

depth of approximately 29 cm below surface (the base of Level 2). The feature fill was hard, mottled black and brown clay sediment with inclusions of fire-cracked rocks, debitage, and small pieces of charcoal. Debitage and flaked stone tools were recovered from the feature fill.

### **Test Unit 5**

Test Unit 5 was a 2 × .5 m north-south oriented unit located north of the spring. The eastern wall of this unit was located on the bank of the spring channel. The unit was excavated in three arbitrary levels. Level 1 was excavated to a depth of 24 cm below the datum. The soil in this level was loose silty sand with debitage and flaked stone tools. We determined from the numerous sticks, clay inclusion, and other materials such as tar paper that the soils in this Level had been recently disturbed. Level 2, excavated to a depth of 35 cm below datum, was composed of mixed brown clay and silt with gravel and cobbles. The numerous clay inclusions and rocks suggest that the soil is disturbed and likely represents cleaning episodes of the adjacent channel. Despite the disturbed nature of the soils, artifacts were plentiful throughout. Artifacts recovered from Level 2 included debitage, ground stone, and flaked stone tools. Level 3 was excavated to a depth of 45 cm below datum. The soil in Level 3 was also disturbed brown clay with rocks and blocks of caliche. Level 3 yielded debitage, ceramics, and ground stone. No features were encountered in this unit and the artifacts probably originated from the surrounding midden.

### **Test Units 6 and 7**

During the examination of the surface deposits near the springs, HRA identified depressions located on a low hill approximately 40 m north of the springs. The hill, which is covered with Midden 1 deposits, contains 11 circular depressions that measure 2-4 m in diameter and are approximately 50 cm deep (Figure 4.16). Based on surface evidence, we hypothesized that the depressions may represent prehistoric pit structures. To determine if the features were in fact pit structures we decided to excavate test units within one of the features. Because of the close proximity of the depressions to the channel area we felt that it would be beneficial for planning efforts to determine if these features represent a concentration of pit structures.



Figure 4.16. Overview Photograph of depression in Midden 1. Elizabeth Warren is standing in the center.



Figure 4.17. Chris Harper taking notes after completion of a level in Test Unit 6.

Test Units 6 and 7 were excavated in the eastern half of one of the depressions. Unit 6 (Figure 4.17) and Unit 7 are adjoining 1x1 m units, which together form a 1 x 2 m excavation unit (Figure 4.18). We originally planned to excavate one unit; however, we expanded our efforts to a second unit because we encountered a pit and a fragment of “floor” but were not convinced of the feature’s function. Following the excavation of Unit 7, we were fairly confident that the depression does in fact represent a Basketmaker III pit structure.

The top level of Unit 6 was excavated as a 1 x 1 m, and levels 2 and 3 were excavated in halves. The eastern half was excavated first, and the western half was excavated second. Test Unit 6 was excavated to a depth of 70 cm below datum in three arbitrary levels. At a depth of 70 cm we encountered two large olla sherds lying flat in the east 2/3 of the unit. A trough metate fragment (left in place) and a mano fragment were also in this gravel area at the south end of the unit. A thick layer of compacted yellow clay with sand was encountered in the western third of the unit. It was at this point determined that the clay may be a floor fragment, and we decided to designate the depression as Feature 5. The gravel area with the artifacts was given a separate feature designation, Feature 6.

Test Unit 7 was a 1 x 1 m unit excavated to the clay layer or floor (Figure 4.18). The feature fill was excavated in two arbitrary levels and the 5-10 cm of soil above the floor was excavated and screened separately as the floor fill. The upper two levels consisted of uncompacted ashy silt (brown/gray) with organics and charcoal fragments. Faunal bone and charcoal increased substantially in quantity in the second, deeper level. Although no sherds were found in Test Unit 7, Test Unit 6 contained 12 gray ware sherds of more than two vessels. All sherds came from below the second level and most came from 20 cm above the floor. Some sherds were recovered from the floor fill level, but none were directly on the floor. We excavated the 5 cm level above the floor in Test Unit 7 carefully with a trowel and the transition from feature fill to floor was very abrupt. A thin layer of gray silt was seen directly above the floor in Test Unit 7 and above this are concentrations of charcoal, which were not as visible in profile.



Figure 4.18. Photograph of Test Units 6 and 7 after excavation. What is probably a pithouse floor is visible in the upper left corner. The pit in the floor is in the lower left hand corner.

### **FEATURE DESCRIPTIONS**

Six features were identified during the test excavations (Table 4.3). Three features were recorded in Test Unit 3, one feature was identified in Test Unit 4, and two features were recorded in the Test Units 6 and 7. The features are described below.

#### **Feature 1**

This concentration of charcoal and ash was first identified in the upper level of Test Unit 3, Stratum 1 (Figure 4.19). No clear outline of the feature could be discerned; however a discrete concentration of thermally altered rock, ash, and charcoal was identified in the south end of the Test Unit that was 10 cm deep and covered the southern half of the unit. The feature also contained FCR scattered throughout the fill. This feature likely represents the upper disturbed deposits of Feature 2, which is a roasting pit.

Table 4.3. Features Identified During Test Excavations at the Corn Creek Site.

Feature#	Feature Type	Date	Artifacts	Flotation
1	Upper disturbed deposits of Feat 2, a roasting pit	None	None; ash, charcoal, FCR	None processed
2	Roasting Pit	BC 1000 to 820 (Cal BP 2940 to 2770)	None; ash, charcoal, FCR	Saltbush seeds; Fuel woods include juniper, sunflower family, creosote, mesquite, rose family
3	Basin shaped, unlined hearth	None	None; charcoal and ash present	None processed
4	Shallow pit - may be a channel	None	Flaked stone, charcoal, FCR	None processed
5	Pit structure; measures 4 m in diameter and center is about 50 cm deeper than surrounding soil	AD 530 to 710 (Cal BP 1420 to 1240)	Logandale Grayware ceramics, Elko Corner Notched points, ground stone, flaked stone, burned sticks or reeds (Feature 5.1)	Amaranth, saltbush, strawberry cactus, possible ricegrass, and possibly cattail, cultivated squash/pumpkin or native buffalo gourd, <i>Ceratoides lanata</i> used for a mat or cushion (Feature 5.1)
6	Pit in Floor of Feature 5	None	Ground stone, flaked stone, ceramics	Cheno-ams

## Feature 2

This feature appeared at the base of Level 3 in Test Unit 3 as a distinct charcoal stain and concentration of FCR (Figure 4.19). Only the portion of Feature 2 that is located in Test Unit 3 was excavated. The fill of Feature 2 was mottled tan and black soil with bands of charcoal underneath the FCR. In the trench, Feature 2 measured 30 cm x 50 cm, and yielded approximately 20 fragments of FCR. All of the FCR was covered in charcoal and stained dark black. There was no oxidation of the soil around the edges of the feature, and only a few artifacts were present. Thick parallel bands of charcoal visible during the excavation of the feature were likely the remains of logs and sticks that were laid under the FCR.

A flotation sample was processed from the fill of Feature 2, and a radiocarbon sample was taken from Level 4 of Feature 2. The resulting conventional radiocarbon age for this sample was 2760 +/- 40 years BP with a calibrated date of BC 1000 to 820 (Cal BP 2940 to 2770). Puseman and Cumming's analysis of the soil sample from the feature suggest that it was used to process saltbush seeds and another type of undetermined seed resource. Woods burned as fuel include a woody member of the sunflower family, juniper, saltbush, creosote bush, mesquite, and a woody member of the rose family. A rabbit/jackrabbit fecal pellet and raspberry/blackberry seed reflect some disturbance to this feature, which was probably related to modern rodent disturbance. Feature 1, which lay directly above Feature 2, may be the result of rodent disturbance into Feature 2 from above.

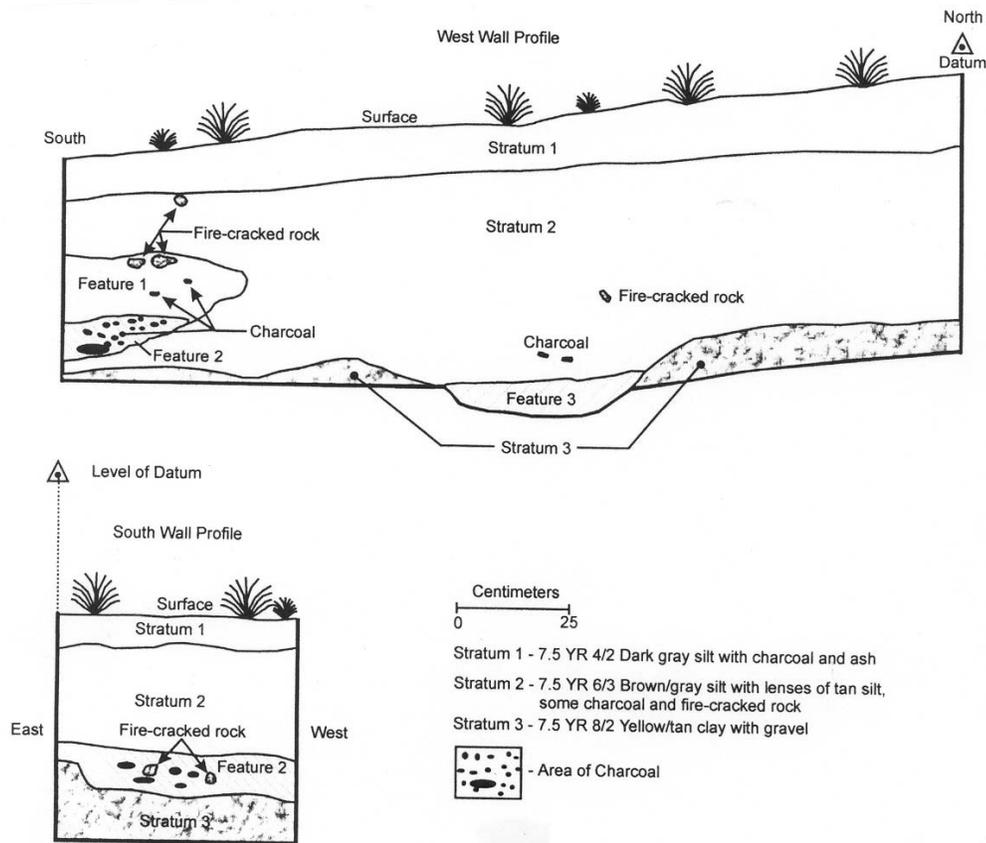


Figure 4.19. Profile of the west wall of Test Unit 3 showing Features 1, 2, and 3.

### Feature 3

Feature 3, a basin-shaped unlined hearth, was discovered in Unit 3 (Figures 4.19-4.21). The feature was identified at the base of Level 5 as a dark stain in Stratum 3, which is a compacted tan/yellow layer. More than half of the feature extended beyond the west wall of the unit. The plan and profile information suggest that the feature has a diameter of approximately 80 cm. The portion of the feature in Unit 3 was excavated exposing a shallow basin-shaped hearth filled with charcoal and ash (Figure 4.20).

### Feature 4

Feature 4 is a shallow pit that was encountered in the southeast of Test Unit 4. The pit had been excavated into a stratum of tan pebbly silt (Stratum 2), a shallow pit. There was a sharp break between that deposit and the fill within the pit, which was compacted black-and-brown mottled clay sediment with inclusions of fire-cracked rocks, flaked stone artifacts, and some small pieces of charcoal. Both the pit fill and Stratum 2 were overlain by Stratum 1, a predominantly gray silt deposit containing abundant artifacts and pieces of thermally altered rocks.



Figure 4.20 Photograph of Feature 3 prior to excavation.



Figure 4.21. Photograph of Feature 3 after excavation.

Feature 4 was interpreted as cultural for several reasons. The pit had a distinct edge and contained artifacts and charcoal in the fill. In addition, in certain places the fill broke away neatly from the underlying Stratum 2 sediment, and the difference between the feature fill and the overlying sediment was noticeable. Alternatively, the feature could have been a channel that was dug to direct water from the spring. The straight, sharp edge suggests that the feature was built, rather than naturally occurring. The clay content of the fill could represent natural filling of the ditch with water-borne settlement. If so, the sediment source area included cultural, artifact-bearing sediment.

### Feature 5

This feature, a possible pit structure, is located on a low hill 40 m north of the springs in Midden 1. The feature was first recognized on the surface as a shallow circular depression in Midden 1, Locus 1 that measures approximately 4 m in diameter (Figure 4.16). The center of the depression is approximately 50 cm deeper than the surrounding soil. There are approximately 10 other depressions on the hill where Feature 5 is located. The soil around Feature 5 is brown-gray ashy silt with charcoal flecks and abundant artifacts. No sherds were identified in the vicinity of Feature 5, and only a few were identified on the entire surface of Midden 1.

Since the depressions were enigmatic, we decided to dig a unit into one of them to determine if they were cultural. Two adjoining 1 x 1 m units (Test Units 6 and 7) were eventually excavated into the pit structure (Figure 4.18). At a depth of approximately 60 cm below the ground surface, a compacted tan/yellow layer covered the west and northwest edge of Unit 6 and all of Unit 7 (Figure 4.20). Most of the base of Unit 6 lacked the 3-5 cm-thick clay floor and was a layer of tan silt with small gravel. The break between the clay floor of Feature 5 and the sandy gravel surface of Feature 6 was abrupt, appearing to have been cut to form a pit. Two large olla sherds, two hammerstones, and one metate fragment were lying on the surface of this possible pit in the floor of the pit structure. A feature number, Feature 6, was given to this feature; however, the feature was not excavated further.

The fill overlying the compacted floor consisted of several layers of fine ashy silt with varying amounts of charcoal and organic material. The strata contained large quantities of flaked stone and faunal remains; however, ceramics were recovered primarily from the 20 cm level above the floor and in the floor fill (5 cm above the floor). Sixteen sherds from at least three vessels were recovered from Test Unit 6, and none were identified in Test Unit 7. All of the sherds that could be typed were Logandale Gray Ware, and all were globular jar body sherds. Logandale Gray ceramics were recovered from Basketmaker III pit house structures that were recently excavated by the Harry Reid Center at Black Dog Cave site near Glendale, Nevada. Although this type is considered to date to Virgin Anasazi Pueblo periods as well as the Basketmaker periods, it had not been securely dated in southern Nevada prior to the excavations at the Black Dog Cave's pit house cluster (Winslow 2006). Tools recovered from the fill of the pit structure included 12 biface fragments, four cores, one Elko-Corner Notched point fragment, four unidentified point fragments, and three mano fragments.

No artifacts were encountered directly on the floor in Test Unit 7; however an area of dense charcoal in the SW corner of the unit was exposed and was excavated in halves. The concentration (Subfeature 5.1) was oval-shaped and measured 21 x 11 cm. Upon excavation it appeared to be a burned concentration of sticks or reeds lying in a shallow depression on the floor (Figure 4.22). Charcoal from the concentration was submitted for species identification and radiocarbon dating. The resulting conventional radiocarbon age for this sample was 1420 +/- 70 years BP and a calibrated date of AD 530 to 710 (Cal BP 1420 to 1240). According to Puseman and Cummings the charcoal fragments exhibited the *Atriplex/Ceratoides* cross-section morphology and the  $^{13}C/^{12}C$  ratio suggests that this charcoal is *Ceratoides* and not *Atriplex*. *Ceratoides lanata* (winterfat) has many branches with densely woolly foliage. These branches might have been loosely woven or simply stacked together to form a woolly cushion or mat.

Macrobotanical remains from the floor fill suggest that the occupants of the structure utilized a variety of native plant foods including amaranth, saltbush, strawberry cactus, possible ricegrass, and possibly cattail. Recovery of *Cucurbita* pollen might reflect cultivated squash/pumpkin or native buffalo gourd. The charcoal record suggests that saltbush/winterfat, hackberry, creosote bush, and mesquite wood were burned as fuel.

Although only a small portion of this feature was excavated, the diagnostic artifacts, architectural features, and radiocarbon dates are consistent with Basketmaker III pit structures reported elsewhere in southern Nevada and elsewhere in the Virgin Anasazi region. Pit structures on the top of the mesa above Black Dog Cave reported by Winslow (personal communication 2003) and Shulter (1961:5) were associated with Logandale Gray ceramics.



Figure 4.22. Photograph of Subfeature 5.1 before excavation.

### Feature 6

Feature 6 is a pit in the floor of Feature 5, a pit structure. Only a portion of the pit was exposed in the excavation unit and the pit was not excavated. A metate fragment, two hammerstones, and two large sherds were found at or near the surface of the pit. The metate fragment was washed for pollen and phytoliths. There was not enough of a phytolith record to obtain a count that would be meaningful or interpretable. The pollen record from this metate is dominated by Chenopodium pollen, indicating that Chenopodium seeds were probably ground on this metate. The hammerstones were submitted for protein residue analysis. A portion of the soil from macrofloral sample 68 was used as a soil control for this hammerstone. The hammerstone and the soil control yielded negative results to all antisera tested.

## ARTIFACTS RECOVERED DURING TESTING

Suzanne Eskenazi

### Flaked Stone (Debitage)

There were 3,215 flakes recovered and analyzed from the Corn Creek Site. The flakes were recovered from all of the test units, and from every level of excavation. The abundance of core reduction flakes signifies the middle stages of raw material reduction for eventual tool preparation. While the quantity of bifacial thinning flakes is noticeably small, more than one half of the flaked stone assemblage was composed of pressure flakes. Both of these flake types are generally associated with the final stages of tool preparation and/or maintenance of a unifacial or bifacial tool (Flenniken and Raymond 1986). The existence of a large quantity of both core reduction and pressure flakes illustrates the broad spectrum of tool manufacture occurring at the site. In addition, chert was the dominant raw material on site. Ninety percent (2,871/3,214) of the flakes were chert. The remaining ten percent was composed of quartzite, limestone, and obsidian.

### Flaked Stone Tools

There were 38 formed tools recovered during testing, illustrated in Figure 4.23. The two diagnostic tools from this assemblage were Elko Corner Notched point fragments, both manufactured from a white/beige chert. The first of these points was recovered from the fill of Test Unit 4 in the midden area. It was broken across the width, leaving a portion of the blade and the haft element. A tiny segment of one of the shoulders was also missing. The other Elko point, recovered from the fill of Test Unit 6 (also in the midden area), was missing the distal end and one entire shoulder. The remaining point fragments were also made of chert and represented the distal ends of the points, which could not be classified into any particular type.

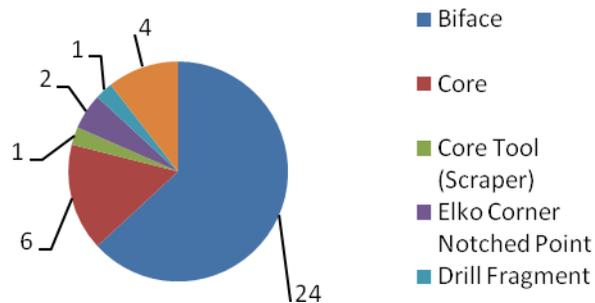


Figure 4.23. Formed Tools Recovered During Testing.

A single chert drill fragment, which was missing its tip, was recovered from the fill of Test Unit 4 in the midden area. It measured 40 cm long by 20 cm wide (at the base). The segment was bifacially worked and rounded, and thickness measured 6.3 cm.

The scraper measured 85 cm long by 77 cm wide, and was 38 cm thick. Flakes were knocked off unidirectionally, and the negative flake scars were polished. One very small portion of one edge (25 cm) appeared to have been used as a scraper.

The collected bifaces spanned the range from early to late stages of manufacture. The average length, width, and thickness of all bifaces were 32.71 cm, 25.67 cm, and 7.66 cm respectively. All four of the quartzite bifaces were in the early stage of manufacture.

All but 11 of the tools in this assemblage were manufactured from chert; six cores and four biface fragments were quartzite, the only other raw material represented in the tools. Why were there so few quartzite tools when all six of the cores and the core tool were quartzite? Perhaps the toolmakers at 26CK2605 found that quartzite was unsuitable for the task at hand after initiating the core reduction process. This would explain the lack of finished quartzite tools and the early stage quartzite bifaces.

Fifty-four percent (21/39) of the tools were found in association with Test Units 6 and 7, both of which were located in the pithouse. The remaining 46 percent (18/39) was spread out among Test Units 1, 3, 4, and 5. The former three units were all located in the midden area. Figure 4.24 shows the test units in which the tools were found. The almost even split suggests that tasks could have been spread out across the site rather than focused in one particular area of the site.

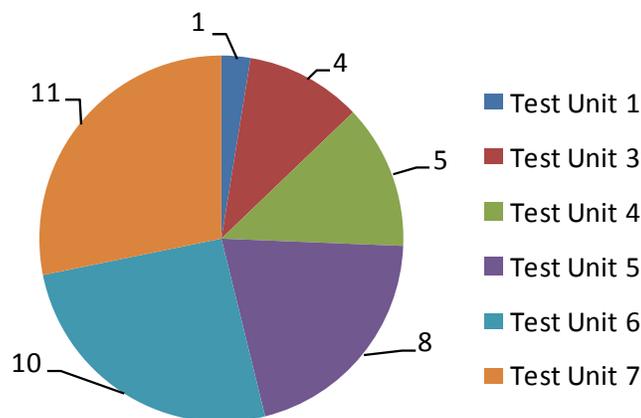


Figure 4.24. Chart Showing Tools Identified in the Test Units During Test Excavations.

Finally, in order to better understand the nature of site use at Corn Creek, the flaked stone assemblage was compared to other nearby sites (Table 4.4). The purpose of this comparison was to determine if Midden 1 was a midden in the true sense. We had the impression during the test excavations that the artifact density was unusually high for an open site, or for that matter for rock shelter sites. This comparison is intended solely as means of evaluating the relative density of artifacts. It is not intended to be culturally meaningful.

The sites used in this comparison are all located within the Las Vegas Valley: Garrett Rockshelter, 26CK5712, located in the Apex project area in the northeastern portion of the valley (Ahlstrom and Roberts 2001a); 26CK4908, composed of a rock shelter and three roasting pits, located on the west side of Las Vegas and excavated as part of the Northern Beltway Data Recovery Program (Blair et al. 2000); and 26CK3601, Burnt Rock Spring Mound, located in the northwestern part of the valley (Seymour and Rager 2001). The Burnt Rock Spring Mound site bears the closest resemblance to Midden 1 in terms of setting, function, and occupation history. The initial step in the comparison involved calculating the volume of dirt removed from each site. Following this, the amounts of flaked stone, cores, bifaces, points, point fragments and drills recovered per cubic meter were calculated. The results, illustrated in Table 4.4, indicated a rather intense use of the site at Corn Creek.

Table 4.4. Comparison of Artifacts Per Cubic Meter.

Artifacts per m <sup>3</sup>	Garrett Rockshelter	Beltway Rockshelter	Burnt Rock Spring Mound	Corn Creek 26CK2605
Volume of Dirt Moved	11m <sup>3</sup>	21.3m <sup>3</sup>	8.4m <sup>3</sup>	2.8m <sup>3</sup>
Flaked Stone (Debitage)	152.36	60.18	652.74	1148.21
Cores	.63	.05	--	2.14
Bifaces	1.45	1.08	1.19	8.57
Points & Point Fragments	1.45	1.55	--	2.14
Drills	0	.05	0	.05

While there were less than three cubic meters of dirt removed from Corn Creek, the amount of artifacts recovered per cubic meter was overwhelmingly greater than the amounts recovered from the other comparison sites. For example, while 11 m<sup>3</sup> of dirt was removed from Garrett Rockshelter, (3.93 times more than at Corn Creek), 7.5 times more flaked stone was recovered at Corn Creek. When compared with the Beltway Rockshelter, more than 19 times more flaked stone was recovered from Corn Creek, although 7.6 times more dirt was removed from the former site. Corn Creek also yielded more than 1.5 times the flaked stone than excavations at Burnt Rock did, even though the volume of dirt moved at the former site was much less than at Corn Creek. Finally, the biface to core ratio was computed for all of the comparison sites. In increasing order, they were: Garrett Rockshelter 2.29:1; Corn Creek 6:1; and Beltway Rockshelter 23:1. No cores were recovered from the Burnt Rock Spring Mound. Ultimately, the fact that there was such a high number of artifacts from Corn Creek is even more significant considering the fact that one would have had a long way to travel for raw materials since the nearest source was miles away.

Overall, the large amount of flaked stone from this site supports the idea that the area is a midden in the true sense. In addition, it also lends support to the suggestion that this site was used somewhat intensively, especially since the number of artifacts recovered per cubic meter is extremely high. Finally, the tool assemblage is noticeably large and diverse for such a small area of excavated test units (only seven). This suggests that multiple activities were occurring at Corn Creek, and that time spent here was not centered on one particular task. The discovery of architectural features supports the suggestion of intensive use. Further research at this site would help to refine our understanding of what behaviors were occurring here, and for how long.

### Ground Stone Artifacts

Eleven ground stone artifacts were recovered during test excavations. Overall, the ground stone artifacts were small in quantity, made of locally available materials, and were not intensively used. The assemblage included six unifacial, one-hand manos, two unifacial metates, one bifacial metate, and two indeterminate ground stone fragments. Manos, or handstones, are ground stone tools that are used to grind food or other products on netherstones, which are the bottom stones against which something is worked. All of the artifacts were manufactured from quartzite.

On the whole, the ground stone was not used intensively; the majority of the stones was moderately ground (54 percent). More than one half of the ground stone artifacts were recovered from Test Units 5 and 6 (54 percent), and the other 46 percent were recovered from Test Units 2, 7, and 1. In addition, both mano and metate fragments were found throughout all levels of excavation. Table 4.5 indicates the provenience of the recovered ground stone.

Grinding activities at Corn Creek did not appear to be concentrated in one single area, as evidenced by the recovery of artifacts from all test units across the site. In addition, the fact that similar ground stone types were found from the surface through level three suggests that grinding behaviors were probably similar through time.

While we can suggest general activities that were occurring at Corn Creek, we cannot determine exactly what was being ground. Discernable striations on the ground stone tools indicate that grinding was in a back-and-forth motion; there were no indications of random grinding on any of the tools. Certain uses of manos and metates produce predictable wear patterns on grinding surfaces. For example, the use of a flat mano on a flat surface produces a flat grinding area on the mano. The use of the same flat mano on a basin metate can cause beveling on the ends of the mano. Because the majority of the manos from this site had flat cross-sections, it is likely that they were used on flat grinding surfaces, and were probably not used intensively (in which case there could have been more convex manos recovered).

Table 4.5. Provenience of Ground Stone Artifacts From Corn Creek.

Provenience	Mano Fragment	Metate Fragment	Indeterminate Fragment
Test Unit 1			
Surface	--	1	--
Test Unit 2			
Level 1	1	1	--
Test Unit 5			
Level 2	1	--	--
Level 3	--	--	1
No Level	--	1	--
Test Unit 6			
Level 2	1	--	--
Level 3	1	--	1
Test Unit 7			
Surface	1	--	--
Level 2	1	--	--
Total	6	3	2

## Ceramic Artifacts

Laureen Perry

Nineteen sherds were recovered during the test excavations in Midden 1 at Corn Creek (Table 4.6). Fourteen of the sherds were recovered from Test Unit 6, which was excavated in Feature 5, a possible pit structure. All of the sherds that could be typed and were from Test Unit 6 are Logandale Gray Ware sherds from jars. The shape of the jars are Pueblo I shapes. Some of the untyped sherds appear to have been locally made and underfired.

Table 4.6. Ceramics from the Test Excavations in Midden 1 at Corn Creek.

FN #	Provenience	Ware	Type	Vessel Part	Description
13	TU3, L1	Unidentified	Unidentified	Indeterminate	
32	TU4, L1	Unidentified	Unidentified	Indeterminate	Spall; Not Big Enough To Determine Type Or Form.
43	TU 5, L3	Unidentified	Unidentified	Indeterminate	
56	TU6, F5 Fill, L2	Logandale Gray Ware	Logandale Gray	Jar Body	2 Sherds; Anasazi Type With Scraped Finish; Locally Made
59	TU6, F5 Fill, L2	Logandale Gray Ware	Logandale Gray	Jar Body	2 Sherds; Same Vessel As FN 56.
60	TU6, F5, L3	Logandale Gray Ware	Logandale Gray	Jar Body	6 Sherds; Different Vessel From FN 56 & 59.
70	TU6, F5, Floor Fill	Logandale Gray Ware	Logandale Gray	Jar Body	2 Sherds; Same Vessel As FN 60.
70	TU6, F5, Floor Fill	Unidentified	Unidentified	Indeterminate	2 Sherds Fit; Free Formed; No Temper; Underfired; Cannot Determine Form.
110	TU6, F6, Feature Fill	Logandale Gray Ware	Logandale Gray	Jar Body	2 Sherds Fit; Different Vessel Than FN 56/59, FN 60/70. "Typical" PI, Globular Jar Shape. Very Wide Mouthed Jar. Calcium Deposits Forming Bumpy Exterior-After Deposition.

### Faunal Analysis

Regina L. Chapin-Pyritz

Test excavations at Corn Creek resulted in the recovery of 447 animal bones from eight taxa (Table 4.7). Most of the bones were recovered from Test Units 6 and 7. The faunal assemblage consisted of numerous reptile elements, including desert tortoise and chuckwalla, and the remains of rodents, cottontail rabbits, and jackrabbits. The remains of large game animals including bighorn sheep were plentiful, although most could not be identified as to species. Many of the faunal remains were burned (170 fragments) indicating that desert tortoise, chuckwalla, jackrabbits, cottontail rabbits, woodrats, kangaroo rats, bighorn sheep, and unidentified artiodactyls were processed and consumed at the site. Only five faunal bones were butchered, evidenced by cut and scrape marks. Seven bones showed signs of gnawing.

Table 4.7. Summary of Faunal Remains from Testing at Corn Creek.

Type	Quantity
Bighorn Sheep, Pronghorn Antelope	246
Unidentified Birds and Mammals	90
Desert Tortoise, Chuckwalla	54
Jackrabbit, Cottontail Rabbit	40
Rodents	17
Total	447

## Pollen, Phytolith, Macrofloral, and Protein Residue Analysis

Kathryn Puseman and Linda Scott Cummings

With Assistance from Laura Beuthel

Samples from an Anasazi pit structure at Corn Creek in southern Nevada were submitted for pollen, macrofloral, phytolith, and/or protein residue analyses. Fill from a Late Archaic hearth also was examined for macrofloral remains. Analyses were conducted to address questions of subsistence. Pollen, phytolith, and macrofloral analyses yield information concerning plant resources that were utilized, while protein analysis of a hammerstone will be used to determine if identifiable plant or animal protein residues are present on the artifact.

Pollen and macrofloral analysis of the pit structure suggests that the occupants utilized a variety of native plant foods including amaranth, saltbush, strawberry cactus, possible ricegrass, and possibly cattail. Recovery of *Cucurbita* pollen might reflect cultivated squash/pumpkin or native buffalo gourd. A metate found in the structure appears to have been used for processing Cheno-am seeds. The charcoal record suggests that saltbush/winterfat, hackberry, creosote bush, and mesquite wood were burned as fuel. Winterfat branches with their woolly foliage might have been used to make a mat or cushion. A hammerstone in the pit structure yielded negative results to all antisera tested. It is possible that this hammerstone was used to process a plant or animal resource other than those represented by the available antisera, or that an insufficient amount of protein residues were retained on the artifact surface.

Feature 2 represents a Late Archaic occupation of the site. This thermal feature appears to have been used to process saltbush seeds and another type of seed resource. Woods burned as fuel include a woody member of the sunflower family, juniper, saltbush, creosote bush, mesquite, and a woody member of the rose family. An uncharred raspberry/blackberry seed and a rabbit/jackrabbit fecal pellet reflect some disturbance to this feature and introduction of some modern material.

## DISCUSSION

Throughout the Southwest the presence of midden deposits containing prehistoric pottery generally signals the existence of surface or semi-subterranean architecture. In the Virgin Anasazi, Fremont, Pueblo, Hohokam, and Mogollon culture areas pottery was manufactured and used by sedentary farmers, who lived in pit structures during the early agricultural period, and later, in surface pueblos made of stone or adobe. After decades of excavation and research archaeologists can confidently infer that the prehistoric inhabitants of the Southwest who made and used quantities of pottery in their everyday lives were sedentary farmers who grew corn, beans, and squash, supplementing these cultigens with gathered plants and animals. Until recently this correlation of pottery and agriculture did not hold true in the Las Vegas Valley. Despite the presence of hundreds or even thousands of pottery sherds at Las Vegas' largest prehistoric sites, habitation features and evidence for an agricultural subsistence focus remain elusive. Archaeologists here accepted this anomaly for two reasons. First, the Las Vegas Valley is peripheral to the core of the Southwest, and second, the Valley's prehistoric residents are believed to have been strongly influenced by Patayan and Great Basin cultures whose economy was more hunting and gathering focused.

Elsewhere in southern Nevada, the adoption of agriculture is known to have occurred in the Moapa Valley at least 2000 years ago (Winslow and Blair 2003). At Black Dog Cave (Winslow and Blair 2003), and at an undated Basketmaker II village excavated by Harrington near the intersection of the Virgin and Muddy Rivers (Shutler 1961:13), farmers began growing maize and other cultigens and storing the surplus in caves by A.D. 1. In the Muddy and Virgin River valleys and elsewhere in the Southwest (Mabry et al. 1997; Talbot and Richens 2002) the use of pit houses as habitations preceded the adoption of agriculture and pottery. By the Basketmaker III Period (A.D. 400-800) the occupants of the Virgin and Muddy River valleys were living in pit structures, making pottery, and using the bow and arrow. Subsequent periods are marked by changes in

architecture and pottery styles. This sedentary farming lifeway continued in the core areas until A.D.1225 (Lyneis 1995:232).

Extending the Virgin Anasazi chronology to the Las Vegas Valley has proven frustrating because 'pure' Virgin Anasazi sites have never been excavated in the Valley. Some of the larger open sites, such as the Berger Site on Duck Creek, Burnt Rock Mound (26CK3601) in North Las Vegas, site 26CK1474 in Las Vegas Wash, the Midby Site Complex (26CK3115 and 3117) in Paradise Valley, and site 26CK1333 near Whitney Mesa (Ellis 1978; Rafferty and Blair 1984; Roberts and Ahlstrom 2000; Seymour 1997; Seymour and Rager 2001) contain mixed assemblages of Patayan, Virgin Anasazi, and Southern Paiute ceramics. Excavation of these sites has been, for the most part, too limited in scope to untangle the relationships between the ceramic assemblages. Despite numerous attempts by Las Vegas archaeologists to recover archaeological data from important sites (Rafferty and Blair 1984; Roberts and Ahlstrom 2000; Seymour 1997, 1999) much of it has been lost due to rapid urban expansion.

Without a complete excavation of one of the depressions in Midden 1 we are hesitant to say with certainty that the midden contains a Basketmaker III Virgin Anasazi "village." However, three pieces of evidence point strongly to that possibility. The first is the discovery of a clay lens that resembles a floor in the excavated depression. Second, a small brush mat provided a radiocarbon date that falls squarely into the known Basketmaker III period. Lastly, Logandale Gray ceramics, which were recovered by HRA from the fill and floor fill of the Midden 1 depression, have recently been associated with one of the best-dated Basketmaker "villages," Black Dog Cave. Diane Winslow, who examined the ceramics from Black Dog Cave, indicated that Logandale Gray ceramics were one of the most common varieties of pottery associated with the Basketmaker component of this site.

In summary, HRA's test excavations suggest that a wealth of data on the Las Vegas Valley's Virgin Anasazi period is preserved at the Corn Creek Site. The present test excavations have discovered a possible cluster of Basketmaker III pit structures, which are the only known concentration of such features located west of the Muddy River valley. The Corn Creek Site also contains features that both predate and post-date the Basketmaker III. The presence of several middens associated with pottery, combined with the discovery of habitation features in one of the middens, hints that other habitation features, possibly representing other Ceramic period occupations, may lie buried at Corn Creek. Furthermore, the excellent condition of many of the midden features combined with evidence that the area was occupied continuously since the Middle Archaic period hints that Corn Creek's archaeological deposits in the middens and loci have the potential to provide data on Native American subsistence and settlement patterns in the Las Vegas Valley from the Middle Archaic to the Historic Period.

## **OUR CHANGING VIEW OF THE FORMATIVE PERIOD IN LAS VEGAS**

Corn Creek is one of the four sites in the Las Vegas Valley where pithouse features were identified and explored in the last five years. Two of the sites, the Three Kids Site and Scorpion Knoll, are located in Clark County Wetlands Park, and a fourth is at the Las Vegas Springs Preserve (Roberts and Seymour 2006). Before these discoveries there were hints that such features existed, but it was widely believed they had been destroyed by Las Vegas' rapid urban expansion. This exciting evidence of settlement permanence is changing our understanding of the Ceramic Period and the local role played by Puebloan farmers.

Since much of these data have not been synthesized, or even reported, we feel it would be useful to summarize the discoveries here. Each of the four sites that contain pithouses was excavated to different extents. The Three Kids pithouse was completely excavated (Ahlstrom 2005), the Las Vegas Springs Preserve pithouse was almost completely excavated (Roberts and Seymour 2006), and the Scorpion Knoll and Corn Creek pithouses have been sampled.

The oldest pithouse (two-sigma calibrated date range of AD 410 and 600) discovered in the Valley was identified at the Three Kids Site in Clark County Wetlands Park by HRA (Ahlstrom 2005; Ahlstrom and

Roberts 2001a). The Bureau of Reclamation funded HRA's excavation of the feature in the summer of 2003. The feature was a shallow circular pit structure that measured approximately 4 m in diameter (Figure 4.25). It consisted of a superstructure of poles and presumably brush and earth that was built over a shallow pit. There was an oval-shaped hearth inside the structure near a ramp entry opening to the east (Figure 4.25, F.3.1). No ceramics were recovered from the floor or floor-fill, but Rose Spring Side-notched points tell us that the site's occupants made use of bow and arrow technology. Despite a thorough sampling of the floor for corn pollen, no evidence of cultigens was found. However, macrobotanical and pollen samples did contain evidence that marsh species, grasses, and mesquite pods were processed. Faunal remains included tortoises and unidentified large mammals.

Scorpion Knoll (26CK6147), also located in Clark County Wetlands, contains pithouse features that were occupied by farmers who used pottery. The site was first recorded as a small scatter of approximately 20 pieces of flaked stone, one pot sherd, a few pieces of fire affected rock, and a fragment of ground stone. In the fall of 2005 and winter of 2006 HRA excavated backhoe trenches across this site revealing the presence of one or two pithouses, thermal features, three storage pits, and a possible ramada-like feature.

Figure 4.26 is a photograph of the backhoe trench showing the profile of a burned pit structure. Note the bowl-shaped lens of ash and charcoal in the trench profile. HRA excavated a single test unit through the structure's fill to a depth of approximately 50 cm below the present surface. At the base of the test unit HRA encountered a compacted clay floor that met a steep-sided wall. Unlike the units excavated in the pithouse at Corn Creek, the excavated units at Scorpion Knoll contained only a few pieces of flaked stone. The small artifact assemblage recovered from the site—from the surface and test units—included fewer than 139 pieces of debitage, 3 late-stage bifaces, 1 utilized flake, and 16 sherds. Margaret Lyneis' preliminary analysis identified 4 Moapa gray sherds, 11 quartz-tempered gray ware sherds, and 1 unknown sherd. Radiocarbon dates indicate the site was occupied between AD 660 and 810. Soil samples taken from the floor of the Scorpion Knoll pit structure and from the floor of the possible ramada contained maize pollen. Other plants processed at the site included saltbrush seeds, goosefoot seeds, and mesquite seeds. The low artifact density and high feature count data hint that the site may have been used as a temporary fieldhouse or farmstead.

Puebloan habitation features have also recently been identified at the Big Springs Site at the Las Vegas Springs Preserve site. These features were first identified in 1937 by a Las Vegas dentist named Parks. Although Park's discoveries have not been confirmed, more recent investigations support his report of structures associated with Puebloan pottery. In 2002 Seymour performed surface collections and test excavations at the site (Roberts and Seymour 2006). More than 400 sherds were collected from the locus, as were many stone tools. Seymour excavated a contiguous series of 5 cm deep 2 m<sup>2</sup> archaeological surface scrapes and uncovered the oval outline of a subsurface habitation feature. A single 1 m<sup>2</sup> unit excavated near the center of the pit structure exposed a hearth about 30 cm below present ground surface. Further excavation in the area of the hearth identified a concave un-plastered floor surface, as well as what appeared to be adobe wall fall. According to Seymour (2006), burned daub from various locations around the structure contained impressions of arrowweed.

Within the pithouse interior Seymour collected 57 sherds. Moapa and Logandale Gray wares were the dominant pottery types in the feature fill. In addition, Seymour reported several chert flakes and a side-notched projectile point on the floor of the feature next to the hearth. Radiocarbon samples from the interior hearth provided a 2-sigma date of AD 680- to 980. An adjacent hearth provided a 2-sigma radiocarbon date of AD 670 to 870. Pollen samples processed from floor and fill suggest processing of Cheno-am seeds, *Cucurbita*, and possibly rye. A single cupule of corn from the hearth was the only reported evidence of maize.

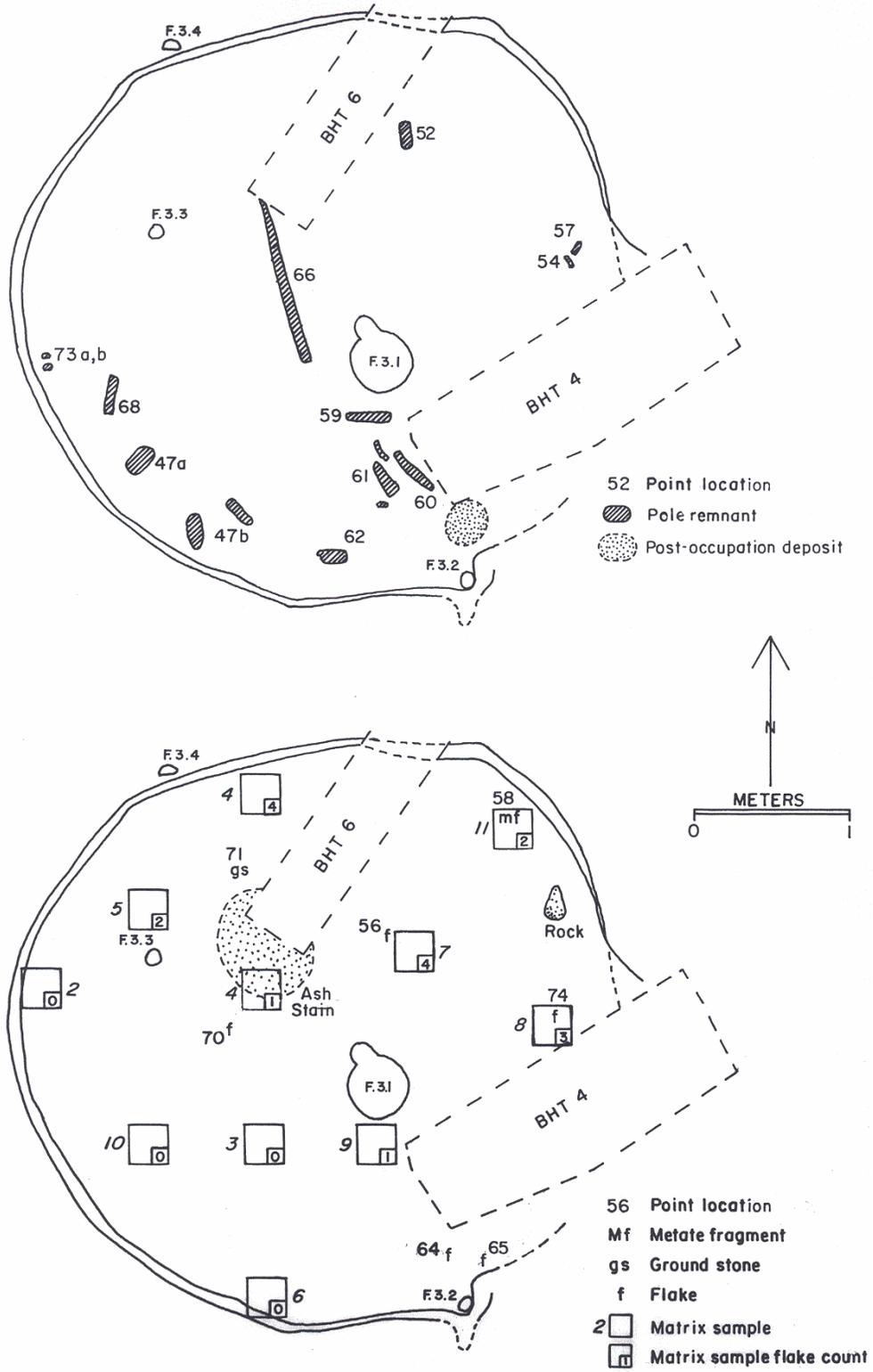


Figure 4.25. Drawings of the Three Kids Site pithouse.

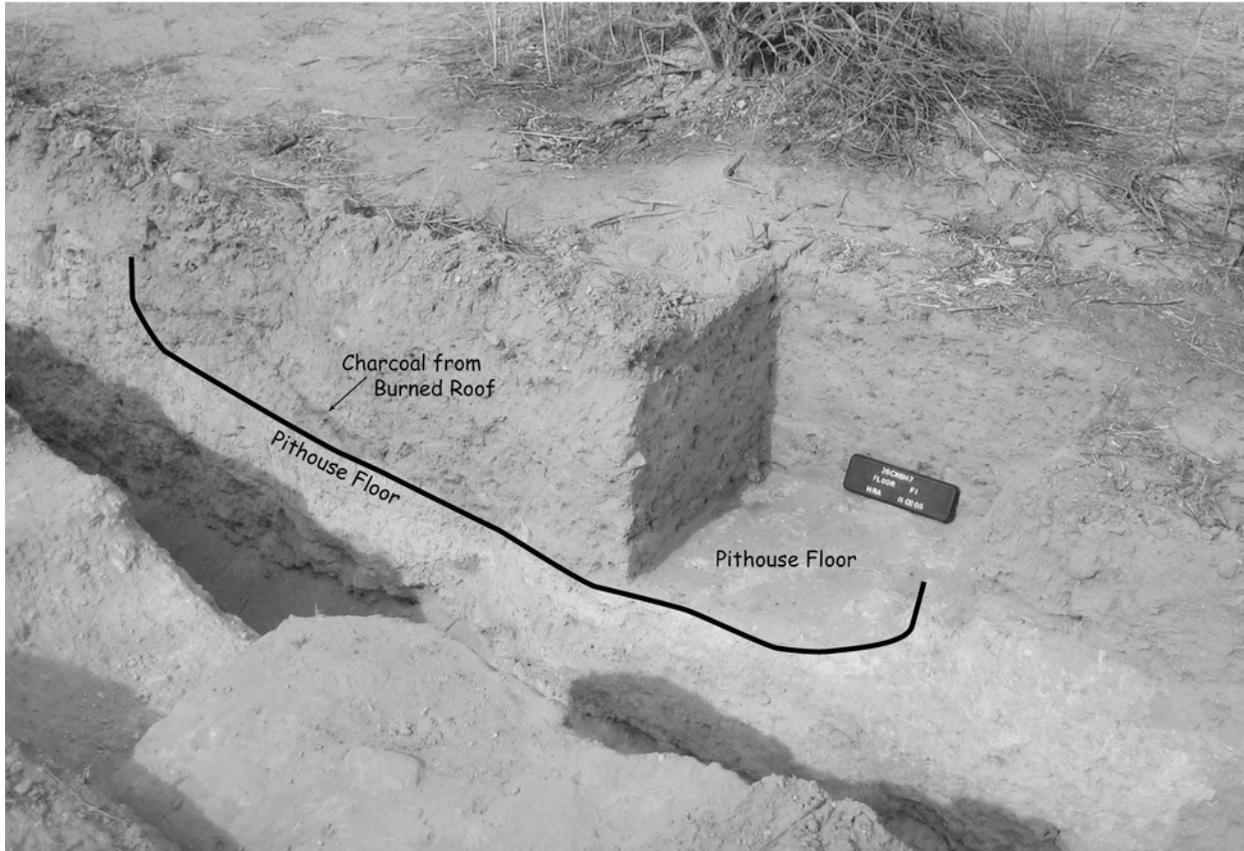


Figure 4.26. Profile of a pithouse test excavated in the Scorpion Knoll Site (26CK6147), Clark County Wetlands Park.

Together these four sites provide strong evidence for a Western Puebloan presence in the Las Vegas Valley (Table 4.8). Unfortunately, the oldest pithouse at the Three Kids site cannot be directly linked to other archaeological complexes because it is pre-ceramic and takes the generic form of a round house with an interior hearth and southeastern entry and no central posts. However, it does resemble Basketmaker II pithouses located 250 miles to the east on the Rainbow Plateau that date between 100 BC and 500 AD. Rose Spring Side-notched points, also recovered from the pithouse, are common in both Fremont and Anasazi contexts beginning around AD 300.

What little we know of the Corn Creek pithouse conforms to Basketmaker III sites elsewhere in southern Nevada (Winslow 2006). The associated ceramics are Logandale gray, and the date fits within the Basketmaker III period. The pit structure is deeply buried and has a well-prepared floor. Unfortunately, we know little else about the feature's architectural characteristics.

At the Scorpion Knoll and Las Vegas Springs Preserve sites, Virgin series graywares, including Moapa and North Creek gray, were associated with the pit structures. Like the pit structure at Corn Creek the floors were encountered at a depth of approximately 50 cm below the modern surface and consisted of compacted clay. Little else can be said with confidence regarding the architectural characteristics. Unlined storage pits were identified near the pithouse at the Scorpion Knoll site, but slab-lined storage rooms and cists, which are common at Virgin Anasazi sites in southern Utah and the Moapa and Muddy valleys have not been reported in the Las Vegas Valley.

Table 4.8. Summary of Pit Structures Identified in the Las Vegas Valley.

Time Period	Site Name/Number	Description
AD 410 to 600	Three Kids Site (26CK1282)	Shallow (10-30 cm deep) circular pit structure, ramp entry, poles around perimeter, central hearth, Rose Springs Side-notched arrow points, cremation burial, no ceramics, no maize, marsh plants and wild seeds processed
AD 530 to 710	Corn Creek Site (26CK2605)	Circular pit structure, floor buried 50 cm below ground surface, Logandale Gray pottery, seeds from marsh species and mesquite processed
AD 660 to 810	Scorpion Knoll (26CK6147)	Circular pit structure, floor buried 50 cm below surface, Moapa Gray pottery, maize pollen and cobs, wild seeds processed, small artifact assemblage, other features included storage and roasting pits
AD 680 to 980	Las Vegas Springs Preserve (26CK949)	Circular pit structure, North Creek Gray and Moapa Gray pottery, central hearth, arrowweed used in construction, extramural hearths present, maize, cucurbita, wild seeds processed

No habitation features that post-date the Pueblo I period (AD 900) or are associated with corrugated ceramics have yet to be identified in the Las Vegas Valley. It is possible that drought conditions, like those documented elsewhere in the Southwest, may have led to Valley's abandonment by its Puebloan farmers. Or perhaps the farmers switched to a more mobile hunting and gathering settlement strategy. One thing is for certain, the pithouse occupants of Las Vegas appear to have used fewer pottery vessels than did the Puebloans of southern Utah and the Muddy/Moapa Valley. We hope that pottery sourcing studies currently underway will identify the manufacture locales of local Puebloan ceramics. Perhaps these studies will provide insight into the relationship between Las Vegas' Puebloans and the Puebloan farmers living to the east.