

# ALL POINTS BULLETIN



## Colorado Archaeological Society-Denver Chapter

*...in the future, as in the past, the gathering of information will depend to a great extent on cooperation between avocational and professional archaeologists. ~ H.M. Wormington, 1978*

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### Exploring the Granada War Relocation Center: The History and Archaeology of “Camp Amache”

By Justin Kelley

One of the most unique, and thought-provoking archaeological sites in Colorado is the Granada War Relocation Center, better known to history as “Camp Amache.” Built at the time the United States entered World War II, the camp is one of ten concentration camps in the US for the incarceration of Japanese-Americans. Camp Amache was only in existence for three years, but the impact on the site’s inhabitants and their descendants is still being felt today. The site is especially relevant in our current sociocultural environment where Asian-Americans face hostility in the wake of the COVID-19 pandemic. It is in this milieu, that professional and avocational archaeologists must collaborate with the public toward the common goal of raising awareness of the importance of sites like Camp Amache and their ongoing stewardship and preservation.



**Figure 1.** General overview of Camp Amache in 1942 looking northwest (Source: Tom Parker, National Archives; Public Domain).

The goal of this brief survey of Camp Amache’s history and archaeology will be to raise awareness of its existence, and provide a snapshot of the work being done at the site by the Amache Preservation Society and the University of Denver. In this article, we will look at the history of Camp Amache, from its establishment in 1942, to the modern efforts to recognize it as a national historic site. We will consider the archaeological research and preservation work that has been done in the recent past. Finally, we consider the importance of archaeology in the preservation and memorialization of the site.

### History

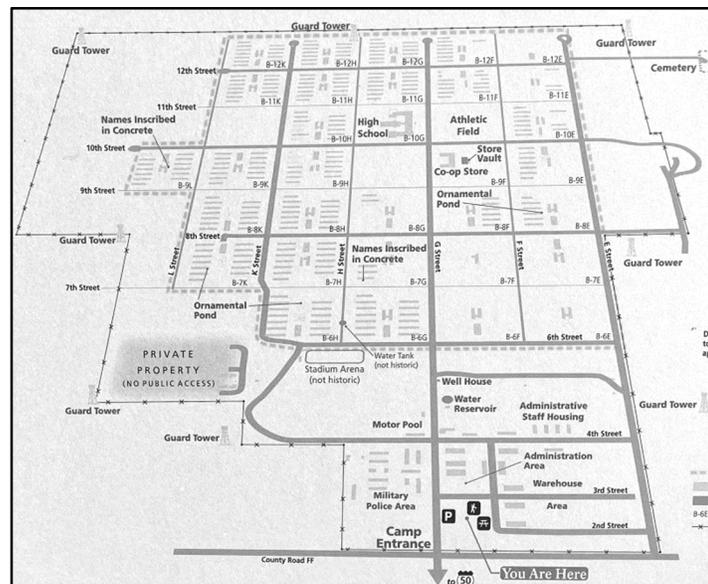
Camp Amache (Fig. 1) was established in the aftermath of the bombing of Pearl Harbor by Japanese forces, which took place in December of 1941. Following the attack, Asian Americans faced a wave of anti-Japanese sentiment. Perhaps one of the greatest expressions of this prejudice was the move by the federal government to relocate Japanese Americans from their homes on the West Coast under Executive Order 1066, signed by President Roosevelt on February 19, 1942. The executive order was meant to prevent Japanese espionage from taking place on America’s shores.

Ten inland “relocation centers” were established in 1942 with locations in California, Arizona, Colorado, Wyoming, Idaho, Utah, and Arkansas to house some 120,000 individuals in total (Burton, Farrell, Lord, and Lord, 1999). Colorado’s Granada War Relocation Center was established near the farming town of Granada in the southeastern part of the state. The site would come to be known locally as Camp Amache, named, ironically, for the daughter of a Cheyenne leader killed 80 years earlier during the infamous Sand Creek Massacre (Abbott, Leonard, and Noel, 2013: 304–306).

Camp Amache encompassed about 10,500 acres, with the settled part of the camp taking up 640 acres, or one square mile. The camp proper was surrounded by a barbed wire fence and six watch towers (Fig. 2). At the peak of its capacity in 1942, Camp Amache housed 7,500 people—men, women, and children—in twenty-nine military-style barracks (Fig. 3). The facility also included schools, churches, police stations, markets, recreational facilities, a hospital, and housing for US military personnel charged with overseeing the site (Burton, Farrell, Lord, and Lord, 1999).

At the end of World War II, the Japanese relocation centers were closed. The residents of Camp Amache were released and the facility was closed in October, 1945. The camp's buildings were dismantled and donated for secondary use by surrounding schools, hospitals, and other organizations. The land was returned to the city of Granada (Burton, Farrell, Lord, and Lord, 1999).

From the closure of the facility in 1945, to continue the story of Camp Amache, we must move forward 45 years, to 1990. At this time, John Hooper, then a social studies teacher at Granada High School, along with a group of students, formed the Amache Preservation Society (APS). Along with the support of other organizations, as well as the University of Denver, the APS has renovated the Amache cemetery, established the Amache Museum and Research Center, and restored key landmarks at the site such as the water tower, a guard tower, and a barrack (Amache Preservation Society, 2018).



**Figure 2.** Map of Camp Amache proper from the signage created by the Amache Preservation Society (Source: M. Kelley).

In February of 2006, Camp Amache was recognized as a National Historic Landmark. A few months later, President George W. Bush signed H.R. 1492 into law (Public Law 109-441, 2006), which established a grant program to preserve the World War II relocation centers. Between May of 2006 and April of 2007, two bills were put forth in Congress to

recognize Amache as a National Historic Site, but these gained no traction (S. 2698, 2006; S. 125, 2007). In April of 2021, Colorado congressional representatives Ken Buck and Joe Neguse have once again proposed a bill to establish Amache as a National Historic Site within the National Parks System (S. 1284, 2021; Kim, 2021).

### Life at Camp Amache

While the internment was depicted in propaganda as providing an ideal lifestyle, guard towers, search lights, barbed wire, and surprise inspections by military police indicated otherwise. Living quarters were cramped (Figs. 3–4), and activities such as eating and bathing were communal. The housing was hastily constructed, and did little to protect the residents from Colorado's harsher weather like snow, rain, and dust storms, common in the high plains (Life, no date). Still, Amache residents made the best life they could of their internship by working, farming, and gardening while their children attended school (Abbott, Leonard, and Noel, 2013: 306).



**Figure 3.** A restored barrack built by the Amache Preservation Society and the University of Denver (source: J. Kelley).



**Figure 4.** A view through the window of the restored barrack into the living quarters (source: M. Kelley).

Aside from the routine of daily life, Amache had recreational facilities, and the internees did many things to pass the time. People participated in various clubs that centered around poetry, theater, chess, singing, and other activities. Churches and schools provided additional means of engagement and physical activity. Residents were given leave privileges once a month to venture outside the camp to nearby towns. If residents had the means, they could leave the camp indefinitely for education or employment, provided relocation did not take them to the West Coast (Life, no date).

## Archaeological Investigation

Camp Amache was first surveyed by archaeologists in 2003. The results of the survey suggested that the site was one of the most well preserved of the ten internment camps in the country (Carillo and Killiam, 2004). The surface survey showed remnants of the landscaping done by residents, largely intact building foundations (Fig. 5), and many artifacts.

In 2005, Dr. Bonnie Clark of the University of Denver began the DU Amache Research Project, which has continued to the present, with the last season of field work taking place in 2020. The Research Project's field work began in 2008. Clark and her student teams have carried out surface surveys as well as excavations in various areas of the camp, which has revealed much about life at the camp—mainly the ways that the site was adapted to suit Japanese-American culture (Clark, Haas, Kamp-Whittaker, Rueda, and Stark, 2014: 3–6; Clark and Amati, 2018). Along these lines, Clark's focus, however, has largely been on the archaeology of gardening (Clark, 2017: 28).



**Figure 5.** One of the concrete foundations at the site, likely for a barrack (source: J. Kelley).

The adaptation of the site to Japanese tastes is one of the most interesting aspects of the results of the archaeological research at Amache. It is evident that residents commonly planted entryway gardens at their barracks (Clark, 2017: 31). These gardens have their roots in the *tsuboniwa*, or courtyard, gardens of Japan. Excavation of these gardens revealed that the residents had applied traditional Japanese gardening methods in order to get their plants to thrive in the sandy, desert environment. In some cases, microscopic remains indicated that the residents had planted Canna, a flowering plant native to Hawaii (Clark, 2017: 31).

## Concluding Thoughts on the Archaeology of Internment

Archaeology, like most fields of scientific inquiry, is complex, and contention about the philosophy and methodology of the work will continue for ages to come. At the end of the day, though, archaeology is about telling stories—stories about the past—and making those stories relevant to the modern world. Archaeologists—professional and avocational—are in uniquely equipped (and, indeed, bear a great responsibility) to bring the past to life. One of the ways to do that is through raising awareness of the significance of sites like Camp Amache through collaboration with the public and archaeological investigation.

Many former residents of Camp Amache, or their descendants, have shared their stories in recent years. Living residents of Amache, who were children at the time of their incarceration, generally remember the feeling of being perceived as an enemy, despite being US citizens (Heffel, 2018). Their children and grandchildren have joined them in advocating for the preservation of the remnant of Camp Amache, and I close with the words of Mitch Homma (quoted in Coppola, 2020), whose family was interned at Amache:

This history and story matter. The story of World War II incarceration, and the decades of racial discrimination and governmental surveillance against Japanese Americans that preceded it, is still relevant. Present-day issues surrounding immigration, terrorism and the infringement of civil liberties in the name of national security echo our past. Remembering this history offers opportunities for thought-provoking discussions and raises relevant questions...My hope with the preservation of the Amache site is to educate a wider audience about this place and this history, and for America to never forget.

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#### Further Reading

- Amache Preservation Society, Amache.org. 2018. <https://amache.org/amache-preservation-society/>. The website of the APS contains timelines, maps, photos, and extensive data on the APS and other groups supporting the preservation of Amache.
- DU Amache Research Project, portfolio. 2019, <https://portfolio.du.edu/amache>. This site has a wealth of information including excavation reports, articles, radio broadcasts, and newsletters from each season of Bonnie Clark's excavations at Camp Amache.

## Getting Involved: Classes, Lectures, and Other Opportunities

### The 2021 Annual CAS Conference and Member Meeting

The CAS Chipeta Chapter in Montrose will be hosting the 2021 Annual Conference and Member Meeting on October 8-10, 2021. Please check the website of the [Colorado Archaeological Society](#) or the [Chipeta Chapter](#) website later this Spring for more details.

### “Interactive Digs” at the Archaeological Institute of America

The [website of the Archaeological Institute of America](#) has a number of “interactive digs,” which allow readers to follow along with archaeological excavations around the world and here in the States by exploring artifacts, site plans, articles, and weekly blogs and reports written by the archaeological teams.

## Archaeology in the News

### 9,000-Year-Old Obsidian Tools Found at Bottom of Lake Huron

<http://www.sci-news.com/archaeology/lake-huron-obsidian-tools-09767.html>

The two ancient obsidian flakes recovered from a now submerged archaeological site beneath Lake Huron represent the oldest and farthest east confirmed occurrence of western obsidian in the continental United States.

## How Ancient People Fell in Love with Bread, Beer, and Other Carbs

<https://www.nature.com/articles/d41586-021-01681-w>

Clues from Göbekli Tepe reveal that ancient humans relied on grains much earlier than was previously thought—even before there is evidence that these plants were domesticated.

## How Hikers Can Protect Archaeological Sites—Simple Steps for Watching Where You Step

<https://www.sltrib.com/news/environment/2021/04/25/how-hikers-can-protect/>

National parks and monuments in southern Utah are seeing record numbers of visitors. While there are dramatic examples of destruction to cultural sites...most damage is caused by visitors who simply don't know best practices. To that end, the nonprofit conservation group Friends of Cedar Mesa, in partnership with the Colorado Plateau Coalition, put together these 18 tips for an educational program called "[Visit with Respect.](#)"

## CAS Denver Chapter General Meeting Notes

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### DC-CAS April 19, 2021 GENERAL MEETING MINUTES

The DC-CAS April General Meeting was held online on Monday, April 19, 2021 at 7:00 pm via the Zoom platform. Lynn Hoy opened the meeting by welcoming everyone to the evening's talk. Craig Dengel announced the speaker for the May 10<sup>th</sup> General Meeting was to be Dr. Maxine McBrinn. The topic was the 1929 flight over the southwest made by Charles Lindbergh and Anne Morrow at the request of Alfred V. Kidder. Linda Sand announced that the State CAS Board was discussing the possibility of resuming in-person meetings. She noted that some Chapters had started outdoor activities. It was requested that participants in face-to-face meetings be vaccinated.

Craig Dengel introduced the evening's speaker, Dr. James R. Allison from Brigham Young University. The title of Dr. Allison's presentation was, *Architecture, Site Layout, and Community Organization in the Greater Southwest*. Dr. Allison began his talk with a discussion of anthropological concepts of community. A classic view of community, proposed by George Peter Murdoch (1949),<sup>1</sup> defined it as a natural community with residences in close proximity (within a few kilometers) with regular interaction, shared territory, shared culture and in-group solidarity. Such a community has natural boundaries, was relatively stable, and homogenous. An alternate view, proposed by William H. Isbell (2000),<sup>2</sup> defined community as a dynamic entity with social interacting groups generally bound by territory, economy and reproduction pool. However, these boundaries are permeable and members can hold varying interests and have cross-cutting associations within and outside of the boundaries. This can lead to factionalism, disagreement and complex relationships. Allison noted that it was difficult to formulate a strategy to investigate archaeological sites based solely on either definition. To identify a community, he proposed that one could examine a cluster of houses, which were occupied at the same time, but it should not be assumed that there would be homogeneity. Within such a cluster, one could look for variation in architecture, resource access, and differences in

social activity and/or identity. Architecturally, one can identify the presence of communal structures and unusual residences (indicating wealth or status differences). One can also look for evidence of differential resource access and/or control of communal sharing. Differences in technological choices, stylistic variations, and trade or external links could indicate groups within a community. Allison applied these proposed archaeological identifiers of community to several sites in Utah, Colorado, and southeastern Arizona.

In southeastern Utah, at the Basketmaker III site of Recapture Reservoir, two communities were identified. The first community dated to AD600 and consisted of a cluster of houses, within two kilometers of each other, organized around a communally-built, 100 square meter pit structure. The second community, near the present-day town of Bluff, Utah also consisted of houses associated with an oversized pit structure. However, the pit structure was smaller than that found at the first community, and may have been a leader's home used to host communal events. A cemetery containing eighteen burials was associated with the second community, an unusual feature for Ancestral Pueblo sites in the Four-Corners area. Allison next turned his attention to the Pueblo I site, Alkali Ridge Basin 13, first excavated in 1932-1933 by J. O. Brew (Harvard University) and later by Dr. Allison in 2012-2013. The Alkali Ridge Basin 13 site dated from the AD750s to the AD780s, and appeared to have been occupied for only one generation. Allison considered the Alkali Ridge Basin 13 site to be the first true village as it had several individual households joined together by shared walls. Each house consisted of a large domestic room, with a slab-lined hearth, in the front with two smaller storage rooms in the rear. Also present was a large pit structure suitable for communal activities. The Alkali Ridge 13 site differed from earlier Basketmaker III sites in its layout, and reflected a more intense interaction between inhabitants due to its conjoined houses. In the spread-out Basketmaker III communities, inhabitants would not necessarily be interacting with each other every day. Excavations carried out at the site revealed variations in

ceramics and in house wall construction, which may indicate different social groups living together. Abajo Red-on-Orange ceramics recovered from storage areas differed from Basketmaker III ceramics. The ceramic designs were highly variable with some designs similar to Southwestern ceramics. This may indicate possible immigrants from southern Arizona. The residential structures were a mix of small, sub-rectangular houses with four-post roof supports and small, round houses with six-post roof supports. Five different types of wall construction were identified with some wall types having limited distribution. The more common wall construction types were found in the central and southern areas of the site, whereas the less common wall construction types were located in the northern end of the site. These variations in structure shape and wall construction suggest that the inhabitants may have been a mix of local and immigrant groups.

Ridges Basin, near Durango, Colorado, dates to around the same time as the Alkali Ridge 13 site. An investigation carried out by the Animas-La Plata Archaeological Project identified several small sites consisting of two or three residences. The distribution area of these sites was similar to that seen during Basketmaker III, but with a higher occupation density. The smaller sites generally clustered into three areas defined as the Eastern Cluster, the Western Cluster and the North-Central Cluster. Within Ridges Basin, variation in pit house construction was noted. The Eastern Cluster contained round pit houses while pit houses in the North-Central cluster were sub-rectangular, D-shaped structures. One site in the Eastern area, known as Sacred Site, stood out as it was larger and organized differently from other sites in Ridges Basin. Sacred Site may have been a small village and consisted of several pit houses, with fenced off areas, located around a ridge top. On top of the ridge was a large, circular, slab-lined structure which incorporated the remains of an earlier sub-rectangular building. Surrounded by a stockade fence, it was thought the circular structure had been a domed communal storage building. Near the stockade fence and storage structure were the remains of a tall wood and mud structure, possibly two-to-three-stories. The remains consisted of both small and large postholes and a hearth. In addition to differences in pit house construction, ceramic differences were found between and within clusters using Correspondence Analysis of ceramic design elements and Refiring Analysis to source clay sherds. Interestingly, Refiring Analysis revealed that the inhabitants on top of Sacred Ridge differed from the inhabitants surrounding the ridge top. Neutron Analysis of Juan Red Ware also indicated there was trade outside of the Ridges Basin area using several different trade networks.

The sites of Cottonwood Falls and Red Knob, both dating around AD1100, were discussed by Allison.

The Chacoan era site, Cottonwood Falls has a Great House on a hill and Great Kiva on the flat area of the site. Similar to Basketmaker III sites, Cottonwood Falls also displays a widely dispersed community with a central communal area. When compared to earlier communities, this organization

suggested stronger social control and centralized leadership. In southeastern Utah, Red Knobs site contains multi-storied great houses (one in McElmo style) on top of two natural sandstone towers, with dispersed residences around each Great House. The site also contained a large Great Kiva structure (25 meters across) and the remains of a prehistoric road into the site. The site's organization suggested the possibility of the presence of multiple social groups, each with its own Great House, interacting with each other. Another interesting site was the Coal Bed Village (AD1200) in Utah. At the eastern end of the ridge top was a post-Chacoan Great House, two times larger than traditional Kivas. Another structure, possibly a smaller, McElmo-style Great House, was present at the western end of the site. A megalithic wall surrounds both structures with a grand entrance located at the eastern end of the site, marked by a "sacred" stone and two-meter-wide pathway running alongside the wall. A smaller entrance to the site was located at the western end of the site which led to a plaza and the second structure. Residential structures surround the ridge containing the walled structures. In 2019, a trench excavation across the megalithic wall and pathway revealed a foundation of large stones placed on top of an older midden deposit from AD900.

Finally, Allison briefly discussed the layouts of several Fremont Culture sites. The Five Finger Ridge site (AD1150-AD1300), located in central Utah, consisted of 37 pit house structures spread out on top of a ridge. On the flatter area of the ridge were three larger and unusual structures. One structure was a unique oversized pit house, though smaller than those seen in Basketmaker III. The second structure was an above-ground adobe house, the only one present at the site. The third structure was a three-walled building with one side open to a plaza. This type of structure is unique to the Fremont Culture. Post holes indicate the structure had a roof, and contained a hearth two-to-three-times the normal size. The Baker Village site (AD1200-AD1295), located south of Ely, Nevada, was a good example of organization in a Fremont village. There was a central, fifty square-meter pit house, built over the remains of an older pit house. This pit house may have been the residence of a leader. Smaller pit structures and above-ground adobe storage structures are organized around the large central pit house. Wolf Village (AD1024-AD1125), located in the south Utah Valley, contained several dispersed, eroded pit house structures. The site also had two unusual structures. One structure was an adobe above-ground structure with a vent shaft. This structure was not large enough to be a communal structure and appeared to be domestic in nature. The second structure was an oversized, elaborate pit house with two tunnels at either end, one of which led to a wall of the above-ground adobe structure. This structure was eighty square-meters in size and showed evidence of numerous remodels (over 200 post holes). Burnt timbers from a collapsed roof provided two tree ring cut dates sixty years apart. At a later date, twenty rooms of unknown function were added north of the above-ground adobe structure. Together the structures hinted at the idea of a Great House in its overly elaborate style and

controlled access. Lastly, Allison examined sites in the Moapa Valley in southeastern Nevada which were recorded during the 1970s Muddy River Survey conducted by the University of Nevada, Las Vegas. The earliest sites occur at the southern end of the Moapa Valley and dated to AD1050-AD1125. There are two or three clusters of sites, and it was not clear if they represented one large community or several smaller communities. Allison examined two ceramic types present at the sites, which were manufactured approximately one hundred kilometers away in the Uinkaret Plateau (Moapa Gray Ware) and the Shivwits Plateau (Shivwits Plain Ware). Analysis results indicated that the northern most sites contained mostly trade ware, particularly Shivwits Plain Ware. Sites located in the middle and at the southern end displayed a greater mix of local and traded ceramic wares.

In conclusion, Allison noted this approach to archaeological analysis was very useful in identifying types of community organization. It was important to search for clusters of houses occupied at the same time, and to not assume there will be homogeneity within a community. Differences in resource use/access, technological choices, stylistic variations, and varying links to the outside world can reveal internal social groups within the larger community. Dr. Allison answered several questions and Lynn Hoy thanked him for a very interesting talk.

1. Murdoch, George Peter, 1949, *Social Structure*. The Macmillan Company, New York
2. Isbell, William H., 2000, What we should be studying: the "imagined community" and the "natural community." In *The Archaeology of Communities: a New World Perspective* edited by Marcello A. Canuto and Jason Yeager, pp.242-266. Routledge, London.

**Please note:** This presentation is available for viewing on the Denver CAS YouTube Channel - <https://www.youtube.com/watch?v=kOGwVbSlcXo>

The general meeting adjourned at 8:38 pm. Submitted by Stacy Greenwood, Secretary for DC-CAS.

## **DC-CAS May 10, 2021 GENERAL MEETING MINUTES**

The DC-CAS May General Meeting was held on Monday, May 10, 2021 at 7:00pm via the Zoom platform. Lynn Hoy welcomed everyone and noted new attendees. She announced that History Colorado was to reopen soon. As such, a return to in-person DC-CAS general meetings could occur in August, depending upon room capacity. Lynn has also returned to work in the Emery Archaeology Lab and was in need of volunteer workers. Anyone interested in volunteering can contact Lynn through the DC-CAS website. Jack Warner announced the Lamb Spring Archaeological Preserve have restarted their outdoor tours, without group size limits. Further information can be obtained at <http://www.lambspring.org/free-tours/>. Jon Kent stated the 2021 Metropolitan State University of Denver summer field school at Cherokee Ranch, was to take place Monday-Friday, June 21<sup>st</sup> to July 9<sup>th</sup>. The field school was to conduct

both survey and excavation under the supervision of Reid Farmer and Michael Kolb. Participation in the field school was open to DC-CAS members. Those interested should email Michael Kolb at [mkolb5@msudenver.edu](mailto:mkolb5@msudenver.edu). Finally, Craig Dengel announced the speaker for the June 14<sup>th</sup> General Meeting would be Ray Sumner, PhD student at Colorado State University. Sumner will speak on his geophysical and LiDAR survey and excavation at the former Fort Cedric, located on private property near Julesburg, Colorado.

Craig Dengel introduced the evening's speaker, Dr. Maxine McBrinn, an independent researcher and museum curator (retired). The title of her presentation was, "*Oblique Views: Landscape, Archaeology, and Time as Photographed by Charles and Anne Morrow Lindbergh and Adriel Heisey.*" The presentation was based upon a curated exhibit of the same name held at the Museum of Indian Arts and Culture in Santa Fe, New Mexico. Dr. McBrinn began her presentation with interesting background information to the 1929 flight over the American southwest conducted by Charles and Anne Morrow Lindbergh. In 1927, after his return from his historic *Spirit of St. Louis* Atlantic flight, Charles Lindbergh embarked on a flight to Mexico as part of a goodwill tour on behalf of the U.S. government. While on the flight, Lindbergh saw several archaeological sites from the air which piqued his interest in archaeology. It was also at this time, Lindbergh first met the daughter of the U.S. Ambassador to Mexico, Anne Morrow. Upon his return to the United States, Lindbergh visited the Carnegie Institute to learn more about the sites he had seen. There he spoke to the Director, Dr. John Campbell Merriam, who put Lindbergh in touch with Alfred V. Kidder. At the time, Kidder was working at the site of Pecos Pueblo (1915-1929). Kidder was known for developing the early chronological scheme for the southwest, and worked at northeastern Arizona cave sites with Samuel J. Guernsey.

A short while later, Charles Lindbergh became a technical advisor to Transcontinental Air Transport (T.A.T.), predecessor to Trans World Airlines (T.W.A). Lindbergh was involved with the development of east-west passenger flight routes through the American southwest for the airline. During this early period of passenger air service, night flights were dangerous and large fuel capacity had yet to be developed. Therefore, T.A.T. could fly passengers two hundred miles per day, and transport the passengers by train at night to the next airport to resume their flight eastward in daylight. In the southwest, T.A.T. airports were located in Clovis and Albuquerque in New Mexico and Winslow and Kingman in Arizona. In July of 1929, after the May marriage of Charles Lindbergh and Anne Morrow, the couple flew from New York to Los Angeles to promote the opening of T.A.T.'s coast-to-coast passenger flight service. Flying in an open, dual-cockpit, Curtis Falcon bi-wing airplane, the Lindberghs took photos of Chaco Canyon and Canyon de Chelly to show Alfred V. Kidder upon their arrival. The photos were used to design an aerial survey to be carried out during their flight back to New York. Of particular research interest were Canyon de Chelly, the Hopi Mesas

and Chaco Canyon as well as the Pueblos at Rio Grande, Rio Chama and Taos. Also of interest were geological features such as the Grand Canyon, meteor craters, and the erosion of Hopi fields. During the return flight, the Lindberghs took around 200 aerial photographs, and stopped in at Alfred V. Kidder's Pecos Pueblo camp, located near Fort Lightning, and at Earl Morris's Antelope House camp in Canyon de Chelly.

Years later, Archaeology Southwest became aware of the presence of Lindbergh photo negatives at both the Laboratory of Anthropology at the Museum of Indian Art and Culture, and the New Mexico History Museum Photo Archive at the Palace of the Governor. Upon their examination, it was found that the cellulose nitrate negatives were deteriorating and in danger of further damage. In 2004, Linda Pierce, Deputy Director of Archaeology Southwest, and Jannelle Weakly, Photo Curator at Arizona State Museum began to preserve the images using high resolution scanning. Linda Pierce later suggested a project to rephotograph the locations from the same perspective as the originally Lindbergh photographs to see how the landscapes had changed over time. Adriel Heisey, a photographer and retired pilot, was enlisted to carry out the aerial photography project. Initially, he planned to use a lightweight, open-cockpit experimental kit plane as it could fly low at a slow speed (30 mph). However, the plane turned out not to be suitable so Heisey purchased a two-seat small plane. He stripped the interior to lighten the plane and to accommodate his photography equipment and laptop computer.

As the Lindbergh collection contained so many images, it was decided that the new project would recreate seven images from Canyon de Chelly, seven images from Chaco Canyon, and four images from the Rio Grande (including Santa Fe). While rephotographing the locations from the same perspective as the Lindbergh photographs, Heisey tried to match the time of year and the time of day. However, in some cases, this was not possible. It should be noted when the Lindberghs carried out their flight, Anne flew the plane while Charles took the photographs. Heisey was able to carry out his flight alone, and he had the advantage of being able to check his images from his digital camera against the Lindbergh image from his laptop computer.

For this presentation, McBrinn showed several sites with the Lindbergh photographs side-by-side with the Heisey photographs. One of the first places to be rephotographed was Santa Fe. In 1929, the Lindbergh photographs shows large areas of agriculture and numerous trees. Today, Heisey's photograph showed Santa Fe as a very developed and urban community. Other sites rephotographed included Pecos Pueblo, Canyon de Chelly at Canyon del Muerto, Canyon de Chelly at the mouth of Monument Canyon, Antelope House Pueblo site, and White House site. The most noticeable changes between 1929 and today were

environmental changes. At all of these sites, once wide river channels were now substantially narrowed. At the White House site, the river channel had been diverted to protect the site from water damage. These locations were also devoid of vegetation in 1929, but were now covered in vegetation. In Canyon de Chelly at the mouth of Monument Canyon, the increase in vegetation could be accounted for by modern grazing restrictions and the 1930 planting of Tamarisk Olive Wood by the Bureau of Land Management. Additional sites rephotographed were Taos Pueblo, Poshouinge Ruins, Pueblo Pintado, Hopi Fields, and Beehive Ruin. These sites also saw changes in the environment with respect to narrowed river channels and increased vegetation. In Chaco Canyon, the sites of Pueblo del Arroyo, Pueblo Bonito and Chetro Kettle were rephotographed. Changes seen at Pueblo del Arroyo included the channelization of the river and removal of historic homestead buildings by the Parks Service as well as increased vegetation due to grazing restrictions. The most noticeable difference at Pueblo Bonito was Threatening Rock being in situ in the 1929 Lindbergh photograph while Heisey captured the 1941 rock face collapse upon the site which destroyed sixty-five rooms. Heisey was also able to capture the entire site in one image, something the Lindberghs were unable to do. At Chetro Kettle, the Lindbergh photograph showed the river drainage coming into the site as well as the camp of Edger Lee Hewitt's first season excavations. Changes documented in the Heisey photograph include the channelization of the river by Hewitt, more site area excavated, and increased vegetation.

McBrinn concluded her talk and took several questions from the audience. Lynn Hoy thanked her for an excellent talk. McBrinn noted that there was an exhibition book available for purchase. The publication information is as follows:

*Oblique Views: Aerial Photography and Southwest Archaeology*, by Charles Lindbergh and Adriel Heisey, Museum of New Mexico Press, 2015, ISBN-10:9780890136072 and ISBN-13:978-0890136072.

A sample of photographs taken by both Lindbergh and Heisey may be viewed at <https://www.archaeologysouthwest.org/exhibit/museum-exhibits/oblique/>

**Please note:** This presentation is available for viewing on the Denver CAS YouTube Channel - <https://www.youtube.com/watch?v=WDAFAerSfs0>

The meeting adjourned at 8:03 pm. Submitted by Stacy Greenwood, Secretary for DC-CAS.

## **DC-CAS BOARD MEETING MINUTES AND FINANCIAL STATEMENTS:**

Please note that the monthly Board Meeting Minutes and the quarterly Financial Statements will no longer be published in the All Points Bulletin. These documents are available to all Chapter members upon request. Please contact us should you wish to view them.

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Suggestions for book reviews should be sent to the editor. Books for review should be sent to:  
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