in England and France and Spain clear up into Copenhagen. And then in 1958 I went, taking with me a large assortment of the tools, all of them surface material and representing both biface and uniface specimens.

Before I went, some of these specimens were shown to colleagues from University of California, Berkeley. The first ones they saw were all biface and they looked at them and said well you can't have a site unless you have uniface specimens. So, then the next man I showed just uniface specimens to, and he said well you have to have biface specimens, uniface specimens don't mean a thing. So, about a month later I saw these people again. This time I had both kinds of specimens. They were very busy and didn't have time to see me so that was the way our attempt to get an opinion and help from the Berkeley people turned out prior to my departure for Europe. I took with me, also, half a dozen comparable pieces from the high shore lines of the Black Fork area in Wyoming. The trip started in England and much of my time was spent there, nearly the whole first month, the month of May 1958. By this time, of course, since my visit with Kenneth Oakley I had another year to gather more materials and by this time we had even come into the Mule Canyon area in Calico, so I had both materials from around Coyote Lake and from Mule Canyon....Kenneth Oakley sent me to see people in various parts of England—various sites in England—I dug down at Swanscomb. And then one day he said casually to me you know it's too bad while you're here you can't meet Dr. Leakey. And I said well, yes, that would be wonderful but I have neither the money nor the time. I can't afford to go to Africa. And he said well, he's not in Africa he's in London right now and so naturally I wanted very much to meet Dr. Leakey and show him this material. He said he's too busy, he has no time to see you and he's over at the London University a great deal of the time and you might check once in a while when you're there, and I did but it came to nothing; apparently there was no chance to see him.

I went to Ipswich, came back from Ipswich, spent one more day with Dr. Oakley and then my last day I was going back to the College of Surgeons to see some of the physical anthropology materials. Just when I was getting up that morning I got a phone call from Dr. Oakley saying bring your material and come over to the museum; there's a possibility that sometime today there'll be a little while when you can see Dr. Leakey. Well, I was there when the museum opened and went in with the materials and after an hour or so Dr. Oakley's secretary came in and said Dr. Leakey's appointment schedule is completely filled; you might as well go on with the schedule you'd planned for today, he hasn't any time to see you. I said no, I would wait, there's a possibility someone wouldn't show up. And she came in a little after one o'clock and said well, you know, there is about a five minute period just before two o'clock and if you have your materials ready you can meet Dr. Leakey and talk to him for five minutes. So, I had every-

thing laid out in a tray and pictures of the sites, everything ready. She took me in to him at five minutes of two and he was interested in the material and at five thirty the janitor came in and said that they were going to close the building and we would have to get out.

We've always wondered since then what ever happened to all the appointments that were scheduled from two to five. Dr. Leakey, when they told us we would have to leave, he said, well, I have a dinner engagement, I have some evening engagements, I'm going to try to break them. If I can I'll be at your hotel by six-thirty. So I went back to the hotel and was packing, getting ready to leave for France the next morning. It was my last day in London, and I told my mother about Dr. Leakey and so we found some semi-clean clothes and got ready to go to dinner. Things were pretty much of a mess in the room by this time, and then there was no telephone call so we decided that maybe this was the end, that Dr. Leakey hadn't been able to get away or he'd decided that the material from America was far afield for his interest. Anyway he didn't come, so we went on getting our packing done. Just before seven the phone rang. It was Dr. Leakey. He was downstairs, he'd been there for the better part of an hour (but) he couldn't remember my name and finally he had gone over to the man who arranges tours at the museum at the hotel and had asked him if there was any young woman from America staying at the hotel who had been consistently asking about archaeological sites and getting on tours that would take her to Stonehenge and places of this sort. He said, yes just one, and that's Miss Simpson; they told him the room number and he phoned us. We went down, we had dinner, Dr. Leakey spent all of dinnertime explaining the flaking techniques of early man, breaking up the rolls and using them as demonstration material much to the displeasure of the waiters who sat around.

And then when we were through he reached down and picked up a very large briefcase he had with him and said here I have some interesting new material, new finds, I'm just bringing the first evidence of with me; and he said you find a place and we can go and talk about it and I'll show you the pictures. And so my mother went all round the hotel and there was no place where it was quiet and she said give me ten minutes and you can come up to our room. So, she went up and threw everything in the closet and under the bed, and we never did find my hat, and so in ten minutes we arrived. It was then about eight thirty and he stayed and told about the very beginnings of the discoveries that led up to the Zinjanthropus in the spring of 1958. So, at two o'clock he left and as he left the room he turned around and he shook his finger at me and he said you keep on looking you'll find this material in deposit and when you do let me know and we will get money and we will have an expedition in America.

The next day we went from England to France, continued the European tour showing the material I had brought to the various scientists that Kenneth Oakley had selected and these included Pat Kelley who was Master of Antiquities at the Musee de l'Homme in Paris. While I was with him I had the opportunity to show the material to the Abbe Breuil who, of course, was one of the early believers in Europe that there was

early man in America. And the Abbe was very generous in his enthusiasm and interest in seeing this material. And then we went on through Spain, various parts of France and up into Denmark and returned to United States late in the fall. In the middle of October I came back into the Manix area and began the survey again.

Now the concentration was in the eastern part of the Calico Mountains. We left the actual lake shores behind and we had a large Archaeological Survey Association field trip; in fact, a series of these field trips into the Calicos in which we would divide the area into mile squares and then split these into quarter mile squares and send a team into each quarter mile. And the only area that we did not include in the survey was the northern part of section 22 which was liberally posted with Keep Out signs (and) No Trespassing. We obeyed those signs, but on the last of this series of field trips Rob Peters who was a retired Geologist said that he thought that these signs were up largely to protect people from falling in to the open mine shafts and that he as a geologist thought he knew mining well enough that he could go through the area with no difficulty and certainly would do no damage to the mining claim, and he would see if there was any evidence in the area that I could see. So, Rob Peters went in by himself and spent the day. When he came out that day he was thoroughly excited. He said you must go in there. There is nothing dangerous, no open pits and there is a broad commercial bentonite cut. And I asked what bentonite was and he said this was a volcanic ash that was deposited in lake clay; apparently this was part of Barstow Formation Miocene deposits that are characteristic in this part of the Calicos and he said in this commercial cut there is an overburden of several feet and I think there are artifacts in broken pieces of chalcedony protruding from the bank of the commercial cut. Well, I was working at that time with a Mr. Ralph Sedrosa from Burbank and John Kettle, who was a fairly new member of the Archaeological Survey Association and the three of us with Rob Peters made a quick trip late that afternoon into this commercial Bentonite prospect area in section 22, and sure enough Rob Peters was right! There were pieces of chalcedony suddenly protruding from the face of the commercial cut.

There was about 8 feet of sand and gravel laying on top of the Barstow formation. Now this was November, late in November of 1958, so as soon as I saw that there were what I thought were artifacts protruding from the bank I started trying to find a scientist, an archaeologist, who would come out and look at this material in place and bear witness for the discovery and I could find no one. It took me three years to find an American archaeologist who was willing to come and look and stick his neck out and say whether or not these were truly tools protruding from the bank. I finally did obtain Dr. Elias Seller, Director of the Texas Memorial Museum, and one of America's most dedicated workers in the study of the association of man and Pleistocene Fauna. So, Dr. Sellers came and spent a considerable period of time studying the lake beds and Lake Manix and he then came up into the bentonite prospect, witnessed the recovery of specimens, removed several of them himself, proclaimed them to be man made tools and subse-

quently wrote a brief note about this material which appeared in print shortly before he died a year or two later. This was, as I say, late in 1958 that we found the material; it was three years later that Dr. Sellers came and saw the material in place. Other people came into the area and geologists, especially Dr. Clements. Dr. Clements felt less enthusiastic about the area than I did. He felt it was a secondary deposit, but since the material was in place and we didn't know how old it was he agreed that it was certainly an area that merited further examination.

Well, in 1963 Dr. Leakey visited the United States. Now I had not told him about this find. I felt it was a long ways from him and that, well, it just didn't seem to be worth his while that I should do this. After all, he was involved in things much bigger and older. So in 1963 we knew that he was coming to Riverside to give a series of lectures and I was determined that I wasn't going to miss the first one; it was a public lecture. The others were also public lectures but this first one was in a small auditorium and in order to be sure we got in I was there three hours before the lecture was due to commence. I was accompanied by a large segment of the Archaeological Survey Association. When the doors opened we went in; of course, we got the best seats, downstairs right in the middle, and when Dr. Leakey came up to prepare his slides for his lecture he looked down. He looked over a fairly sizable audience and he spotted us immediately, looked down and waved at me, came over to the edge of the platform, and leaned over and said "you have your material in place?" I was rather surprised by this but answered "yes, I do," and he said "I want to see you as soon as we can get together." Of course, like all his other lectures that was an overflow and he was mobbed afterwards and I had no chance to talk with him that evening. The next day he gave us a talk in the afternoon. It was a Southwestern Anthropological Association meeting and he gave the two lectures and held some private conferences besides. I saw him as he was preparing for one of these private conferences and I told him that I had my material with me but I was not going to bother him with it and could he suggest a time when it would be convenient. And he did. He told me to come the next Wednesday at 11:00.

Well, Wednesday at 11:00 was a little difficult because I was at Southwest Museum and this type of work was not considered part of my museum duties. By working two Sundays in exchange for taking Wednesday off I did manage to get to Riverside with the materials. We had a wonderful time, he had my mother and me to lunch and he and I spent the late part of the morning and up until about 4:00 in the afternoon going over the material and analyzing what had been found. And he liked it very much. And I could see something was bothering him though. I asked him what was wrong and he said well, these are all such nice pieces, I wish I could see some of the workshop materials. So, I said well, when is your next lecture, and he told me and I said well, that day I will come out and I will bring some of the workshop material. And so I arrived that evening with my truck loaded with some 100-150 boxes of workshop materials and residue from the debris of the various workshops in the Calico area and along the lake

shores. He had me pile these in his kitchen, which didn't leave very much room. The overflow went into his bedroom and the living room and the walls were lined with it. He retained that material all the rest of the time he was at Riverside.

And about two or three weeks later he came down off the platform after one of the series of public lectures that he was giving and he said I like this material so much, it's so interesting I must see the site. There was one other early man site in the western area that he was concerned with. It was (in) the Panamint Valley area. I had the feeling that he wanted to see both and he was interested in both sites but he had to choose and apparently that night he chose the Manix area as the one in which he was going to be interested. And it is to the lasting credit of the people who brought him the material and had worked for years in the Panamint Valley area, Clem and Sylvia Winslow, that they were very generous in their pleasure in the fact that he had selected my site. They have been helpful in our work at the Calico site since then, which is the mark of people with a real genuine interest in the progress of science.

We set up a date to come out to the Calico area—May 11—and I asked Dr. Leakey if he would mind if there were a second car, we were going some distance from the highway and we had to get him back for his lectures and everything and I didn't want to see him lost out there in the desert. So he laughed and said no, if I wanted a second car it was alright so long as the person who drove it kept out of the way. And then he kind of smiled and looked at me and said, "And that will go for you too. When you show me where the site is I want you to leave me alone and when I'm through examining it I will call you."

So I got hold of Mr. Kettle, who had been coming out to all the lectures and who was by this time President of the Survey Association, and I told him the situation—that I wanted a second four-wheel-drive vehicle but he'd have to stay out of the way. He said he'd be glad to do that, and so to get ready for this trip my mother and I went out on the preceding weekend to stock specimens in place and hide them so I could take Dr. Leakey quickly to the material in place. And much to our horror, when we arrived there, standing right in front of the commercial prospect cut—the bentonite cut—was a large bulldozer. It had already gouged out a portion of the deposit in which the specimens had been recovered and was obviously standing there ready to go to work again on Monday morning, so we hunted over the area and of course couldn't find the bulldozer operator. We spent that night searching the bars and restaurants in Yermo and the eastern part of Barstow without success so we slept right at the last No Trespassing sign.

When they drove in in the morning, at six o'clock, why, we were up because we slept even with our shoes on. We just stood up and got in the front seat of the truck and drove right up and left our sleeping bags right in the middle of the area down here at the gate-pulled in right behind them and explained what the problem was. As we drove up my mother said if they don't cooperate, when he starts the bulldozer up, I'll faint and fall right in front of it. So when she explained to Mr. Jones, who was the lease holder, why I was there and what the trouble

was, my mother explained to Mr. Jones, the lease holder, I had found archaeological material in the site and that Dr. Leakey had come from Africa and this was the only site in America that he was interested in and he was going to come out to see it in a week. Couldn't he please hold off his bulldozers for that length of time.

Meanwhile, I was talking to the bulldozer operator and telling him that there were a lot of places better to work than where he was and he didn't seem to care about that at all, all he was going to do was what Mr. Gunn told him to do. So, Mr. Gunn gave us a real bad time which we later found out was his usual way of kidding. And he told my mother that this was the one place in his whole plain that he had to work, he had a lot of money tied up in working here and he went on for about 10 or 15 minutes. Then he laughed and said no, he didn't have to work here; he'd take his bulldozer over and make a road out from the site so people wouldn't get stuck coming in.

The old road was one that came in thru the bentonite and was impassable in the wet weather, so he would improve his claim by making an all-weather road. And that was a very good deed on his part because it's the road we've been using as an all-weather road throughout the history of the excavation. Once we were free and clear of the bulldozer, we cleaned up the debris we'd left behind us, torn up soil and so on, and fixed the deposit so that Dr. Leakey could get into it and the following week very early in the morning, four o'clock, I was in the vicinity of Dr. Leakey's house and showed up at the appointed hour which was 4:30 AM. We had breakfast and were ready to leave his home just as there was a suggestion of a sunrise. We got out to Yermo and met John Kettle and proceeded into the prospect area. I showed Dr. Leakey where the bentonite deposit was and explained the geology of it to him and left him. And then John and I took up a vigil back by the cars. In about 25 minutes Dr. Leakey called me down and as I came into the pit I knew from his face that he was not happy and as I walked up to him he said this is absolutely no good at all, but we shall find the right site, it's near by."

Then he set off on a dog trot which I have since come to know well and we went all over the hills in that vicinity. Once in a while he would stop and ask me what Dr. Clements had said about this phase or that of the area and finally we were up on the crest of the region. From there we had a good view of the whole area and I was able to show him that this was a large alluvial fan that had flowed eastward out of the Calico Mountains and it had been beheaded by the erosion of the Mule Canyon—the cutting thru of Mule Canyon, and that after that the fan had starved as a result of the lack of materials reaching it from the hills and that an erosional pattern giving it the hill and valley appearance of today had followed after that. He stood there awhile looking at it nodding his head slowly and said that must have taken a long, long time, that's just what we want. And then he wandered on over the hills for about two hours and began to circle back and as he circled back he was coming into the area that was immediately west and north of the bentonite prospects, and then he was on top of that ridge where we had talked previously. He said, "We're awfully close to the right location here. Let me see if we can't find another

road cut, another bulldozer cut." We wandered down off the hill and onto a high flat area and ahead of us was an area that had been badly disturbed by the bulldozer and he said, "I think this is it!" He went down and there was a road cut there and he stood there looking at the bank for a long time and he turned around and he smiled and he said, "Have the young man with the cameras come up. We've found the site." So, I motioned down into the valley and John Kettle came up with the cameras. And he (Leakey) climbed up on top of the road cut and picked up some rocks and he set them up into four cairns and made a square 25 by 25 feet. He looked over at me and said, "You will dig here." And I said but, Dr. Leakey, this is on a hillside. It's down. It's steep. I said why don't we go up on top here, its only a few feet to the left. And he said you go up on top you will have a big deposit of overburden to dig thru before you get down to our deposit that's going to have the material in it. You dig where I'm putting the cairns and you will not have any overburden and I think you have a very good chance of finding artifacts. Then John took some pictures for him and we went on with the survey of the basin.

Then Dr. Leakey went east and made the request for the grant from National Geographic and National Geographic decided that before they would approve the grant that they would send Drs. Haurey and Haynes out to the University of Arizona to look at the area geologically and archaeologically. And they came out and they spent the day and I never saw the report that they sent in but it was such that National Geographic turned down Dr. Leakey's request. So, I wrote Dr. Leakey this, that I guess the project won't be funded, I appreciated his efforts but I guess the project as such was not going to come off because the grant had been refused, and he wrote me "Patience"—this was always one of his words to me when I was losing a bit of patience—and he said, "Patience, Dee, that grant will come thru." And, so the next time he came to Washington he sent for Vance Haynes and they had a confrontation at National Geographic and the result was that Dr. Leakey did convince the board that the grant should be made and the excavation begun.

And so the grant was approved in the spring of 1964 and Dr. Clements was appointed as the project geologist although there was some opposition to this on the board of National Geographic. Dr. Alex Kreiger was asked to serve as Consultant Archaeologist and I was in the field as Field Director. The funds were to be administered by Dr. Gerald Smith. San Bernardino County Museum was to be the repository for the material and Dr. Leakey, of course, was in charge of the whole program. At that time I was still working for Southwest Mu-

seum and so I took a six month leave of absence. The our program was supposed to only last for two months.

Well, I was appointed temporary County Archaeologist and temporary San Bernardino County Museum curator and I came into the field then supposedly for a two month project in November 1964. In the meantime we had to establish a crew early in the summer. These people had saved their vacation time to come out and work, usually in stints of two weeks each, and I had a crew that was large enough to serve two weeks each and encompass the two months that we were to be in the field.

And Mr. Kettle [was] in charge of logistics, and he set up our overhead measuring device which was unique to the archaeological profession. It is a device of power laid on its side running on tracks west to east across the pit, and from this we are able to determine our depth thru any given point in the excavation and thru any point of the original ground level. So this being a unique device that actually worked when it was put up on wheels, the crew felt that the expedition was a success even before the ground was broken at least in one sense. And of course I was concerned because I had no way of knowing that was even a deposit where we were going to dig. Here, the ground had been laid, the overhead device set up, the crew hired and we were in the field and I thought that possibly within the first day or two there'd be a bald spot showing in the excavation and we would hit the Barstow formation and that would be the end.

But that was not the end. This is the spring of 1967 and we're still looking for the Barstow formations, except in one small part of our pit where we went down with pick and shovel deliberately in what we jokingly called our speed pit in an effort to learn where the Barstow formation was. And you know that over the left of the pit we have from four to ten feet to reach it, and we have no idea where it is in relation to our other test pits and trenches so there is a rich deposit. And just as Dr. Leakey predicted when we opened up our trenches and stuff, further to the west where I had wanted to dig in the first place there was an overburden of at least ten feet before we hit the artifact-bearing structure, which we have only hit in the last month or two after three seasons of searching. So he was right without ever seeing the inside of the hill, not only the fact that there was fan structure there that was probably containing artifacts but also that there was no overburden in contrast to an area only ten or fifteen feet away where the overburden was very thick.