Introduction

This project examines socio-economic organization at the coastal Oaxacan site of Río Viejo through large-scale horizontal excavations of residences (Figure 1). The lower Rio Verde Valley on Oaxaca's western Pacific Coast has been the focus of interdisciplinary research over the past 15 years (Joyce, 1991a; 1991b; 1993; 1999; Joyce et al., 1998a;
Urcid and Joyce, 1999; Workinger and Colby, 1997). Archaeological research shows that by the Terminal Formative Period (100 B.C.-A.D. 250) the lower Río Verde Valley was the locus of a state polity with its capital at the urban center of Río Viejo (Joyce, 1993; 1999; 2001). While Río Viejo declined in size during the Early Classic (A.D. 250-500), by the Late Classic Period, the site had grown to its maximum area of 250 ha and was the capital of a state polity that dominated the lower Verde. While surface-visible structures in the areas studied during the 2000 field season were originally thought to date to the Late Classic (A.D. 500-800) florescence of the site, the research shows that these occupations actually pertain to the Early Postclassic (ca. A.D. 800-1100). The study, therefore, provides crucial data on the Early Postclassic Period, during which the city of Río Viejo was undergoing a significant transition, declining in both population and political importance. This report describes the results of the 2000 excavations at Río Viejo and discusses their significance for understanding social organization in the lower Río Verde Valley during the Early Postclassic Period.

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Figure 1. The Lower Río Verde Valley, Oaxaca.
Methods

Two loci were chosen for excavation (Figure 2). The first area (Operation RV00 A) was on the summit of a monumental substructure located on Río Viejo’s central acropolis (Mound 1). The Op. RV00 A excavations were directed by Arthur A. Joyce as part of a larger regional project, the Río Verde Human Ecology Project. The second area (Operation RV00 B) was located 750 m to the east of the acropolis on Mound 8, one of the site’s large residential platforms. The Op. RV00 B excavations were directed by Stacie M. King and will form the basis of her doctoral dissertation.

Excavations in both operations began by delineating the outer dimensions of structures and identifying interior and exterior occupation surfaces or floors. For horizontal control, artifacts and features were recorded on a 1-m² grid system, while vertical control was achieved by excavating in 5 cm lots within natural or cultural strata. Sediments were passed through 5-mm mesh hardwire screens. On occupational surfaces and floors, sediment samples were taken from each 1 m² grid unit for chemical analysis (100 g) and from every fourth unit for flotation (10 liters). Flotation samples will be analyzed for paleoethnobotanical remains, while chemical analyses will investigate chemical signatures of sediments that may enhance understanding of the social organization of food processing activities and the use of space. Both the chemical and paleoethnobotanical analyses are pending. In Op. RV00 A, excavations cleared a total of 242 m². Two structures were completely cleared and three others were partially excavated. In Op. RV00 B, two structures were completely excavated, along with the majority of two others and small portions of three more, for a total of 284 m². All of the Postclassic structures were low platforms, approximately 0.5 m high that supported perishable buildings. The excavations yielded burials along with artifacts, features, and refuse that demonstrate the domestic function of these buildings. Analysis of the artifacts recovered during the excavations is ongoing, and final drawings and descriptions of the excavations in Op. RV00 B are still in process.

Río Viejo Operation RV00 A

The Op. RV00 A excavations show that by the Early Postclassic Mound 1-Structure 2 was occupied by people living in relatively modest houses. Mound 1-Structure 2 is an L-shaped monumental substructure that rises approximately 8 meters above the surface of the acropolis plaza and 15 meters above the surrounding floodplain (Figure 2). The structure was first built during the late Terminal Formative (A.D. 100-250) and was reoccupied in the Late Classic (A.D. 500-800) after its apparent abandonment in the Early Classic. The top of the substructure had an area of approximately 1400 m², which supported probable public buildings during the late Terminal Formative and Late Classic periods. Excavations on Mound 1-Structure 2 during the 2000 field season exposed the remains of five low (ca. 0.5 m) platforms dating to the Early Postclassic.
The five platforms excavated in Op. RV00 A were densely packed often with less than two meters separating structures (Figure 3). All of the structures were built in similar fashion with platform fill retained by oval or rectangular slabs, including reutilized metates, set upright on their long axis. Smaller horizontally set slabs capped the edge of the fill, thereby stabilizing the platform (Figure 4). Other than several post holes, no other features were found intruding into the occupational surfaces of the platforms. The deposits that overlay occupational surfaces included concentrations of adobe fragments, daub, and charcoal apparently from the decay of wattle-and-daub superstructures. Sherds from jars, bowls, and comales were found on the platform surfaces.

Three of the platforms excavated in Op. RV00 A surrounded a patio (Mound 1-Structures 2-1, 2-2, and 2-4; see Figure 5). Structure 2-1 defined the eastern edge of the patio and measured 11 m x 5 m with its long axis orientated 20°/200°. Two burials (RV-B38 and RV-B39), each containing a single child without offerings, were excavated outside of the southwest corner of Structure 2-1. Both burials were disturbed by rodent activity. Burial RV-B38 was an infant, flexed on its right side. Burial RV-B39 was a young child, although its position and orientation could not be determined. The northern end of the patio was bounded by Structure 2-2, which measured 10 m x 5 m with its long axis oriented 110°/290°. Most of the occupational surface of Structure 2-2 was exposed by erosion on the current surface so that, even though the entire floor area was exposed, only the southeastern corner was actually excavated (Figure 3). Flotation and soil chemistry samples were removed only from the floor area that had been
covered with sediment (i.e., the floor area subsequently exposed by excavation). The western end of the patio was bounded by Structure 2-4, although only a 1.25 m long section of the north wall of this building was exposed.

Figure 3. Plan of Op. RV00 A Excavations, Río Viejo, Oaxaca.
Figure 4. Reconstruction of Early Postclassic Residence at Río Viejo.

Figure 5. View of Río Viejo Op. RV00 A Excavations.
A monumental stone was found laying on the surface of the patio. The stone was worked into an oval shape, measuring approximately 1.42 m x 1.09 m x 0.48 m, and resembled in form a plain stela or altar (Figure 6). On the upper surface of the stone were two ground depressions measuring 15 to 23 cm in diameter and about 8 to 10 cm deep. There were also 13 shallow (1-3 mm) pecked depressions measuring between 1 and 3 cm in diameter. Two similar stones have been found on Mound 8 approximately 50 m east of Mound 1 (Urcid and Joyce, 1999:24-25) and several boulders at the site exhibited the small shallow pecked depressions. The function of these stones is unclear. They were not metates since numerous manos and metates have been found in Early Postclassic deposits, although they may have been milling stones for the processing of some unknown material. The pecked depressions on these stones resemble those on stones recorded by Mountjoy (1987) at Tomatlán, Jalisco. The stones from Tomatlán are usually accompanied by more elaborate petróglyphs, however. Mountjoy (1987:41-47) suggests that these stones represent the eye or face of the sun god and may have been used in rituals petitioning the deities for rain.

Figure 6. Monument Stone in Op. RV00 A Patio.
A ceremonial use for the monumental stone in the patio on Mound 1-Structure 2 may be suggested by the presence of a multiple burial (RV-B41) interred 1.25 m east of the stone. The burial included two individuals placed in a pit partially lined with stones; neither was accompanied by offerings. The first individual to be interred was a secondary burial of an adult male, 20 to 25 years old at death. Several bones of this individual exhibited cut marks, possibly due to a violent death, perhaps human sacrifice, or to preparation of the body following death and prior to the first inhumation (Urcid, 2000). Prior to burial beneath the patio, which would have been the second inhumation of this individual, red pigment was added to some bones and some were burned at low temperatures. The fill in the burial pit also included ash and charcoal indicative of burning. The second individual was a primary interment of an adult female. She was seated and tightly flexed, probably indicative of a bundle burial, and placed directly on top of the first individual. After the burial was covered with sediment, a fire was set over the grave leaving a layer of burned earth. The evidence suggests a relatively elaborate mortuary ceremony, which may have involved the burial of an adult female accompanied by a male ancestor or sacrificial victim. In prehispanic Mesoamerica, human sacrifice was one way to petition the deities for fertility, including rain (Boone, 1984). This would support Mountjoy’s (1987:41-47) interpretation that these pecked monumental stones were associated with ritual activities. Since the rituals would have been carried out in a small, enclosed patio space, it is likely that they were household ceremonies rather than large-scale public performances. Conversely, since there was not a direct association between the burial and the stone in the patio on Mound 1-Structure 2, a utilitarian function for the stone is equally plausible.

While the evidence from the patio suggests ritual activities, data from the other two platforms (Structures 2-3 and 2-5) confirm the domestic use of this area (Figure 3). Structure 2-3 was located 2 m east of Structure 2-1 and was oriented with its long axis at 110°/290°, exactly perpendicular to Structure 2-1. It is impossible to estimate precisely the surface area of Structure 2-3 since its eastern wall was not present, either due to minor erosion along the eastern edge of Mound 1-Structure 2 or from mining of building materials by later people. Since the eastern edge of Mound 1 appears to be generally intact, it is possible to estimate the length of the structure as ranging from a minimum of six meters to a maximum of eight. Since Structure 2-3 is 5.5 m wide, this yields an estimated surface area of 33 to 44 m², making this platform somewhat smaller than Structures 2-1 and 2-2. Beneath the occupational surface immediately outside of the southwestern corner of Structure 2-3, the burial of an adult male was excavated (RV-B36). The individual was flexed on his left side and unaccompanied by offerings. In the western end of Structure 2-3 a feature of uncertain function was uncovered, consisting of a circular concentration of stones 1.3 m in diameter overlaying the building’s floor. Excavation beneath the stone feature did not reveal evidence of a hearth or pit. The smaller size of Structure 2-3, and the presence of a type of feature not found in any of the other excavated Early Postclassic buildings, opens the possibility that this structure may have differed in function from the others. Ongoing artifact, flotation, and soil chemical analyses will, hopefully, clarify the function of Structure 2-3.

Structure 2-5 was located only 1 m south of Structure 2-1. Only short sections of three of the retaining walls of Structure 2-5 were exposed. The northern wall of Structure 2-5
differed from the typical platform retaining walls in that it consisted of three courses of unfaced stones without the horizontal capping stone over the edge of the platform. It is not clear why this wall differed architecturally from the others. The Structure 2-5 platform appears to have been 4.5 m wide with its long axis oriented 20°/200°; length could not be estimated. Overlying the occupational surface of the 1 m wide passage between Structure 2-5 and Structure 2-1 was a 0.4 to 0.5 m thick midden deposit. A radiocarbon date of 997 +/- 47, or A.D. 953 (AA37669), was obtained from charcoal in the midden, which confirms the Early Postclassic date of the associated ceramics. The platform fill of Structure 2-5 also included dense deposits of Early Postclassic refuse, probably redeposited. The midden material in the fill of Structure 2-5 suggests that the Early Postclassic occupation in this area began prior to the construction of that structure.

Artifacts associated with the Early Postclassic occupation on Mound 1-Structure 2, especially those from middens, provide evidence for the domestic economy of this period. Typical Mesoamerican domestic items included obsidian blades, cores, and debitage; ground stone axes; hammerstones; mano and metate fragments; chert projectile points and debitage; heat altered rock; animal bone; shell; charred plant remains; ceramic sherds, figurines, whistles, earflares, stamps, and spindle whorls; bone needles; and carved bone. The diverse set of imported goods associated with the residences included greenstone beads, a turquoise pendant, obsidian, rock crystal, pumice, non-local ceramics, and fragments of at least one alabaster bowl. An almost identical set of domestic artifacts and imported goods was recovered from the residences excavated in Op. RV00 B (see below).

**Río Viejo Operation RV00 B**

Operation RV00 B excavations were undertaken on a large flat residential platform (Mound 8) that lies 750 m east of the Classic Period acropolis and Op. RV00 A (Figure 2). The buildings cleared in Op. RV00 B, were among approximately 50 surface visible structures on Mound 8. A map of the surface-visible foundation walls near Op. RV00 B was produced during the field season, which shows both the density and uniformity of these residential structures (Figure 7). It is clear from this map that the structures are aligned according to two distinct orientations (7/187° and 25/205°), which perhaps mark at least two different Early Postclassic Period building episodes. This would further imply that the all of these structures might not have been occupied simultaneously.

In Op. RV00 B, two structures were excavated completely, along with over half of two others and small portions of three more, for a total of 284 m² (Figure 8). Exterior patio space appears to have been relatively limited, especially since in the presumed "patio" between Mound 8-Structures 4, 7, & 8, the excavations exposed an additional structure (Mound 8-Structure 12). The house foundations consist of between one and three courses of stones, which often contained fragments of broken metates and ground stool tools re-utilized as construction material. These foundations likely supported perishable superstructures, consisting of thin wooden posts covered with a mud plaster that was
then left to dry in the sun. Fragments of this baked mud were found on both sides of the stone foundations, presumably as a result of the collapse of the walls following abandonment. In addition, a post-mold impression is visible just beyond the north wall of Mound 8-Structure 4, suggesting that poles of about 10 cm in diameter were sometimes used in this construction method.

![Figure 7. Plan of surface visible structure walls in area of RV00 B excavations on Mound 8.](image)

Although there was a general absence of activity areas based on excavation data, four small burn features located within Mound 8-Structures 4 and 8 show at least some repetitive use of small fires inside houses. Sediment samples from these features will be analyzed for botanical remains and chemical signatures to try to further delineate their use. Artifacts recovered from the platform fill in Op. RV00 B include ground stone axes, mano and metate fragments, obsidian tools, chert projectile points, figurines, whistles, earflares, and ceramic stamps, all of which represent typical Mesoamerican domestic goods. Two artifact classes found in Op. RV00 B, however, suggest a more specialized domestic economy. Close to a hundred spindle whorls were found in Op. RV00 B excavations, as well as more fragile bone spindle and needle fragments. The spindles
and whorls indicate that Op. RV00 B residents were involved in the production of thread. This thread was likely made out of cotton given both the environmental zone and the continuing presence of indigenous varieties of cotton growing in the region. The presence of needles further indicates that thread was being woven into textiles on-site. In addition, molds for making figurines were found in Op. RV00 B excavations. These molds demonstrate that Early Postclassic Period occupants made some of their many figurines locally. Imported items such as greenstone beads, obsidian, and pumice were also found in Op. RV00 B excavations, demonstrating connections to Mesoamerican communities beyond the lower Río Verde Valley.

![Figure 8. Plan of RV00 B excavations with structure numbers indicated.](image)

Perhaps the most surprising and informative discoveries of Op. RV00 B excavations were the 17 Early Postclassic Period human burials located beneath the house floors of Mound 8-Structures 7 and 8. In spite of the different alignment of the long axis in these structures (Figure 8), the individuals were buried side-by-side with striking uniformity in position, orientation, and offerings (Figure 9). The individuals were placed in an extended, supine position, with their heads to the south, oriented between 4 and 8° east of north. Typically, there were between one and three ceramic vessels interred around the feet as offerings, although a few individuals were given additional items consisting of quartz axes, obsidian blades and shell pendants (Figure 10). The burials include male and female adults, although one sub-adult (around age 16) is present. The purposeful placement of these burials, without any overlap or superimposition, demonstrates a
certain degree of planning and memory associated with deceased individuals. That these individuals were buried beneath the house floor, while people continued to live within the house, demonstrates the importance of having one’s ancestors close by. There is no evidence to suggest that the individuals died all at the same time or that they were victims of trauma; instead, each person was likely interred beneath house floors separately upon their time of death.

Items from several earlier time periods were also found in both the platform and structure fill. Artifacts from earlier deposits include ceramic fragments, figurines, stone tools, as well as an obsidian eccentric. Whole Late Classic Period ceramic vessels were placed as offerings in five earlier burials uncovered in Op. RV00 B excavations. These burials do not conform to Early Postclassic Period patterns, and often exhibit flexed positions with varying orientations. The presence of these burials, which in three cases were later impacted by Early Postclassic Period foundation walls and features, confirms that there was occupation of this area during the Late Classic. The interior walls of Mound 8-Structures 4 and 8 may pertain to this earlier occupation.

Figure 9. Plan of Structure 8, showing placement of Early Postclassic period burials.
Figure 10. The central image is a photograph of three Early Postclassic period vessels buried with one individual. Then, from the upper left corner and clockwise: (1) excavating Structure 8, (2) spindle whorls, (3) obsidian blades placed as offerings, (4) vessel from a different mortuary context, (5) quartz tools found as offerings and in fill.

Conclusions

The results from the FAMSI supported residential excavations suggest little differentiation in status and social roles among Río Viejo’s Early Postclassic inhabitants. The architecture exposed in both operations was strikingly similar, with most structures measuring approximately 5 m x 10 m or 11 m. Generally, the walls consisted of between one and three courses of stones, forming low platforms that would have supported perishable superstructures. In both operations, buildings were densely packed often with less than a meter separating structures. We observed little differentiation in terms of activity areas, and a general absence of features such as ovens or production loci. The only clear examples of "activity areas" included the possible milling or ritual stone found in the patio exposed in Op. RV00 A, and the four small burning features within structures of Op. RV00 B. Artifacts recovered in the
platform fill, in middens, and on surfaces were also generally consistent between the two operations and provide clues as to the domestic economy of the Early Postclassic Period. These data suggest activities such as food processing and consumption, working of lithics, textile manufacture, production of ceramic figurines using molds, and performance of household rituals. Textile manufacture seems to have been an especially important activity in both areas with over 100 spindle whorls recovered from the residences along with some examples of the bone spindles and needles used in the production of cotton thread. Human burials associated with the residences were interred with modest offerings. The difference in burial patterns in the two areas may be related to chronology within the Early Postclassic, although burials from earlier periods exhibited a similar degree of variation (Christensen, 1999; Joyce et al., 1998b). While the inhabitants of these residences had access to a variety of local and imported prestige goods, the relatively modest architecture and burial offerings indicate commoner status.

Our data are consistent with previous research showing that a major sociocultural transition occurred between the Late Classic and the Early Postclassic at Río Viejo. During the Late Classic, Río Viejo was an urban center covering approximately 250 ha with monumental architecture and numerous carved stone monuments often depicting nobles with their hieroglyphic names (Joyce, 1993; Joyce and King, 2000; Urcid and Joyce, 1999). By the Early Postclassic, Río Viejo was in decline, with a decreasing population and a reduction in the construction of monumental architecture and erection of carved stone monuments (Joyce, 1993; 1999; Joyce et al., n.d.). The residential excavations further elaborate on this picture of a regional center in decline. In Op. RV00 B, a fragment of a Late Classic Period carved stone, showing an elite individual with an elaborate feathered headdress, was found re-utilized in an Early Postclassic Period structure wall. This placement, however, constituted the stone’s third use, as the side opposite the carving shows evidence of secondary re-use as a metate. At about the same time, the Op. RV00 A excavations show that the Mound 1 acropolis, which had been the Late Classic civic-ceremonial center of the site, was occupied by low-status people living in relatively modest houses. Overall, the data suggest that Early Postclassic peoples did not treat the earlier sacred spaces, objects, and buildings with the same reverence they had been afforded in the Late Classic, suggesting that commoners were rejecting ruling institutions, symbols, and ideologies.

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List of Figures

Figure 1. The Lower Río Verde Valley, Oaxaca.
Figure 2. Plan of Río Viejo Showing Mounds and 2000 Excavation Areas.

Figure 3. Plan of Op. RV00 A Excavations, Río Viejo, Oaxaca.

Figure 4. Reconstruction of Early Postclassic Residence at Río Viejo.

Figure 5. View of Río Viejo Op. RV00 A Excavations.

Figure 6. Monument Stone in Op. RV00 A Patio.

Figure 7. Plan of surface visible structure walls in area of RV00 B excavations on Mound 8.

Figure 8. Plan of RV00 B excavations with structure numbers indicated.

Figure 9. Plan of Structure 8, showing placement of Early Postclassic period burials.

Figure 10. The central image is a photograph of three Early Postclassic period vessels buried with one individual. Then, from the upper left corner and clockwise: (1) excavating Structure 8, (2) spindle whorls, (3) obsidian blades placed as offerings, (4) vessel from a different mortuary context, (5) quartz tools found as offerings and in fill.

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