

# ARCHAEOLOGY IN TUCSON

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Summer 1995

## Highlights of Tonto Basin Prehistory: Results of the Roosevelt Community Development Study

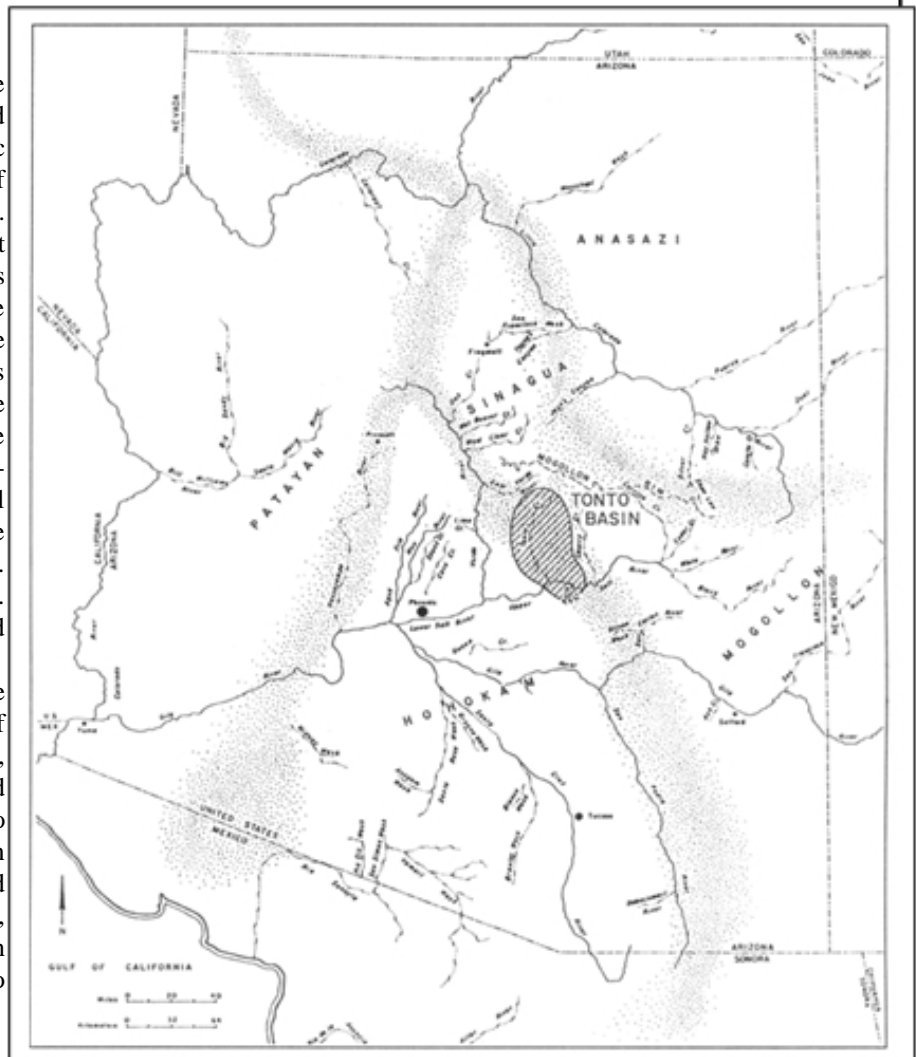
*By Mark D. Elson, Desert Archaeology, Inc.*

The Tonto Basin has long been an attractive area for archaeologists. This is due to its large and spectacular ruins, its intriguing mixture of ceramic styles and artifact types, and the presence of seemingly different cultural traditions and peoples. Located within a dramatically striking environment in the approximate center of Arizona, it is bounded by high, rugged mountain ranges to the east and west, plateau uplands to the north, and the arid desert to the south. The Tonto Basin also lies within a cultural transition zone, surrounded by the territories of four major prehistoric cultures: the Hohokam, Sinagua, Anasazi, and Mogollon. Well-watered and containing abundant natural resources, the environment was conducive for the flourishing of a dynamic prehistoric population. This culminated in the Classic period (ca. A.D. 1150-1450) in what has been traditionally defined as the Salado culture.

Recent archaeological investigations in the Tonto Basin, sponsored by the U.S. Bureau of Reclamation, Arizona Department of Transportation, and Tonto National Forest, have uncovered significant new data on the prehistory of the Tonto Basin and the Salado. Deciphering Tonto Basin prehistory has been a cooperative endeavor, and researchers from Arizona State University, Arizona State Museum, Museum of Northern Arizona, Statistical Research, Inc., and Tonto National Forest, have all made major contributions.

Desert Archaeology's work also played an important role in these investigations. Starting with the Rye Creek Project in 1988 and continuing with the Roosevelt Community Development Study in 1991 and 1992, the Tonto Basin has been "home away from home" for many Desert Archaeology personnel. In fact, as this is being written, archaeologists on Desert Archaeology's Sycamore Creek Project are just now completing a six-month field session. This article discusses the results of our recent investigations for the Roosevelt Community Development Study, which is now in its final stages.

The Tonto Basin has played a prominent role in the history of archaeology in the American Southwest, and some of the most significant early theories of Southwest prehistory were influenced by work there. In 1930, Emil Haury, then affiliated



*The Tonto Basin in central Arizona, surrounded by several defined prehistoric culture areas. Different researchers have included the Tonto Basin as part of each of these cultures at one time or another.*

with Gila Pueblo, excavated the site of Roosevelt 9:6 and first defined aspects of the Red-on-buff ceramic culture, which he later named the Hohokam. Haury proposed that the Tonto Basin was settled by colonists from the Phoenix Basin, the heartland where Red-on-buff ceramics were most abundant.

The founders of Gila Pueblo, Winifred and Harold Gladwin, later expanded these ideas. In 1935, they proposed that the Red-on-buff ceramic people, after several hundred years of living in the Tonto Basin, were themselves replaced by migrating Black-on-white ceramic people from the north. They

called these newcomers the Salado. Based on this early work, Hohokam colonization, and the Salado as an intrusive pueblbuilding people who replaced the Hohokam, became central themes in Southwestern prehistory.

Work on recent Tonto Basin projects has enabled archaeologists to rethink some ideas about the Salado and the processes that structured Tonto Basin prehistory. Archaeologists now consider the Salado to be a widespread, pan-Southwest, religious or ideological system (an archaeological "horizon"), instead of a specific Tonto Basin culture. However, some 60 years later we also are finding the evidence to support theories of the early archaeologists.

### THE ROOSEVELT COMMUNITY DEVELOPMENT STUDY

The Roosevelt Community Development Study (RCD) is one of three related archaeological projects undertaken by Desert Archaeology, Arizona State University, and Statistical Research, Inc., in the Roosevelt Lake area of Tonto National Forest (see *Archaeology in Tucson*, April 1991). These projects have been sponsored by the Bureau of Reclamation because of plans to raise the dam at Roosevelt Lake, thereby providing better flood control for the city of Phoenix. However, the raising of the dam could flood close to 600 archaeological sites in the Tonto Basin.

The possible destruction of these resources necessitated the implementation of archaeological procedures, and around 150 prehistoric sites were chosen for testing or excavation. Results of these investigations now provide one of the largest archaeological data bases in the American Southwest.



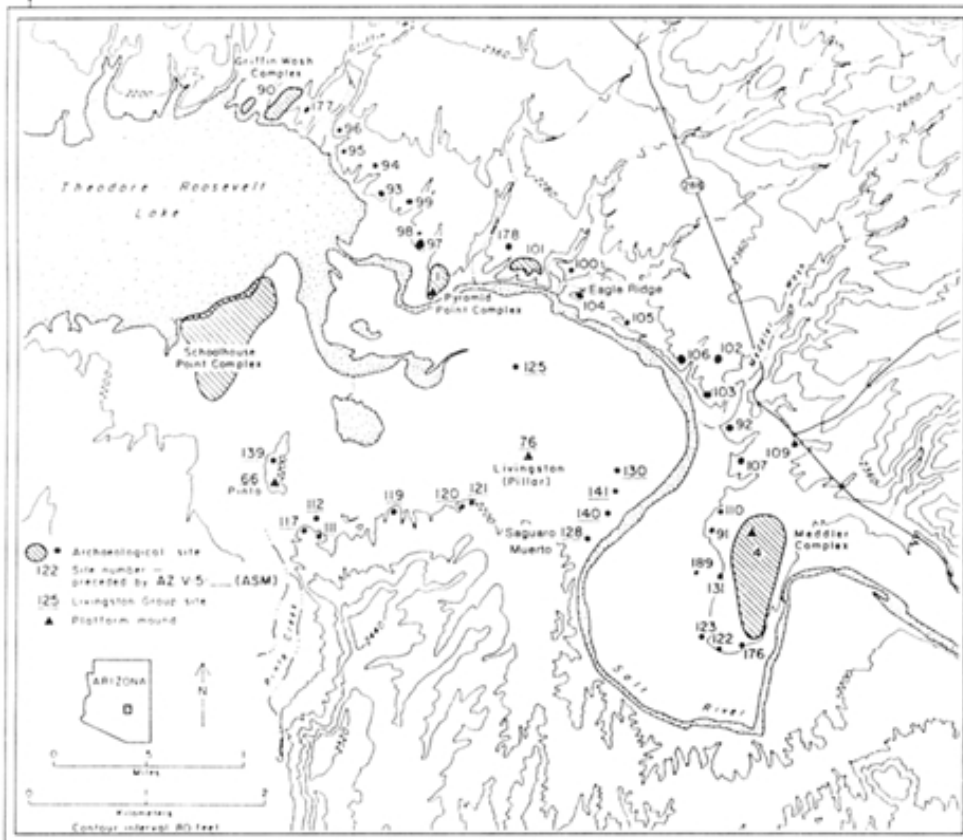
*Bell-shaped pithouse at the Early Ceramic component of the Eagle Ridge site. On the floor are three crushed ceramic vessels surrounding the hearth.*

The RCD project involved the excavation of 27 prehistoric sites along a four-mile stretch of the Salt River, at the point where the river leaves the deeply cut canyons of the Sierra Ancha and enters the broad basin floodplain. The Salt River is one of the largest water courses in Arizona, and irrigation agriculture was practiced along its banks in prehistoric and historic times.

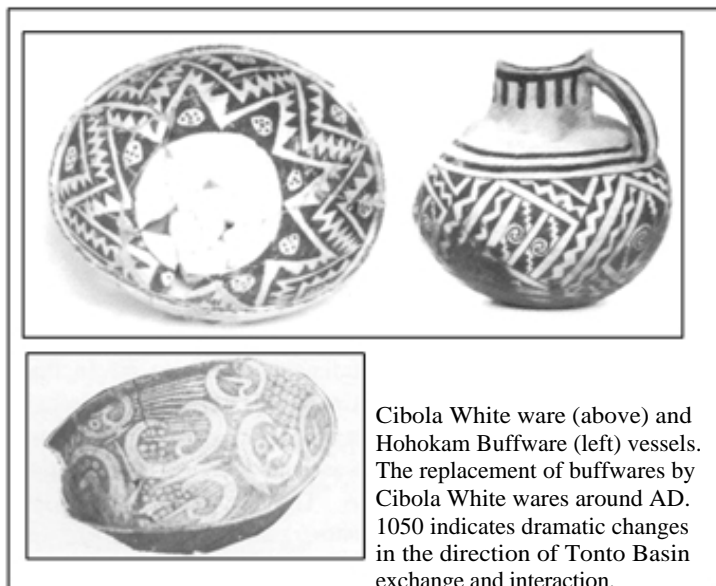
Sites within the Livingston Study area investigated by Arizona State University lie just across the Salt River from the RCD sites. Together, the two study areas provide a nearly complete view of a single local Tonto Basin settlement system. This system is separated from the next local system

down the river by an area of limited prehistoric settlement extending approximately 3 miles. A variety of site types were investigated in the RCD and Livingston project areas, ranging in time from the Early Ceramic period (ca. A.D. 100-600) to the end of the Roosevelt phase of the early Classic period (ca. A.D. 1150-1350). With few exceptions, settlement within this portion of the Tonto Basin ended by the Gila phase of the late Classic period (ca. A.D. 1350-1450).

The significant time depth within the RCD project area allows for a detailed look at the growth and development of a single local system. Of the three projects, the RCD Study is the only one within a continuous geographic area, and all significant sites within this area were included in the investigation. This made it possible to collect information about the different periods represented and to gain insights into



*Location of prehistoric sites within the Roosevelt Community Development and Livingston Study areas.*



stability and change over time. Desert Archaeology's project area included the Meddler Point and Pyramid Point platform mound sites, a 100-room pueblo called the Griffin Wash site, and numerous smaller masonry compound and pithouse sites.

What follows is a summary of the results of the RCD investigations. Readers interested in more detail about Tonto Basin prehistory and the various Roosevelt Lake projects are referred to the specific publications of Desert Archaeology, Arizona State University, and Statistical Research.

#### THE GROWTH OF A TONTO BASIN LOCAL SYSTEM

Our findings indicate that the RCD project area was inhabited between A.D. 100 and 600 by an indigenous, ceramic-using population that probably derived from earlier Late Archaic groups. This Early Ceramic period population is known from the Eagle Ridge site, which is the earliest ceramic period site in the Tonto Basin. It is one of a growing number of

early ceramic sites known in the greater Southwest (see *Archaeology in Tucson*, January 1994). Inhabitants of Eagle Ridge grew corn, cotton, and beans; hunted deer and rabbits; and fished the Salt River. Direct radiocarbon dating of cotton seeds has now produced the earliest date for cotton in the Southwest.

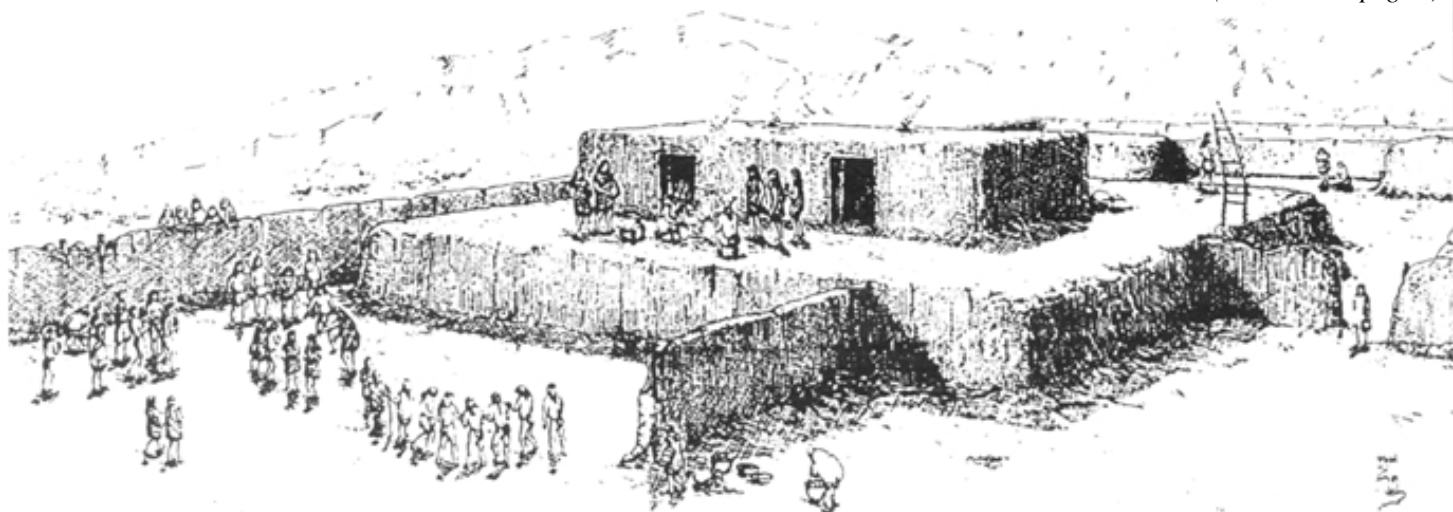
Immigrants first arrived in the Tonto Basin between A.D. 700 and 800. Evidence suggests that Hohokam groups, probably from the Gila River area of the Phoenix Basin, established a permanent settlement at the Meddler Point site by A.D. 750. It is unclear whether Hohokam migrants mixed with the descendants of Early Ceramic groups, or whether the earlier inhabitants had already left this portion of the Tonto Basin. Meddler Point is nearly identical to Hohokam settlements in the Phoenix Basin, containing clusters of pithouses surrounding a central plaza with a cremation cemetery.

A Gila River source area for the migrants is suggested by the very high percentage of plainware ceramics containing sands with particles of micaceous-schist. This type of micaceous-schist is not available within the Tonto Basin or nearby areas, but is very common in ceramics at Hohokam settlements along the Gila River. In sharp contrast to the Phoenix Basin settlement pattern, the Tonto Basin lacks ballcourts. This may be due to the low population densities within the Tonto Basin and the presence of established ballcourts within a short, one-to two-day journey.

Over the next 250 years, the Meddler Point site slowly expanded and interacted more with other local Tonto Basin settlements. However, large numbers of Red-on-buff ceramics suggest continued participation in the Hohokam regional system. As the population grew through time, smaller satellite settlements, containing one or two families, were established away from Meddler Point.

Relations with the Hohokam area appear to have been dramatically curtailed sometime between A.D. 1025 and 1075. Similar patterns are seen at this time in other portions of the Hohokam regional system, such as the Tucson and New River

(continued on page 6)



*Reconstruction of the Meddler Point platform mound by Ziba Ghassemi. The mound is believed to have been constructed around AD. 1280 and used for public displays and ceremonies. See article on pages 4-5 for information on the artist's process of reconstruction.*

## An Architectural Reconstruction of the Griffin Wash Site

*By Ziba Ghassemi*

Archaeologists and architects share an ability to shed light on communities, whether existing in the present or past. However, both architectural drawings and archaeological site documentation are often too dry and technical for the lay person to easily read and understand, much less envision as a living entity. Illustrations can be far more effective in transmitting the intended information. They represent on a more tangible level a community's architectural forms and settings, construction materials and methods, and surrounding environment. With their nonverbal messages, illustrations touch a wider audience and easily excite the imagination.

The architectural reconstruction of an archaeological site can sometimes be as time consuming and complicated as a regular architectural project. The reconstruction of the Griffin Wash site is a good example of this process.

To start, I was provided with a topographic map of the site that showed the floor plan of the room blocks. In a series of meetings with the site's excavators, I was told the estimated height of the walls, the method of construction and types of materials used to build the walls, and details about some of the artifacts discovered. I was shown slides of the excavation and pictures of artifacts. The excavators also made suggestions as to the kinds of activities that occurred at the site. Cotton clothing from the well-preserved Tonto Cliff dwellings provided an idea of what the Griffin Wash inhabitants might have worn.

The first step was to draw several "perspective skeletons" of the room block from different locations and varying eye-levels in relation to the viewer. By doing this, the room block was raised or lowered to provide either an aerial or ground level perspective from different sides. These drawings were then shown to the archaeologists, who chose the view they felt best

presented the information they wanted to communicate.

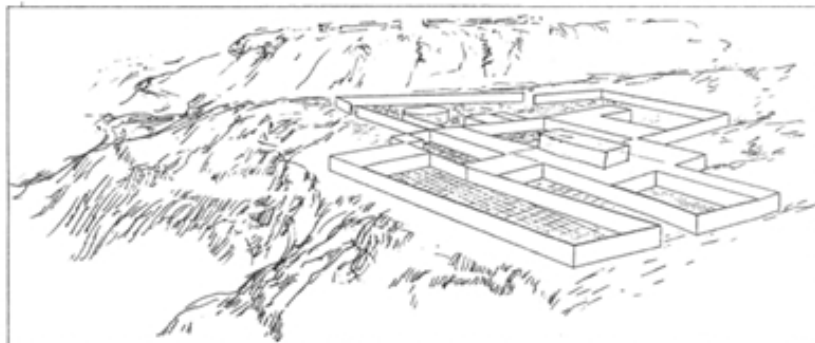
This view faced southwest and allowed us to show a smaller room block in the background. Once the view was chosen, the walls were drawn as they might have looked when the site was inhabited. I used historic photos from the pueblos of Hopi and Zuni to get a feel for a living pueblo.

The most challenging part of this process was probably the reconstruction of the surrounding environment, given that both room blocks were on high, narrow ridges with small ravines coming down their sides. Because I had only a one-dimensional topographic map of the site, it was hard to picture the surrounding landscape in three dimensions. To help, I built a scale model of the site by cutting out the contours on the topographic map and placing the room blocks on top of the ridges. By viewing the model in sunlight in the proper direction, I was also able to determine correct shadows for the saguaros, people, and ridge faces.

After this lengthy process, the drawing was given life by including vegetation, textural elements, and shadows. People were then added to the architectural reconstruction, based on the historic photos and the activities that the archaeologist told me probably took place at the site.

The Griffin Wash site reconstruction exemplifies the very strong connection between people's activities and their environment. This is also the focus of my interest in architecture. The reconstruction particularly allows the viewer to experience the room block in a three-dimensional setting, bringing life to the site for the first time in more than 500 years.

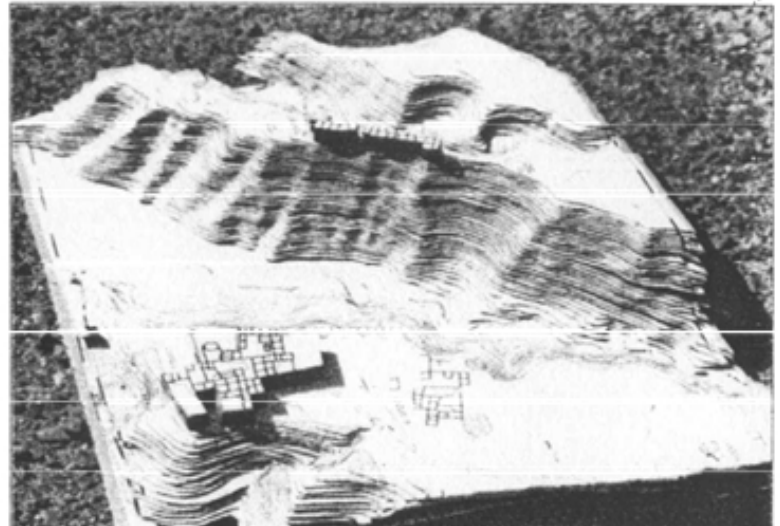
*Ziba Gllassemi was born in Tehran, Iran, and came to the United States in 1979. She is currently a graduate student in architecture at the University of Arizona, where she will receive her M.A. degree in December 1995. Her future plans include working as an architect and continuing her graduate education in urban design.*



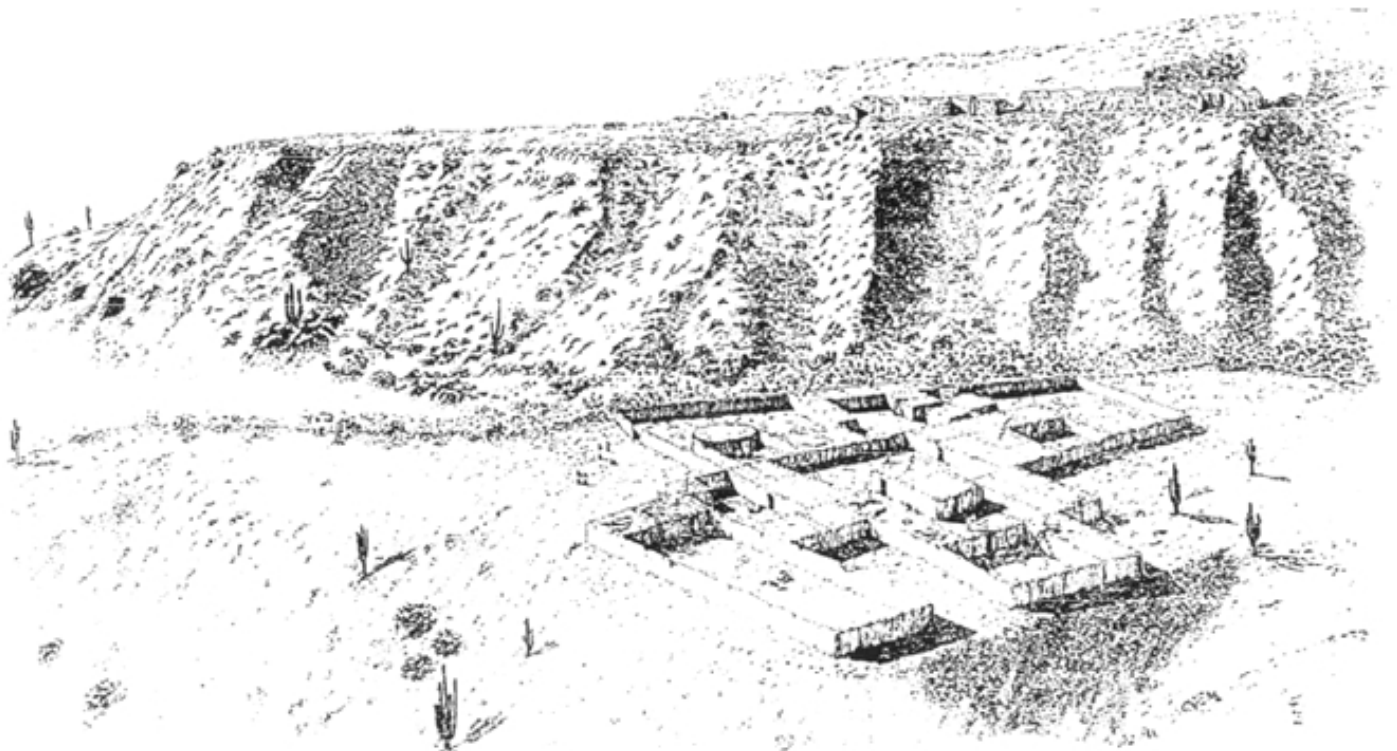
*Skeleton perspective of the Griffin Wash site.*



*Topographic plan map of the Griffin Wash site.*



*Scale model of the Griffin Wash site.*



*Reconstruction of the Griffin Wash site.*

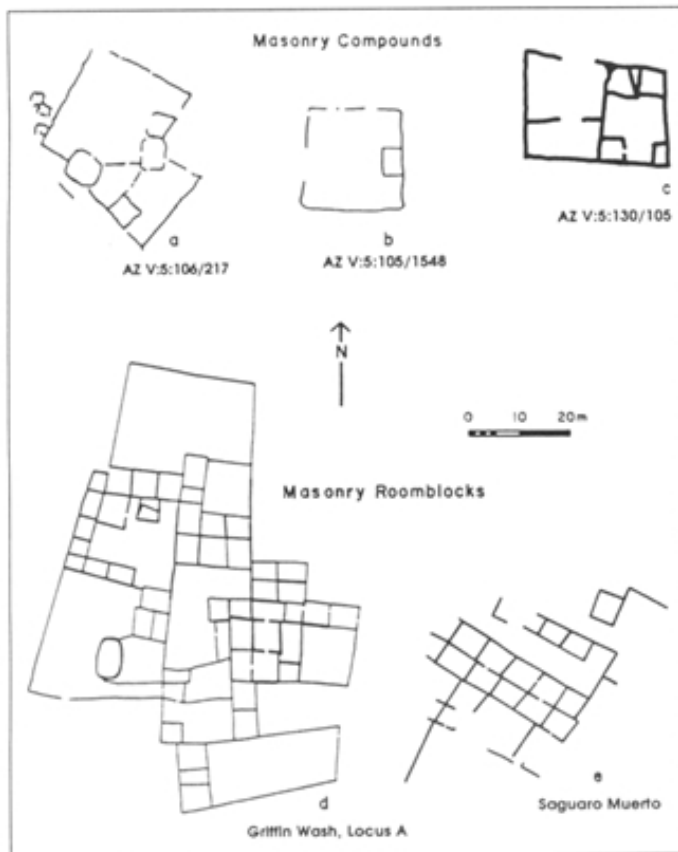
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areas. This supports suggestions by Hohokam archaeologists that the once extensive Hohokam system underwent significant reorganization between A.D. 1000 and 1100.

The retraction of the Hohokam network, along with the expansion of the Chaco system in northwestern New Mexico, resulted in increasing interaction of Tonto Basin groups with groups producing Cibola White ware (Black-on-white) ceramics. A significant increase in cotton production in the Tonto Basin suggests that cotton may have been the medium exchanged for white ware vessels.

A second wave of migrants to the Tonto Basin, this time from the pueblo regions, began sometime after A.D. 1200 or 1250. These groups most likely followed established Cibola White ware trade routes. The migration of pueblo groups was probably in response to environmental stress, and possibly conflict, in their homelands. Tree-ring studies indicate that the mid-to-late thirteenth century in the northern Southwest was a period of high climatic variability, including what archaeologists call the "Great Drought." Although we cannot pinpoint a source area for the Tonto Basin migrants, all lines of evidence suggest they came from an area where Cibola White ware ceramics were produced. This limits our search to areas north and east of the Tonto Basin.

The arrival of nonlocal groups in the Tonto Basin is most



Differences in architectural form between masonry compounds and room blocks. In room block, many rooms share common walls, but this is rare or absent in masonry compounds. These represent very different concepts of room layout and the social use of space.



The main room block at the Griffin Wash site (Locus A), containing close to 50 rooms.

apparent in the sudden appearance of pueblo room-block architecture, like that found at Griffin Wash and ASU's Saguaro Muerto site. The construction of nucleated room blocks is very different from the local tradition of masonry compound architecture. The Griffin Wash inhabitants may have specialized in the production of corrugated pottery, previously made only in small amounts in the Tonto Basin, and possibly in the growing of cotton and agave.

The local settlement system also expanded at this time. Meddler Point grew, and villages were established at Griffin Wash and Schoolhouse Point. This, along with an increase in the number of smaller residential sites, indicates significant population growth.

Tree-ring, radiocarbon, and ceramic dating suggest that the first Tonto Basin platform mounds were constructed around A.D. 1280. Platform mounds are artificially elevated surfaces, constructed from the filling-in of ground floor structures (see *Archaeology in Tucson*, April 1995). They provide important information about prehistoric social organization because their construction required leadership and the organization of labor for a task that was not directly related to subsistence pursuits.

The presence of distinct cultural groups, an increasing population to feed, and the need for communication to organize irrigation systems are critical factors that influenced the construction of platform mounds in the late thirteenth century Tonto Basin. Platform mounds also appear to be related to a new religious or ideological system that spread to the Tonto Basin at this time. Though the exact nature of this system is unclear, platform mounds are believed to be monumental symbols of this ideology. As locations for ceremonies and feasts, they helped integrate an expanding and ethnically diverse population.

Platform mounds do not appear to have been residences for elite groups, at least not during the thirteenth century. Limited social stratification, possibly along lineage lines, was probably present and was necessary for organization of labor. The integration of the local settlement system at this time is suggested by the Pyramid Point platform mound, also be-



lieved to have been constructed around A.D. 1280. This is the smallest mound in the Tonto Basin and appears to have served as a signal-tower for communication. It was strategically placed at the very end of a prominent ridge, where it was visible from every platform mound and village site in this portion of the Tonto Basin.

This local system failed around 50 years after construction of the platform mounds. The exact reasons are unknown, but they most likely relate to continuing environmental and social stress. Widespread and thorough burning of structures in the RCD project area and elsewhere in the Tonto Basin suggests that conflict increased after A.D. 1300. All settlements within the RCD project area were abandoned by A.D. 1325, and only a single large settlement at Schoolhouse Point remained on the south side of the Salt River. This reflects a pattern seen throughout the Tonto Basin and greater Southwest at this time where smaller sites were aggregating into a few large villages. Some groups may have moved out of the Tonto Basin as well.

#### FUTURE DIRECTIONS

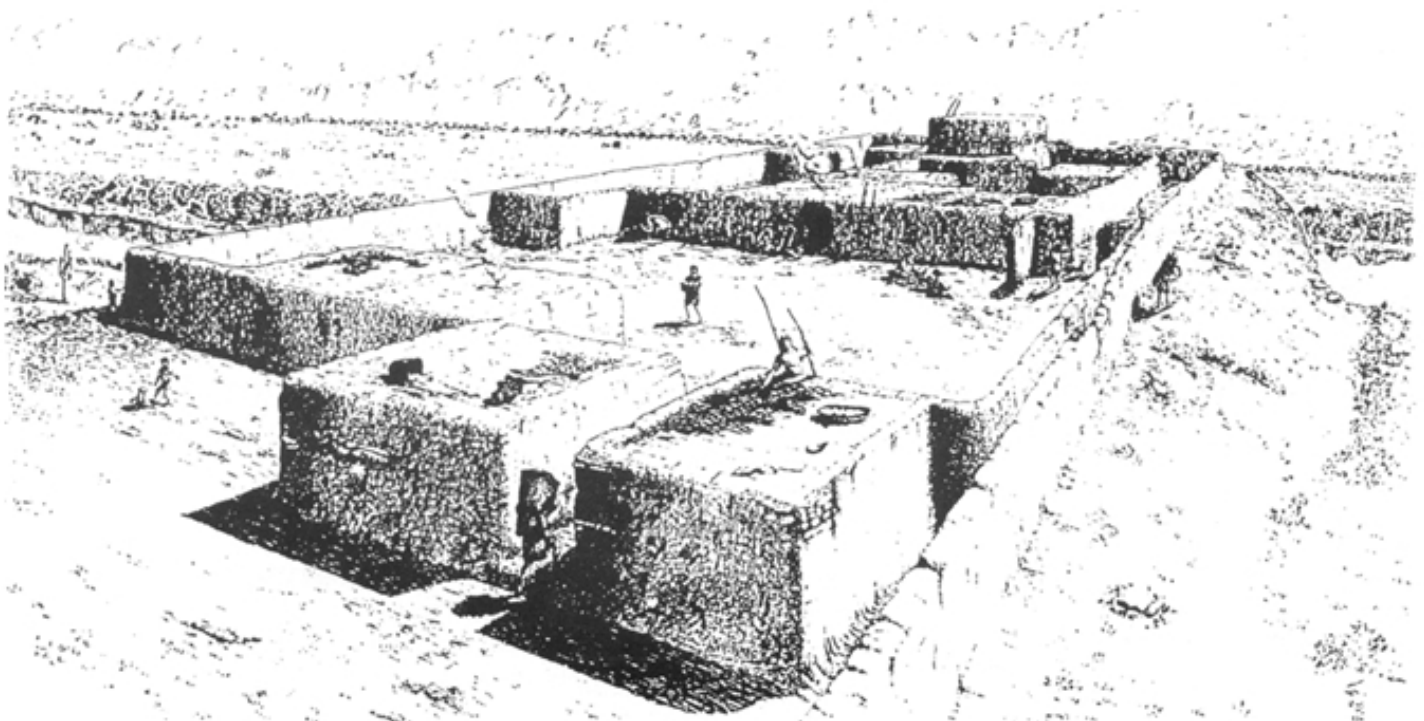
The Roosevelt Community Development Study has allowed for an in-depth look at a single, integrated Tonto Basin local system. Our research has documented the evolution of this system over a 1200-year period. Because we have intensively examined only one local system of the Tonto Basin, our results cannot automatically be generalized to include the entire Tonto Basin. Fortunately, the results of Arizona State University's Roosevelt Platform Mound Study and Desert Archaeology's

Sycamore Creek Project will soon provide a broader basis for considering the patterns we have observed.

However, the insights we have gained on large-scale processes, such as migration and regional integration, apply not only to the greater Tonto Basin, but to other areas of the American Southwest as well. In fact, even though the local system we investigated eventually failed, it still has important implications for later events in Tonto Basin prehistory. The establishment of a regional ideological system involving platform mounds sometime around A.D. 1280 has parallels to the much more extensive Salado system that spread to the Tonto Basin early in the fourteenth century. By understanding these earlier mechanisms, we gain greater insight into the even more complicated Salado process.

Sufficient information also was recovered from the RCD Study to examine previous hypotheses of Tonto Basin prehistory. Although our investigations indicate that the Basin contained an indigenous population prior to Hohokam settlement, the processes of migration proposed by Emil Haury to explain the early period of settlement are essentially correct. Winifred and Harold Gladwin also were mostly correct in their belief in a later pueblo migration, although some of the exact mechanisms they describe are no longer thought to have occurred.

Many questions remain to be answered: who were the pueblo migrants, what exactly is Salado, and what happened during the late Classic period Gila phase, when the Salado system reached its apex? New data and new thinking by a diverse set of researchers are moving us rapidly toward answers to these questions.



*Reconstruction of the Pyramid Point compound and platform mound by Ziba Ghassemi. The platform mound is the two-story structure at the far end of the site overlooking the Salt River. It is believed to have served as a signal or watchtower for communication. See article on pages 45 for information on the artist's process of reconstruction.*

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*Carved steatite dog figurines recovered from the Roosevelt Community Development Study (see story on page 1).*

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**ACKNOWLEDGMENTS**

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