

## **Summary of Presentation at Montezuma Castle**      October 17, 2020 Presentation by Matt Guebard

Text below is based on notes taken by Dennis DuBose and written by Dennis DuBose.  
All inaccuracies are due to Dennis DuBose

Over 100 years ago many local Southwest residents were concerned about ancient and historic sites and wanted to see them protected and preserved. This led to the Antiquities Act being passed by Congress and then signed into law by Theodore Roosevelt on June 8, 1906. The Antiquities Act gives the US President unilateral authority to designate National Monuments. Montezuma Castle was one of the first, designated in December, 1906.

In 1895 some individuals from Prescott and Flagstaff put some money together to do some preservation work on Montezuma Castle, but the National Park Service took over in 1916 to repair and interpret the cliff dwelling.

In 1933-34 there was some excavation as part of a Depression Era New Deal program. There was a little more excavation and architectural analysis in 1988.

The Park Service currently does research since about 2008 and helps maintain the site along with Tuzigoot and Montezuma Well. There are four masons who work year-round to keep these sites safe and secure.

Research has coordinated with Tribal Partners for about eleven years to better interpret the site. There have been a few new publications and these results are beginning to be incorporated into the Museum and Wayside interpretations.

Montezuma Castle is located on Beaver Creek, which flows into the Verde River a few miles further on. Building began about the year 1125. It took about 100 years to build from that to the form you see today.

Montezuma Castle is five stories tall. It has about 4500 square feet of space spread among about 20 rooms. Each room is built on a ledge,

The lower outer wall of Montezuma Castle presently has a reddish color, darker than the upper stories. This is actually a "sacrificial" coating serving to protect the original surface underneath.

A key part of the Montezuma Castle site is a second structure now called Castle A at the base of the cliff below Montezuma Castle cliff dwelling. Castle A was originally several stories high, as evidenced by beam sockets in the cliff wall behind it. Castle A originally had about 45-50 rooms, many more than the Castle itself above (about 15).

It is estimated that in the 1350s the entire complex contained about 250 people. It is estimated that the population of the Verde Valley about this time was 3500-4500 people.

The site habitation ended about 1375-1395. This 250 years or so is a long time for occupation for cliff dwellings. Occupation is typically only about 30 years for other cliff dwellings.

Archaeologists call these people who lived at Montezuma Castle and other sites in the Verde Valley during this time as Southern Sinagua. This is a group of people defined by styles of masonry, ceramics, burials, and other detectable cultural traits. They were not a tribe or unified group of people and probably were multicultural. Defining pottery styles included both locally made and those acquired by trade. Burials were in shafts, laying on the back.

One of the research questions has been, "Can we get better dates for the occupation than come from comparative ceramics?"

The 1933 New Deal Era excavations were aimed at increasing employment. The idea was to employ local people to do the excavation to collect artifacts and put them into local museums, and set up the site for tourism, increasing local revenues.

In 1933-34, Earl Jackson and Sallie Pierce (Van Valkenburgh/Harris) supervised some ten excavators working on Castle A at the base of the Montezuma Castle cliff. The New Deal workers excavated 9 rooms, primarily looking for artifacts and burials.

The excavation records show that 7 of the 9 rooms were burned in a "conflagration." That information did not become part of the traditional interpretation of Montezuma Castle.

A major objective of recent research has been to date this fire. There are two usual explanations for a room being burned, abandonment/decommissioning or attack by hostiles. Usually in a large site one or two rooms are found burned, with different dates, each room has its own history. But here there was a massive fire burning most rooms at the same time, apparently.

Recent research went back to the field notes of the 1930s excavations. These reported evidence of human remains with severe injuries. Skeletal remains showed violent trauma. There were 4 or 5 sets of remains with cuts on the back of the head or cranial fractures. The burned bone was "singed while still green," indicating that the fire and death of these people occurred at the same time.

All of this was not reported externally. The paradigm of Anthropologists in the 1930s was that the Ancestral Pueblos were peaceful and egalitarian. Earl Jackson probably decided not to go against the grain of distinguished established researchers with possible contrary information.

Current Park Service Researchers met with Tribal Partners to see what they had to say about these events, did they have any traditional stories about violence here. First the Hopi were asked. They said that there was a story in their tribal histories about how some of their ancestors were attacked by fire during a crazy siege. Some people high up looked down and saw others destroyed. According to Hopi tribal history, there was a long siege while the attackers waited below for them to give up, but finally the attackers departed.

Then Yavapai-Apaches say they have a story about attacking Montezuma Castle. They teamed up, they said, for a big raid. They did not indicate there was a long siege. However, to set Castle A on fire the raiders may have needed to gather wood, brush, and pitch as accelerants. This would take some time, not long, but to people trapped above and later passing on the story to later generations, it could have seemed like a long time.

The Yavapai-Apaches oral tradition includes the use of flaming arrows. It seemed to the modern Researchers that flaming arrows were not likely to set such rooms on fire. The Researchers had built an isolated replica room in imitation of an actual room, using the same materials, including a wooden roof ceiling, for experimental purposes, to learn techniques. A local enthusiast, who makes replica bows and arrows for testing by following ancient styles, was called upon to do an experiment. The Park Service Researchers asked him to try and set the isolated replica room on fire with a flaming arrow. The fellow made a pitch ball, put it on one of his arrows, lit it, and shot it onto the replica room roof. The roof immediately caught fire and it went so fast that they scrambled to put it out in fear that they were close to starting a forest fire. So, perhaps, there is something to the Yavapai-Apache oral history.

Hopi tradition is that the different Hopi Villages and Clans each have their own history. In origin, different clans were moving around all the time. Different groups migrated to nearby Hopi and asked for admission. They might stay in a nearby location such as Homolovi until accepted for admission. Each group had to bring something to contribute to the Hopi community. Also, they were expected to learn the Hopi language and adopt Hopi culture.

In the cliff wall against which Castle A stood, there is a “pillar” of fired clay mortar embedded. Originally, perhaps, a room wall joined the cliff at this point, mortared in well to hold it. It was fired in the “conflagration.”

The modern method of Archaeomagnetic Dating works like this ... In clay mortar there is a certain amount of iron. These iron particles have their magnetic poles arranged at random, based on the history of the material. They are fixed. But if the material is heated up the magnetic poles are loosened up. Then as the material cools, these magnetic poles align with the current magnetic field of the earth at the locality and become fixed anew.

But the magnetic field of the earth varies and wanders over time. This wandering has been mapped by geologists. So, if the direction of the magnetic poles in the fired clay can be determined and matched to the direction of the earth's magnetic field at some point in the past, then that point in time is when the material cooled. In this case, it is when the Castle A mortar cooled after the "conflagration."

In 2013, Archaeomagnetic Dating gave a date between 1375 to 1395 for the Castle A fire. This late date is consistent and correlates with pottery styles found at the site. For example, Jeddito Yellow Ware did not exist until after 1315 and it is found at the site.

Recent Researchers have looked very closely at the architecture of Montezuma Castle. It was found that walls were plastered and replastered. The plaster was examined using microscopy. Three larger rooms were discovered to have had bright yellow plaster, a color matching Jeddito Yellow Ware. These larger rooms had more features, indicating that they may have had special purposes. The yellow color is important in Hopi concepts, being associated with fertility, water, and plant life.

Incidentally, all 15 or so rooms in Montezuma Castle are large rooms. There are no separate large rooms for habitation and smaller rooms for storage. Rooms were used for both habitation and storage.

Many rooms in Montezuma Castle have soot marks on ceilings, often deep soot. They were plastered over again and again. This raises a question about air quality in a room with a fire in it. The Park Service Researchers used the replica room (the one almost burned down testing a flaming arrow) to test out the air quality inside. The results compared to similar studies of people worldwide living in small enclosed rooms with fires. Such people have many respiratory health problems, especially women and children under the age of 5 years, who spend a lot of time indoors. In the Developing World, pneumonia caused by poor air quality is the most common cause of death for children under the age of five.

The occupants of Montezuma Castle would live into their 40s if they were lucky enough to survive childhood. Most died young of infections. Infections were a problem for older people as well. Grinding corn with stones gets sand in the meal. Long term eating of this meal grinds down the teeth. Human remains of older people show many abscesses in teeth and jaws.

The local water near Montezuma Castle has a high arsenic content. Montezuma Well has a very high arsenic content.

Oral histories of Apaches and Pueblo peoples indicate there were a lot of land disputes in the area. Archaeology does not pick this up.

Although the Yavapai were nominally hunter-gatherers rather than agricultural people, after the arrival of the Spanish the Yavapai would often plant corn and squash near springs or alluvial fans and leave after the seeds sprouted. Then they would return later

to harvest what had survived and was left. This is a different plant care pattern from agricultural tribes.

In modern times the Park Service uses 3 ladders to get up to Montezuma Castle. They go up there 3 or 4 times a year to check for rodents and deterioration. They post a lookout to warn visitors not to attempt to climb the ladders. Visitors would indeed try the ladders if the lookout did not warn them away. Somehow in 1989 someone got up there and posted a graffiti.

Currently, the National Park Service attempts to do preservation and repair by doing the least amount possible. In the 1930s they were more heavy-handed. For example, doorways were reconstructed or closed in. This was in order to "direct" visitor traffic. Up into the early 1950s visitors were allowed up into Montezuma Castle. But when the new highway was built, visitor traffic greatly increased and the structure began deteriorating. So, the cliff dwelling is now closed to the public. There is hope that eventually a 3-D interactive virtual computer model will be made so visitors can experience exploring the site.