

**The Archaeology of Gardening at Amache:
A Synthesis of results from University of Denver Field Investigations, Summer 2008**

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The forced removal of over 120,000 people of Japanese descent from their homes along the west coast of the U.S. during World War II, and their subsequent internment, is a pivotal incident in world history. The internment camps themselves are significant resources for better understanding this shadowed history. Built for this express purpose, occupied temporarily, and modified quite intensively by the internee population, they are ideal archaeological sites. Occupations of people relocated because of their ancestry to new environmental settings, these sites can contribute to the archaeological study of important anthropological topics, including identity, confinement, and placemaking.

The Granada Relocation Center—better known as Amache—is located in southeastern Colorado. Home to over 10,000 internees between 1942 and 1945, it was first surveyed by archaeologists in 2003. Based on comparisons with other recorded interment camps, the researchers suggested that Amache, with its remnant landscaping, largely intact building foundations, and surface artifacts, might have the greatest archaeological integrity of any of the ten interment camps in the U.S. (Carrillo and Killam 2004). In 2007, the site was designated a National Historic Landmark, the highest federal recognition of a historic site in the U.S.

In the summer of 2008, the University of Denver, Department of Anthropology held a field school at Amache. The investigations were designed to further assess the archaeological resources of the site, especially the gardens documented by historic photographs and site survey. Because about half of the people interned at Amache were gardeners or farmers from California, we were particularly interested in how they were applying their expertise to a new environment, the High Plains. Gardens were also an important way internees transformed the stark military landscape of the camp. Anna Tamura, a landscape architect for the National Park Service, has suggested that gardens at all the internment camps are significant resources that express “raw creativity and ingenuity in action” (2004:19).

The garden features at Amache tend to fall into three types: ornamental, vegetable, and entry gardens. In 2008, we investigated at least one of each type. The ornamental and the vegetable garden we studied were located in barracks blocks, the occupational areas of the camp. We also investigated a pair of entry gardens in the barracks block that was pressed into service as the elementary school. Historic documentation indicated these gardens were designed and created by the children of the school.

These locations were subjected to ground penetrating radar (GPR) survey, which confirmed the presence of features with hardscaping and suggested they had good integrity (Figure 1). The GPR results in the location of the vegetable garden, however, were inconclusive. Each identified garden was also sampled for soil chemistry analysis. During the field school, we carefully excavated a portion of these four gardens, following standard protocol for garden archaeology (Currie 2005). Soil was sampled from each stratum, as well as from the fill of internal garden features (such as planting holes). These samples were floated and their contents analyzed for macrobotanical remains.

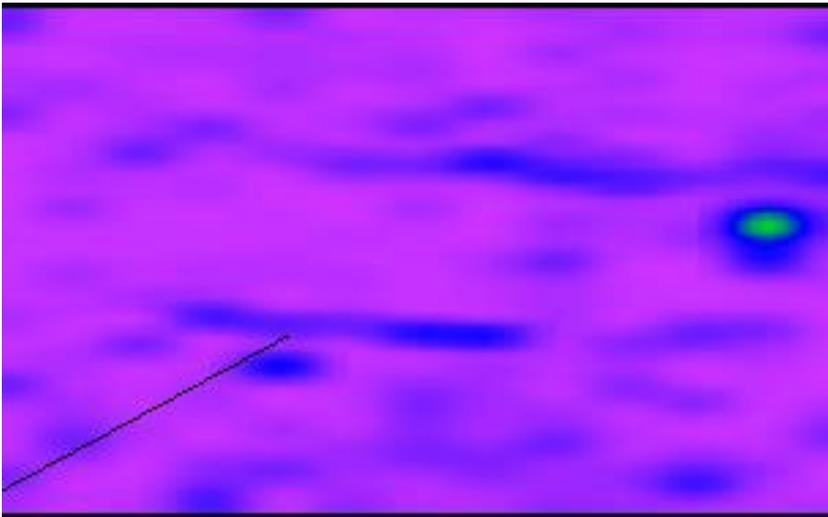


Figure 1: Ground Penetrating Radar plan view of one of the two oval garden beds in Block 9L. Line points to exterior wall. Bright green reflection is a partially buried stepping stone.

Results

The Japanese garden has been of interest to both Westerners and those of Japanese ancestry for a very long time (e.g. Conder 1893; Ishimoto and Ishimoto 1968). Typically characterized by asymmetrical design and the use of natural materials, Japanese gardens are often seen as a respite from the modern Western world (e.g. Street and Stevenson 1916).

Yet as Kendall Brown so cogently argues, even the most “traditional” Japanese-style gardens in the United States are Japanese American artifacts, serving as a bridge between the two worlds. Those who designed, built, and maintained them were simultaneously looking back to Japan, but forging places and identities within America. Although many designers strictly adhered to tradition, others created more visibly hybrid gardens, “adapting Japanese design to the culture in which they lived” (Brown 1999:13).

In 2008 we tested one of a pair of oval beds that once held an ornamental garden (Figure 2). Whoever designed the Block 9L garden features was anything but traditional. There is an almost unnerving symmetry in the design. Each bed is a precise oval of exactly the same size. Directly on the centerline of the bed we identified the remains of a tree that had been planted there. Rather than a stone retaining wall, the material is concrete block scavenged, or more likely stolen, from stores of camp construction materials. Each block was carefully split into three portions and laid in a way that disguises the defining features of the block—its circular center holes. Without rather close inspection, the pieces appear to be carefully quarried basalt blocks, a material that would have been familiar to any gardener practicing in California.



Figure 2: Ornamental Garden during excavation, Block 9L. DU Amache, Summer 2008

Despite what appears on the surface to be a very Westernized design, whoever created this garden was still informed by Japanese landscape principals. One of the most influential of these is *shakkei*, which literally translates to “borrowed scenery.” For example, many of the gardens at Manzanar are sited to draw the eye to particular mountain peaks (Helphand 2006:184). On the High Plains, the location of Amache affords fewer such opportunities. Still, the site is on a terrace above the Arkansas River and in a few locations, one sees the trees that line the river bank. To the northeast also lies the small town of Granada, a view you can see from 9L because the block juts out east of all the other barracks blocks. Although not as majestic as the Sierra, the borrowed scenery at this Amache garden would have been reassuringly civilian. The importance of places that provided respite from the internment camp landscape is hard to overstate. Jeanne Wakatsuki Houston recalled that in the Manzanar gardens, facing away from the barracks, you could “for a while not be a prisoner at all” (Houston and Houston 1973:72).

The plant remains recovered from the ornamental garden are likewise intriguing. We recovered enough of the tree to identify it as *Ulmus parvifolius*, or Chinese Elm. Near the planting hole we identified a square stain in the soil that was likely a stake. We also recovered a length of copper wire, a rare material during the war that was likely procured with some stealth. These remains suggest the tree was being trained. That Chinese Elms are a popular choice for bonsai, makes this suite of data particularly suggestive. We also recovered seed of the *Portulaca* or purslane only in the samples from the oval garden. This strongly suggests that a *Portulaca*, a weedy plant found around the world, may have been “deliberately grown as a ground cover for the garden feature, being a drought-tolerant, attractive choice for such a purpose...*Portulaca* does not seem to have tremendous significance in Japanese gardening traditions, but as abundantly evidenced elsewhere, Amache internees were adept at substituting or being inventive with local materials, including plant materials” (Archer 2009:5)

Research in two of the school area entryway gardens indicates that placemaking through gardening was not confined to the *Issei*, or first generation, of Japanese in the U.S. A number of historic records document the landscaping of the barracks block that was converted for use as the elementary school. Like the rest of the camp it had been denuded of all vegetation during construction. For the most part, the soil in the camp is very sandy

and once freed of its native vegetation was a wind-blown nightmare. As the Principal of the Amache school wrote in an education journal, “passage from room to room, to library, office, or lavatory, could be attained only by stepping out in the periodic fury of dust and sand” (Dumas and Walther 1944:40).

The children of Amache were no doubt either aware of or recruited into the camp landscaping projects of the older generations. Those who landscaped with their families were likely among the children who approached the school administrators with the suggestion that the school also be thus transformed. In fact fifty children submitted landscaping plans for the school (Dumas and Walther 1944). The 2008 intensive survey in the school block suggests a similarity in the size, placement, and boundary hardscaping of the individual beds. The edges of almost all the beds were delineated by limestone likely quarried from an outcropping near the northwest guard tower (Figure 3). We excavated units in two beds that flanked a doorway of one of the barracks used as a classroom. This pair of beds were approximately the same size and both bounded by limestone outlines. However, excavation revealed that the children who designed and built them put into place quite different kinds of schemes. One of these beds was landscaped with consistently sized gravel that almost certainly came from the banks of the Arkansas River, about three miles to the north of camp (Figure 4). The adjacent bed had no gravel at all. From one bed we recovered ornamental morning glory seeds (*Ipomoea*), but none from the other.



Figure 3: Photograph of young elementary school children landscaping outside of their classroom. Note the limestone border of both visible beds. Photograph by camp photographer Joseph McClelland.



Figure 4: Entry garden at school with gravel layer visible through most of unit. DU Amache, Summer 2008.

One of the photographs that accompany the period education journal article shows a young white woman and a line of little Japanese girls standing along the edge of a prepared bed. The caption reads, “The teacher shows one of the little girls how to scatter seeds” (Dumas and Walther 1944:41). The very different beds revealed through excavation suggest that some of these Japanese American children had learned quite a good deal about transforming the land from their parents and were applying that knowledge to the arid setting of the camp in very different ways. Thus, the physical remains of the camp highlight the overwhelming paternalism of the official records of this activity. Any child of a parent involved in farming or gardening was likely to know at least as much, if not more, than their teachers about how to undertake this project.

Vegetable gardens at Amache were consistently called victory gardens, whether they were the more typical barracks area gardens, or those areas of the surrounding agricultural fields set aside for students. Some of our best photographs of victory gardens were taken from the watertower on the southeastern corner of the camp. These photos document how the gardens of the adjacent block 12K evolved over time. One of those gardens was chosen for study because we could firmly connect the garden to its original location in the block. Unfortunately, this garden yielded no definitive macrobotanical evidence of what had been grown there. We did, however, recover evidence of some of the strategies employed by those who gardened this plot.

We recovered many pieces of small diameter white tubing, which likely was associated with how this garden, or individual plants within it, was watered. Our excavations also revealed an alignment of moderately circular features consisting of finely textured sediment that was much darker than the surrounding matrix. A return to the historic photographs with an eye to interpreting these features revealed a line of plant pots running through the garden (Figure 5). When these were watered, moisture escaped through the bottom drains of the pots taking some of the darker, richer soil in the pots with it, which was the archaeological marker of this practice, along with fragments of terra cotta pots. Without the excavation data, it is unlikely that we would have been able to identify pots in the photograph. Soil chemistry analysis did not suggest that the soil in the garden as a whole had been amended, but these features show that the gardener(s) were strategically using pots that held better soil for some plants.

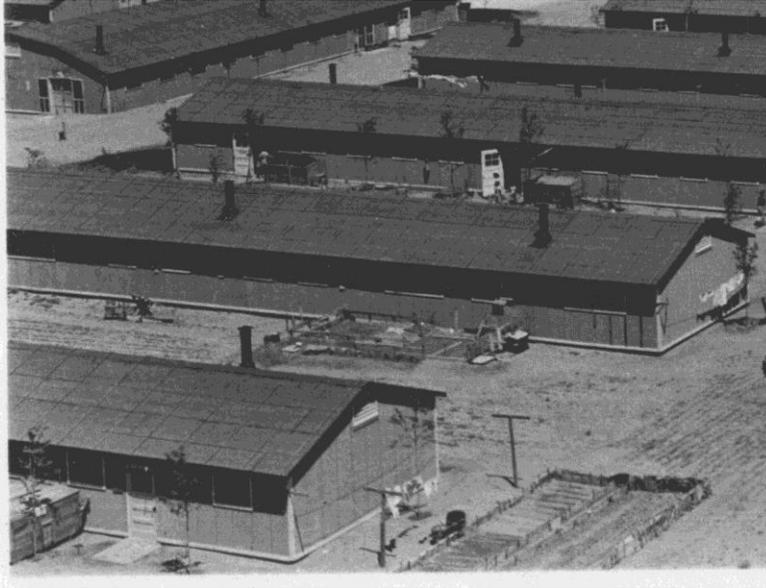


Figure 5: Historic photograph of Block 12K and victory garden excavated in 2008. This image captures the line of plant pots found during excavation. They are just to the right of the barrier that splits the garden in half. Photograph courtesy of Tim Abe.

Although gardens at other internment camps have been studied by landscape architects (e.g. Helphand 2006; Tamura 2004) and even excavated by archaeologists (e.g. Noah 1999), the Amache project is the first to examine the soil chemistry and archaeobotany of these gardens. As such, the 2008 investigations were a pilot to assess the broader data potential of such features, one which was largely successful. Analysis of the soil chemistry indicated a significant difference in soil carbon in the ornamental garden. This suggests that the gardener(s) amended the poor, sandy, native soil. Archeobotanical recovery was good in the ornamental and entry gardens (Archer 2009). Analysis revealed that internees procured some trees and plants commercially, but they also appear to be transplanting local species, as well. Excavations in the entry gardens show that the children who created them employed different landscaping strategies, suggesting generational understanding of the Japanese dooryard garden tradition of which the entry gardens are an example (Helphand 2006). Finally, although the macrobotanical data from the vegetable garden was disappointing, by using the careful strategies of garden excavation, we were able to recover evidence of strategies pursued by Amache's gardeners to compensate for the horticulturally poor environment of the camp.

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