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Monumental Architecture and Social Organization at the Rivas Site, Costa Rica

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Results are reported of fieldwork conducted in 1992 and 1993 at the Rivas site (SJ-148-RV), San José Province, Costa Rica. The investigations have revealed a large site, over 2 km in length. Habitation areas similar to those identified at other sites in the region were found. Cemetery areas with low status burials contrast with high status interments at the adjacent site of Panteón de La Reina. In addition, a large complex of monumental architecture that is unlike anything found in the area for the time period (ca. A.C. 900–1500) has been identified. Concentrated deposits of fancy ceramics, including many examples of wares imported from the Atlantic Watershed and Central Valley regions, suggest that Rivas was a major node in long distance exchange systems. These various data suggest that the social system of the Rivas site was highly ranked or stratified and that the site itself was of great significance in regional and inter-regional cultural dynamics.

Introduction

Lower Central America is commonly characterized as the meeting place of influences stretching north from the Andes and south from Mesoamerica (Johnson 1948a; Stone 1972; cf. Creamer and Haas 1985; Sheets 1992). This view of the region as a frontier zone is nowhere more emphasized than in Costa Rica where, in the Nicoya region, at the time of Spanish contact groups of Mesoamerican immigrants were found in close proximity to cultures with distinctively South American traits (Stone 1977: 78–95). Prior to the arrival of the Spanish, southern Costa Rica was part of a larger cultural world that shared ideological beliefs, subsistence practices, and technological skills (notably, gold metallurgy) with regions to the south. While the rainy Atlantic slopes of the Talamancan mountain range have received relatively little archaeological scrutiny, the Pacific watershed (FIG. 1) has achieved notoriety, particularly in the form of the large stone spheres found in the region (Stone 1977: 106) and the gold-bearing site of Palmar Sur (Lothrop 1963).

Although many stone spheres have been removed from their original contexts, to grace the front lawns of private homes and businesses in the more prosperous regions of the country, their source of origin is the area roughly south of modern Buenos Aires, especially the Diquís Delta that is

the lower course of a fluvial system originating in the foothills of the Talamancan range. This river system is composed of the Coto Brus which flows north, and the Térraba which begins its southern journey near the base of Mount Chirripó, the highest peak in Costa Rica. Near its source, this river is known as the Chirripó del Pacífico; then, flowing through one of the largest valleys in Lower Central America it is known as the Río de El General, before joining with the Coto Brus to course through the delta. The natural communication route formed by this river system facilitated contacts with people further south, in what is now Panama, as well as influencing the direction of early Spanish forays into the region. Through most of its course, this river is in tropical moist forest (Tosi 1969) which today experiences a distinct dry season from about December through March. Past environments are not well known, though no doubt the area has been tropical for many centuries.

The Spanish reported the existence of a territorial network of large communities at least some of which were organized into dual divisions and had sociopolitical systems that included ranked leaders on communal, village, and intervillage levels (Fernández Guardia 1964; Ferrero 1981). Although the chroniclers occasionally give fairly detailed information regarding villages they encountered,

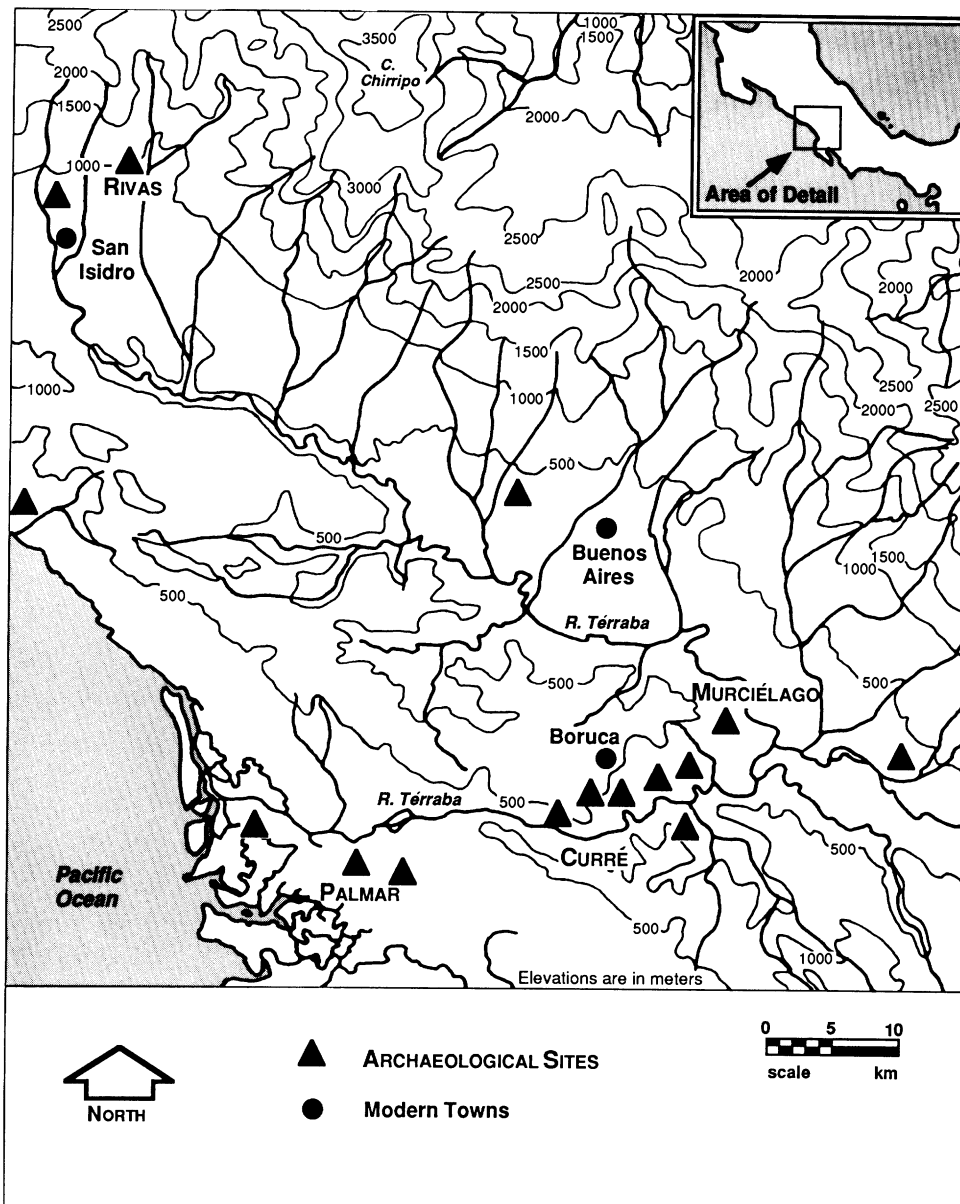


Figure 1. Map of the Diquís Region, Costa Rica.

no correlations between their reports and archaeological data have yet been made with confidence. A 10-year survey program throughout the valley by Robert P. Drolet (1986, 1988, 1992; Drolet and Siles 1988), however, successfully identified 15 major settlements that bore evidence of late prehistoric occupations (FIG. 1). The archaeological phase to which these sites are assigned is known as Chiriquí, dating to between about A.C. 1000 and Spanish contact ca. 1520 (Drolet 1992: 232) in Period VI of the Costa Rican prehistoric chronology developed by Snarskis (1981: 27).

The Rivas Archaeological Project was designed to con-

tinue Drolet's study of late prehistory in the General Valley. Although much of his research focused on survey, Drolet (1986, 1988, 1992) excavated a large Period VI site, Murciélago, located in the midsection of the valley system. In order to examine variability in site organization, subsistence, craft specialization, and other aspects of culture, the Rivas site—the uppermost settlement known for the valley system—was selected for study.

The Murciélago site is located on a broad terrace next to a wide stretch of alluvial bottomland. Manos and metates were abundant outside of circular, stone house rings concentrated in five residential sectors covering about 30 ha

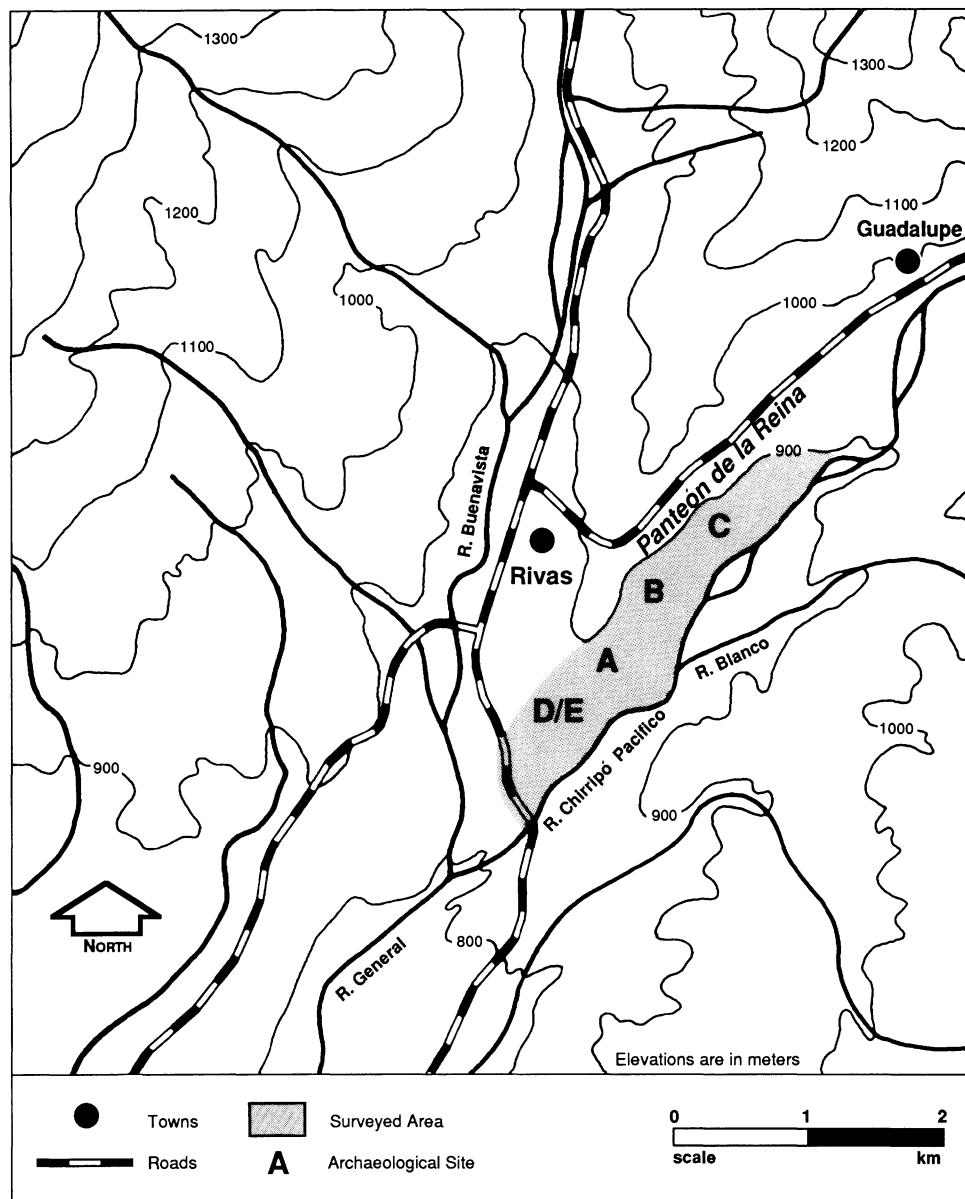


Figure 2. Map of the Rivas area.

(Drolet 1986: 328). Rivas, however, is in a restricted zone on narrow river terraces in the upper valley (FIG. 2). Drolet's preliminary investigations of Rivas indicated very few grinding stones, and the proximity of different environmental zones suggested that a wide variety of collected resources would have been within easy reach of the site. Furthermore, while there was evidence of circular structures at Rivas there were also indications from surface inspection of large arrangements of river cobbles in different forms. These factors as well as apparent contemporaneity of the sites (based on similar ceramic styles) suggested that valuable comparative data on variability of

Chiriquí settlements could be obtained by further work at Rivas.

Another aspect of the Rivas site that focused our attention on it was its location next to one of the richest gold-bearing cemeteries in Costa Rica, the Panteón de La Reina. Many ridge top cemeteries (*panteones*) in the region are famous as sources of treasure, but La Reina is renowned as an exceptional source of wealth (MacCurdy 1911: 211–212). Although this cemetery was badly looted at the turn of the century, field research at Rivas, at the base of its eastern slope, would provide good evidence of the kind of settlement associated with such burials. The

cemetery areas immediately associated with Murciélago, in contrast, were not famous in local lore, and an unlooted tomb group excavated by Drolet yielded only one small, copper-gold alloy object (Drolet, personal communication, 1990).

Two field seasons in a multi-year program of study were carried out at Rivas, in 1992 and 1993. All of the Rivas site is in land actively used for coffee and subsistence farming. Therefore, research was focused in pasture areas and other locations where work would not impinge on the economic activities of the owners. Site survey was limited, with concentration on area excavations. While these conditions impeded a full understanding of site organization, considerable knowledge has been gained and sufficient trust in archaeologists and interest in their work has developed among the land owners that survey will be permitted in the future. This report presents what we have learned to date about the Rivas site and its implications for understanding a number of issues in culture history and processes in the region and beyond.

Small Scale Residences

Our first work, in 1992, was focused on an area in a pasture and guava grove designated as Operation A. This area was selected for our initial investigations because andesite river cobble “house rings” were visible on the surface of the ground. These rings are the most recognizable evidence of architecture in the region. They usually consist of one or more lines of cobbles that defined the outer boundaries of structures or activity areas.

Three rings were found in close proximity to one another and excavated in Operation A (FIG. 3). While all three had suffered some damage due to farming activities, Structure 1 was both the largest, at 11 m in diameter, and most carefully constructed, with an apron built on its western side. All three structures showed similar artifact patterns containing relatively few within but an abundance on top of their stone rings and immediately outside. This pattern is similar to that found at Murciélago and other sites and indicates that most activities occurred outside of residences. Neither postmolds nor hearths were found in structure interiors, although an isolated postmold (8 cm in diameter) was found 6 m east of Structure 1.¹ Three areas that may have been hearths were found outside structures, though the greatest evidence of fire use was the presence of abundant charcoal flecks throughout the exterior excavation areas. Charred plants were the only evi-

1. The valley and terraces on which we work run roughly SW-NE. All references to directions in regard to excavations and survey in this site, however, refer to “grid” directions which were oriented to the valley: north = up valley; south = down valley; east and west are perpendicular to these axes.

dence of organic remains found in Operation A or anywhere else at the site, though searching for pollen and phytoliths continues.

A distinctive feature at the Murciélago site was the expansion of cobble rings around houses with concentrations of artifacts in these areas that appeared to indicate the loci of specific activities, such as stone tool manufacture or repair (Drolet 1986: 328, fig. 22.5). A somewhat similar pattern was observed at Rivas though house rings usually maintained a uniform width. Concentrations of cobbles, however, were found east of the houses, between them and the terrace edge. These areas (lines of stones, FIG. 3) as well as concentrations of smaller cobbles around large boulders yielded dense concentrations of pottery and stone tool fragments, suggesting they were activity areas and, possibly, refuse dumps.

Because Operation A was in a pasture, limited shovel test-pit survey was carried out in an area of 7200 sq m north of our excavations. Two more house rings, a low-status cemetery, and numerous features of uncertain nature—cobble pavements that may be sections of house rings, for example—were located during this work. Additional house rings appear to be located immediately south of Operation A, although cultivated fields prohibited us from determining this with certainty.

Petroglyphs and Boundaries

A distinctive style of petroglyphs, commonly consisting of circles and spirals connected by curvilinear lines (FIG. 4), is found throughout the southern zone of Costa Rica (Zilberg 1986). These petroglyphs are most frequently encountered on large boulders or on rock outcrops near Chiriquí sites, suggesting that the art work dates to the same period as the archaeological remains, although such spatial correlations do not guarantee contemporaneity. Our discovery of a petroglyph in the house ring of Structure II in Operation A (FIG. 4A) gives proof that the petroglyphs are the product of the people represented by the Chiriquí archaeological culture.² The petroglyph was carved on a river cobble measuring 44 cm in length by 29 cm in maximum width. The design, on the upward-facing side of the stone, consisted of lines carved an average of 0.5 cm in depth and 1.5 cm in width. Although the petroglyph was found near the end of the ring that was damaged due to agricultural activities, it was clearly part of

2. Payson Sheets (personal communication, 1993) reports that research conducted in the Volcan Baru region of the Rio Chiriquí Viejo, Panama, indicated that petroglyphs in the same style were made prior to volcanic eruptions between a.c. 900 and 1000 that covered the base of the rocks on which the petroglyphs were made. He also notes that many petroglyphs were found in areas between villages, suggesting they may have served as boundary markers.

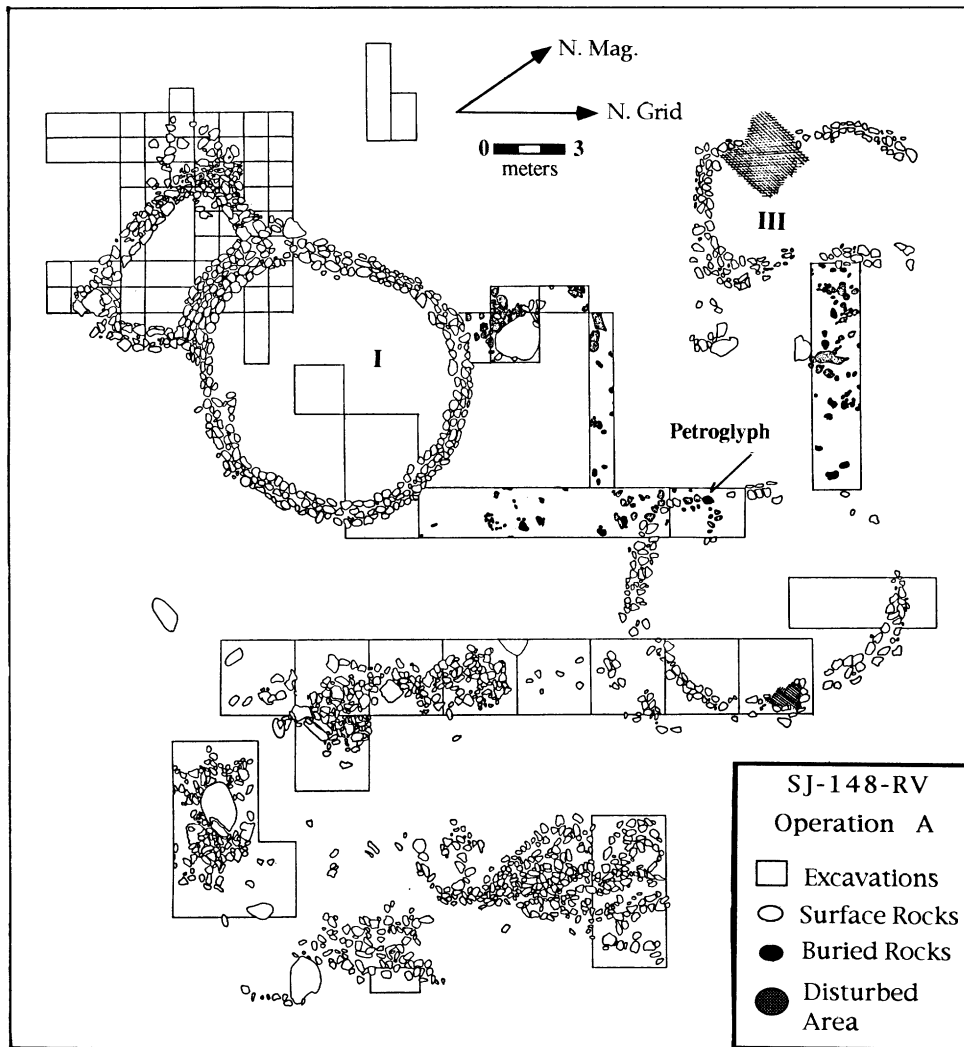


Figure 3. Operation A excavations.

the house circle. It is interesting to note that its position in the Structure II house ring is equivalent to the location of the apron in Structure I and to inferred entry areas in other structures at the site. Furthermore, the three connected circles on the petroglyph resemble the pattern of the three house rings in Operation A, as if there was a correspondence between the art and the local house group organization. A similar petroglyph of about the same size was found during a visit to the Pacuar site, 20 km downstream from Rivas (FIG. 4B).

Two other petroglyphs, both carved on large boulders, are known at the Rivas site. One, consisting of a large spiral with radiating lines, is found about 300 m north of Operation A in the back yard of a farm household (FIG. 4D). The second is about 200 m north of Operation A on a boulder in a fallow field (FIG. 4C). We chose this latter area, Operation B, as a second place to examine in 1992, to

investigate the context in which such art works existed during the occupation of the site.

We opened a 36-sq m area immediately around the petroglyph, a series of pits around other large boulders without visible petroglyphs to the west, and several large pits in a concentration of small boulders and cobbles 20 m south of the petroglyph. No additional petroglyphs or any sign of structures were found during this work. Artifact densities were light to non-existent in the pits close to the petroglyphs and boulders, although we did encounter an activity area where stone tool repair or production apparently took place, about 10 m from the petroglyph. The excavations among the stone concentrations did yield quantities of artifacts similar to those found in the stone concentrations in Operation A. Drolet had reported the presence of burials in the coffee field immediately north of the petroglyph but we failed to relocate them.

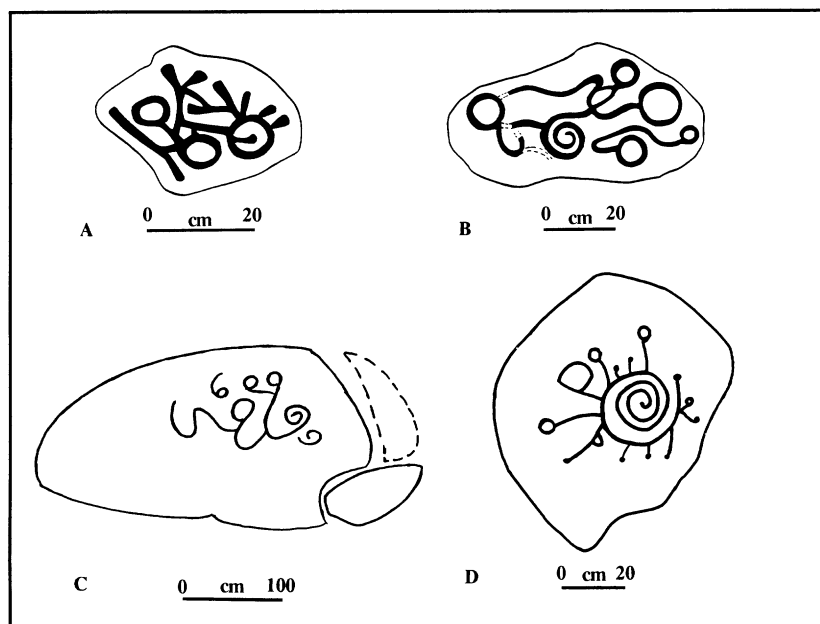


Figure 4. Petroglyphs discussed in the text.

The available evidence for Operation B provides some suggestions regarding both the role of petroglyphs and site organization. Our recovery of ceramic sherds and tool fragments and the close proximity of the activity area tend to suggest that this petroglyph was not in sanctified space, since such areas are usually kept clean, although the low density of materials immediately in the vicinity suggests that the neighborhood of the petroglyph was one of relatively low levels of activity. Furthermore, the Operation A petroglyph was in a location which indicates at least proximity to common, everyday activities.

All of these data suggest that the petroglyphs at the Rivas site were as much signs as they were symbols, serving to demarcate distinct areas and concepts within the everyday lives of the site's inhabitants. While the exact symbolic meaning of the petroglyphs is elusive, the Operation A carving was placed at a boundary in the form of the house ring while the Operation B petroglyph was located close to a cemetery and somewhat apart from areas of intense activity. The carvings themselves resemble maps, though whether a natural or cosmic landscape is depicted remains unknown. It is also interesting to note that despite intensive investigations of the monumental sector of the site, no petroglyphs have been found there. The activities and beliefs associated with rock carving therefore may not necessarily have been linked to high status. Zilberg (1986: 344) has suggested that petroglyphs are associated with cemeteries while Sheets (see note 2) has suggested that they were located between villages. The Rivas data suggest

that petroglyphs may have served a number of different uses. If this art style was in use for a long period of time its role may have changed through time or varied from region to region.

Cemeteries

While we were unable to locate the burials near Operation B, we were alerted to the presence of a cemetery area farther north, in what came to be designated as Operation C. We were anxious to excavate in such an area for a number of reasons. First, few collections of mortuary data had been scientifically recovered from southern Costa Rica (cf. Haberland 1959, 1976, 1984). Second, the presence of cemetery areas within the Rivas site was intriguing given the proximity of the known, elaborate, gold bearing burials on the Panteón de La Reina.

Although the Panteón de La Reina burials had been looted, cursory inspection of the area and local lore indicated several standard features of these graves. The elite buried on the ridge top were placed in pits commonly covered with pavements of saucer-sized flat cobbles, making them easy to identify by looters. In addition, pillar-shaped andesite cobbles, ranging from slightly less than 1 m to almost 2 m in height, were arranged either directly on top of graves or as perimeter markers around groups of burials. The exact arrangement of groups of burials is uncertain, but interviews with local looters by Blanco indicate that some patterning did exist, possibly including three or more distinct cemetery areas on the

Panteón de La Reina. The elite dead were entombed with grave goods that included gold ornaments and fancy pottery as the chief preserved remains. Some burials were extremely rich in gold, others contained very little gold but had many fancy ceramics, while others had both.

The burials of Operation C shared some but not all of the features of the elite burials. Cobble pavements covered individual graves, but no pillars were used. A line of rocks on the NW edge of the cemetery may have served to define a boundary for the area, although this line could only be followed for a distance of 3 m. Some pavements appeared to cover wider areas than the narrow, single graves found in our main area of excavations (FIG. 5). We do not know if this is due to disturbance by farming activities or if it represents a different form of burial.

Grave outlines were very difficult to identify and organic materials were almost completely absent save for the occasional soil stain in the area where the body had been located. Pottery and occasional stone artifacts were the primary materials found. Most cobble pavements covered areas of about 150 cm × 70 cm, while some were slightly smaller. Pottery vessels were commonly stacked or nested and were often located in what appeared to be the foot and head ends of graves. It was also common to find burial goods at several different levels in a grave. Whether this represents more than one burial within a grave shaft or the practice of placing offerings at different levels within the same burial episode cannot be determined at present.

The grave goods mostly consisted of jars and tripod bowls. Miniature vessels and single examples of a whistle and a rattle were also recovered, as were two stone axes. The jars were usually plain wares while the majority of the other ceramics were fancy wares, usually including painting or polished slips (Ceiba Rojo Cafe, Papayal Grabado, Buenos Aires Policromado, Turucaca Blanco Sobre Rojo, Sangria). These goods indicate that the people buried in this cemetery had access to fancy pottery but not to the finest wares available or to gold. This stands in marked contrast to the kinds of artifacts reported to have been found in the Panteón de La Reina and, indeed, in other areas of the site, as will be discussed below.

Although the cemetery areas near Operations A and B have not been investigated in detail, they appear to exhibit the same general patterns found in Operation C. Drolet excavated a small number of artifacts from the cemetery near Operation B and the inventory of artifacts recovered is generally similar to those found in Operation C. Thus, there are at least three separate cemetery areas within the Rivas site. If the other cemeteries approximate the 0.64 ha size calculated for the Operation C cemetery, they likely held a considerable number of burials. Separate cemeteries

suggest separate social units. All of the Rivas cemeteries are distinct from those on the Panteón, and all appear to be contemporary. This suggests that there were at least three non-elite social groups in the Rivas community that did not have access to gold and other high-status goods. The evidence that another, distinct, group lived at Rivas and was buried on the Panteón de La Reina is to be found in the monumental architecture at the site.

Monumental Architecture

We encountered monumental architecture at Rivas about half-way through our 1992 field season. Although “monumental architecture” may bring to mind pyramids and megaliths, the term as used here refers to human constructions that require significantly greater energy investments to build than quotidian structures. Monumental architecture entails the labors of more than the minimal social unit to build, takes up significantly more space than other constructions, and commonly is elaborated by features, such as decorations, that distinguish it from non-monumental works. The constructions at Rivas fulfill these criteria and compare favorably to those structures cited as monumental by Renfrew (1973, 1974) for Neolithic Wessex and Bronze Age Malta.

It is likely that sections of the Rivas monumental structures were identified by Drolet when he did his initial work at the site, but dense vegetation cover at the time of his work inhibited him from identifying the magnitude of his find. The monumentality of these structures is expressed in three ways. First, although some sections of architecture are constructed of stones similar in size to those used in areas such as Operation A, many are much larger, some weighing more than a ton. River cobbles found in Operation A average between 30 and 40 cm in length while those in the monumental sector are frequently more than a meter in length. Second, the size of structures is much greater in the monumental area. The average diameter of house rings in Operation A and at most Chiriquí sites is about 10 m whereas the typical ring in the monumental sector at Rivas is 20 m in diameter. Third, monumentality is expressed by a continuous flow of architecture, so that one ring or line of stones intersects with another. This creates an area of continuous artifice imparting a dramatic sense of a densely structured space. This sense of artificiality is heightened by the incorporation of natural features, such as linear mounds of earth (*ballenas*) produced by ancient erosional processes, into the features of the built environment.

We spent most of our available time in 1992 mapping and conducting selected excavations in an area of the monumental sector that we designated as Operation D.

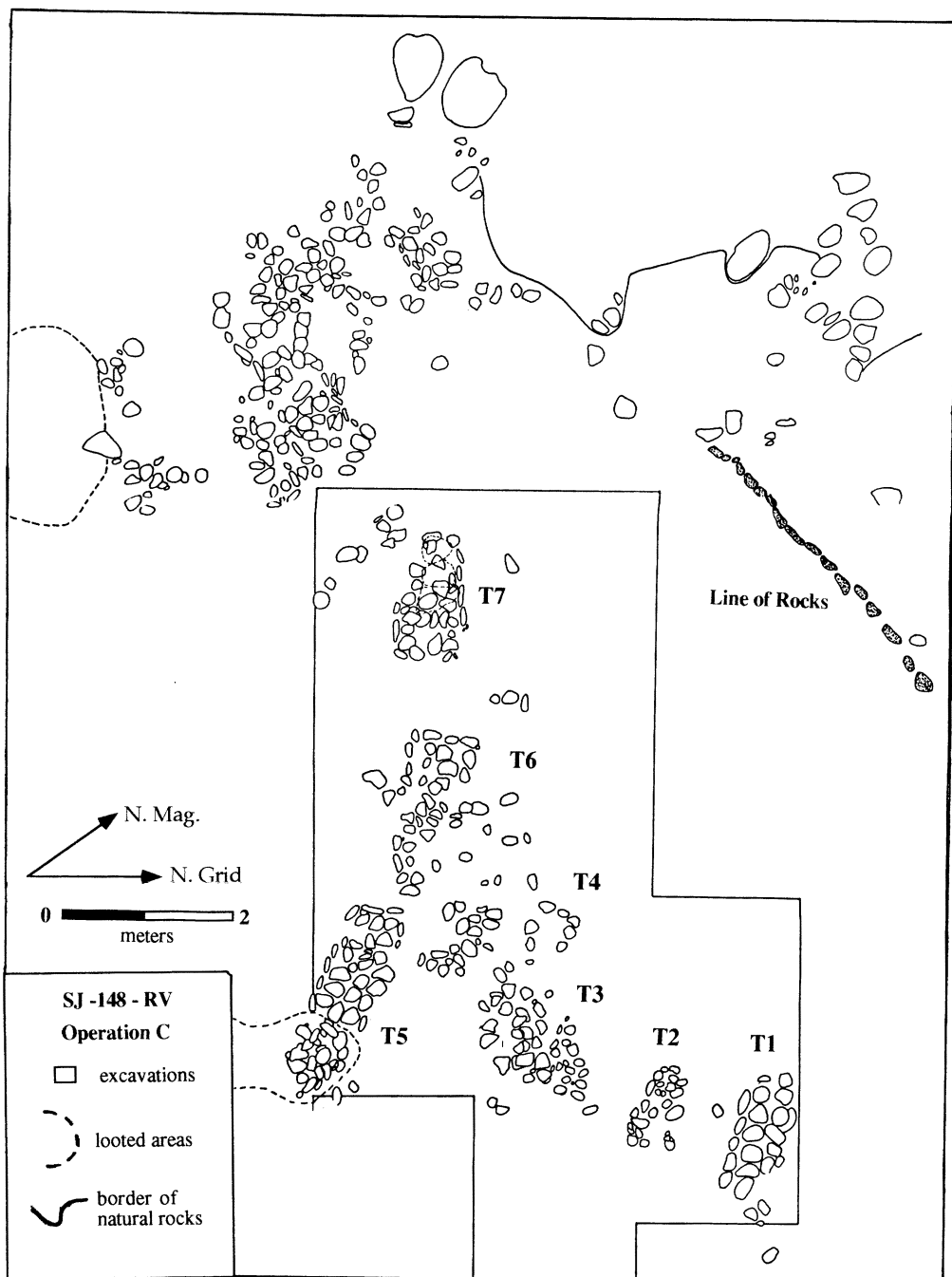


Figure 5. Operation C excavations.

This work identified a variety of features. They include circular structures (FIG. 6: I; FIG. 7), an artificial causeway (FIGS. 6, 8), a cobble drain between two circular structures, a retaining wall that created different horizontal planes in the area, a large mound of stones, and a quadrangular structure (FIG. 7: III). We also identified a large space (approximately 50 × 70 m) that appears to be modified

and built on natural terraces formed into a plaza-like area (FIG. 7: IV).

The forms of many structures commonly diverge from a circle to take on oval or even non-symmetrical shapes. In addition, many appear not to be completely closed, with gaps in the lines of stones on some sides while others have patio-like extensions on them. We placed trenches cutting

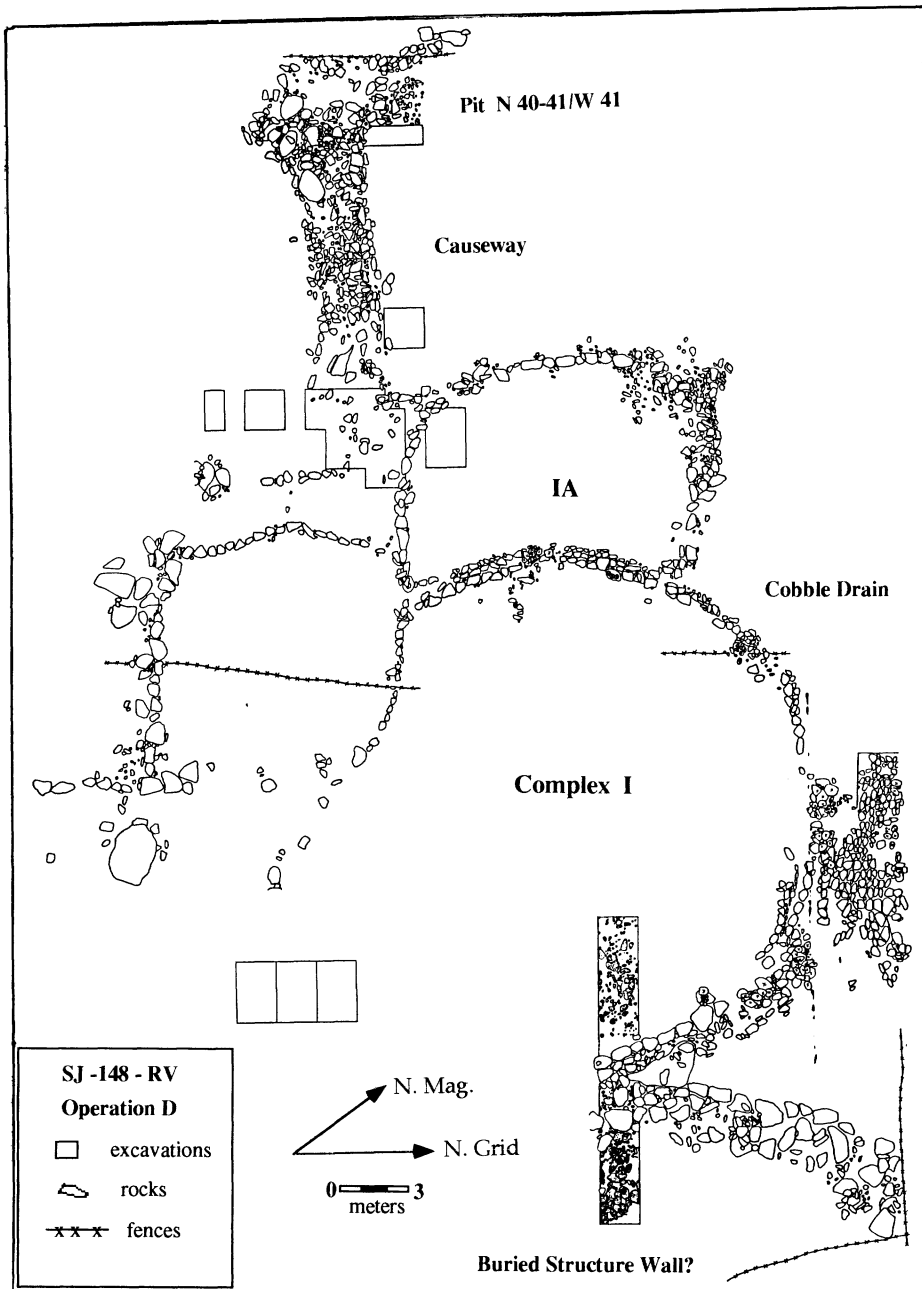


Figure 6. Operation D excavations. The illustration shows a relatively small section of the monumental sector, Complex I, and the causeway.

across the walls of these and other architectural forms in Operation D and, as in Operation A, found dense accumulations of artifacts outside walls but not inside. These artifacts consisted of both ceramic sherds and stone tool fragments.

Although analyses are preliminary and ongoing there appear to be distinct differences between the materials found in Operations D and A. The former has a higher

proportion of fancy, polychrome pottery; many large open-mouthed bowls, some as much as a meter in diameter; and a higher proportion of stone tools than the latter. Only 60 linear m separate Operation A from the first identifiable features in the monumental sector. Nevertheless, the areas appear to be distinct; perhaps social boundaries defined the end of one area and beginning of another, for, at present, there is no observable architectural pattern

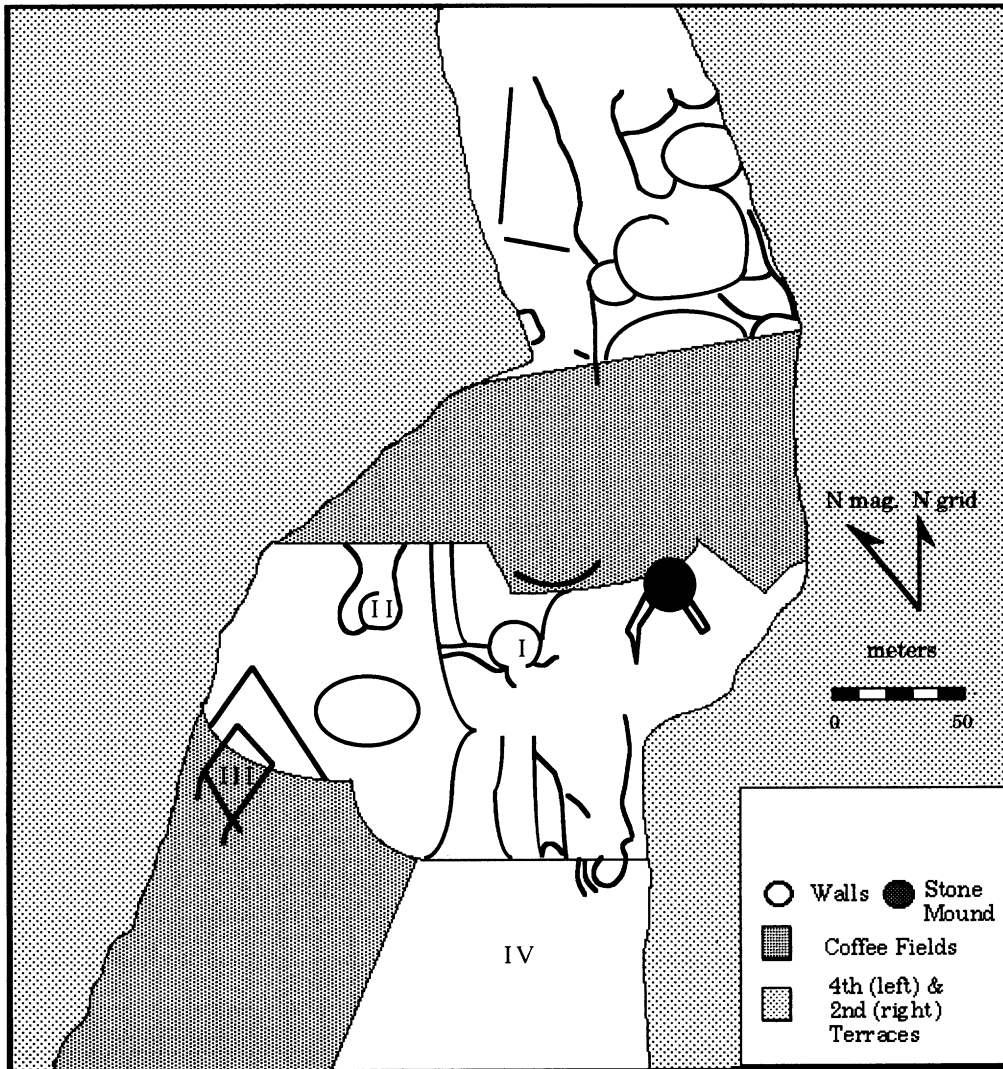


Figure 7. Schematic map of the D-E monumental architecture. D is lower area, E upper. Complexes in D are marked with roman numerals.

that demarcates distinct boundaries save for an apparent gap in architectural remains.

Near the end of our first field season we encountered clear evidence of stratified deposits in some of our excavation pits. These consisted of an upper 40 cm deposit of dark brown soil, as had been found in Operation A, followed by an orange-red layer containing virtually no artifacts. This second layer varied in depth but was commonly about 40 cm in thickness. Below this layer, however, was another dark level, 20–40 cm in thickness, containing refuse similar to the uppermost level.

Intrigued by the evidence of stratigraphy at Rivas, we decided to devote our entire 1993 field season to excavations in the monumental sector. North of Operation D we

had found evidence for monumental architecture in a coffee field, but we were prevented from working there due to the value of the field to the land owners. The architecture continues in uncultivated land north of the field so we worked there, designated as Operation E. An area of 40 × 100 m was completely cleared of vegetation, including removal of the root layer. All partially exposed walls in this area were cleared to establish the architectural pattern; less intensive work was carried out on architecture in an additional area of 5000 sq m. Excavation pits and trenches were placed throughout these areas and soils were sifted through ¼"-mesh hardware cloth.

The same pattern of great amounts of artifacts immediately outside of structures with few materials inside oc-



Figure 8. The causeway connecting Complexes I and II. Looking east, to Complex I.



Figure 9. Aerial photo of most of Operation E. The arc of four lines of stones is in the lower center of the picture. The parallel walls, shown in detail in Figure 10, extend upwards from the right end of the arc. The terrace edge can be seen at the upper end of the pavement between two house rings in the upper left. The lower left corner of the photograph points to magnetic North.

curred in Operation E as did the stratigraphic deposits noted in Operation D. In addition to defining the architectural organization of the area, we found a distinct pattern of artifact deposition, clarified the nature of stratigraphy, and found clear evidence that very large boulders had been deliberately moved during construction activities at Rivas.

The dominant feature in Operation E was a large oval area that was bounded on its western end by an arc of four rows of small cobbles (FIG. 9). This arc joined an E-W trending line of very large stones, most of which were visible on the ground surface. Excavation in this area uncovered a second line of stones running roughly parallel to the first one, about a meter north of it in what would have been the interior of the structure as defined by the outer line and arc. This inner line of stones was buried under 40 cm of dark soil.

At its western end, the inner wall fanned out into a pavement area that appeared to continue underneath the outer wall, stopping about a meter south of it. A series of excavation units were placed west of this area and east of the visible end of the inner wall, as well as in other areas of the operation, in order to determine if more buried architecture was present. No additional walls or other cobble features were found. This suggests that the inner wall was constructed on a plan that closely resembled the architecture of the main area of Operation E as observed by the organization of the uppermost cobbles and stones, but at some point the earlier wall was covered and a new wall built slightly south of it.

Great densities of artifacts were found and five features were identified in the area of the two parallel walls (FIG. 10). The features were located either directly next to the exte-

rior face of the inner wall or at the same level beneath the outer wall. All of the stratigraphic evidence suggests that the features were made at the time of the construction or use of the (earlier) interior. They consisted of entire or nearly complete pottery vessels that had either been deliberately smashed or had broken after deposition. We believe that many more such vessels were located outside the inner wall but had not been recorded as features during our first work in the area. The ceramics are predominantly types from the Atlantic Watershed or Central Valley regions of Costa Rica. Numerous other sherds from these areas had been previously noted during clearing of the walls, before the features were uncovered. In addition, two fragments of stone statues that appear to be in Atlantic slope styles were also found in this area of Operation E. There was also an apparently much higher percentage of elaborately decorated Chiriquí pottery, including many fragments of ceramic figurines of seated women.

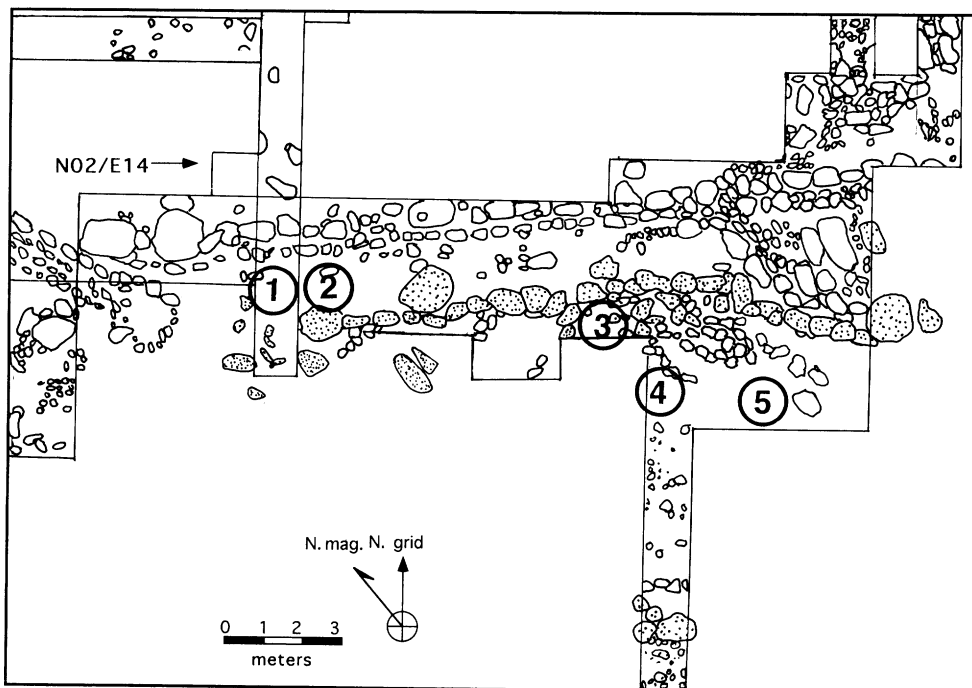
The pattern of light and dark stratigraphy noted in Operation D was observed again in Operation E. Thanks to the careful study of Larry Conyers, project geologist, we were able to develop a theory as to the nature and significance of these deposits. The central red-orange layer, containing virtually no artifacts, consists of weathered andesite, reduced to soil, with occasional small inclusions of

chunks of decomposed andesite that were not completely disintegrated. Local people refer to this material, particularly the decomposed material that still retains its original shape, as *piedra muerta* (dead rock). The fact that various areas of the monumental sector contain a layer of this soil sandwiched between two artifact-bearing layers indicates that the middle layer was deliberately placed there by human agency, and we have designated this layer as the “*piedra muerta fill*” (PMF).

We noticed in Operation D that the PMF occurred in some areas but not others. In 1993 we were able to determine that the PMF was found only within the oval area defined by the arc of four lines of stones and the inner (northern) line of stones, discussed above. Other architectural units contained only dark soils. The PMF layer in Operation D also was found only in areas with distinct boundaries, in particular, within stone arcs on the northern side of the causeway (FIG. 6).

The identification of PMF deposits is significant for a number of reasons. First, it indicates an even greater amount of labor expenditure for the monumental sector of the Rivas site, an amount that was already considerable given the number of rocks and cobbles moved to form the structures. As in the case of the two walls in Operation E, PMF deposits indicate that there was a significant amount

Figure 10. Detail of excavations in Operation E. The rocks shown as stippled were at least partly exposed before excavation. Rocks shown as clear were mostly buried. Circled numbers indicate the locations of features.



of reorganization of space in the monumental sector after initial constructions. The organically and artifactually rich deposits above and below the PMF are the results of human actions that built up refuse; once, before the PMF was laid down, and then again after it was deposited.

Because some areas contain layers of PMF but not others, we believe that its presence may help to indicate roofed and non-roofed areas at the site. A consistent difficulty in excavating and reconstructing monumental architecture in Costa Rica is the determination of which areas were roofed and which were not. Often, archaeologists are forced to speculate on such patterning, since postmolds are rarely encountered. We think it highly likely, however, that PMF was in areas that were not roofed. The visual effect of orange-red soil would have been heightened in open areas where the bright color would have stood in marked contrast to the blacker soils or grass outside of PMF areas. In addition, the low nutrient values of PMF likely discouraged the growth of vegetation, making it more useful in open areas than in closed ones where the reduction of sunlight would naturally reduce plant growth. Especially in the case of the oval structure in Operation E, the amount of roofed area to be covered was considerable. Though probably not beyond the engineering abilities of the site's inhabitants, such a construction should have left traces of very large or numerous roof support posts; yet none were found, despite careful efforts on our part to excavate in areas where they were most likely to have been placed. Taken together, these considerations have led us to suggest that PMF areas were not covered by roofs.

The area of concentrated architecture in Operation E is bounded by a row of large boulders trending N-S. Excavation units were placed to the west of this row, where there was no evidence of large scale constructions. One unit, on the southern end of our cleared area, however, revealed a series of stone alignments of considerable importance for

understanding activities in the rest of the monumental area. This was a large pit in which we uncovered what appears to have been a stone pathway comprised of three lines of stones running roughly SE-NW. This likely was a path placed in the area because it is and was one of the lowest points in this sector of the site, receiving large amounts of run-off during rains. The path runs directly under a boulder 2 m in length and 1 m wide. The fact that this boulder is directly on top of the path suggests that it was deliberately moved there. There is little to suggest that an earthquake could have placed the boulder in its present location because the area is generally devoid of large stones. The large size of this boulder is further testament to the tremendous efforts devoted to constructing the monumental sector of the site and suggests that many such boulders which appear to be in "natural" locations may have been moved there by human agency.

Dates

A total of 12 radiocarbon assays have been conducted on materials retrieved at the Rivas site (TABLE 1). All samples were carbonized vegetation. Because distinct hearths were rarely found at the site, most samples were from areas of charcoal concentrations. Taking the assays as a group and ignoring two dates that differ radically from the rest (M5-92 and M4-93) the double standard deviations of the dates suggest occupation at Rivas site spanned the uncorrected radiocarbon years from about a.c. 900 to 1400. Such a span conforms to the general assessments of the length of Chiriquí occupation in Diquís. Taking a more adventurous view by considering the dates themselves and a single standard deviation would place the occupation of Rivas between about A.C. 1050 and 1250, which would date to the middle of the Chiriquí phase.

Three dates deserve special mention because the samples were carefully retrieved in order to examine the PMF

Table 1. Radiocarbon dates for the Rivas site.

Lab No.	Sample No.	Operation	Unit	Level (in cm.)	C14 years (b.p.)
Beta-54745	M4-92	A	S44/E14	42-53	900 ± 80
Beta-54746	M5-92	A	S64-65/E18-19	30-35	3380 ± 60
Beta-54747	M6-92	A	S40-41/E30.5-31.5	30-40	660 ± 70
Beta-54748	M7-92	C	Burial 5	125	710 ± 70
Beta-54742	M1-92	D	N34-35/W25-26	40-50	970 ± 60
Beta-54743	M2-92	D	N50-51/E6-7	65-75	870 ± 80
Beta-54744	M3-92	D	N38-39/W31-32	100-110	920 ± 110
Beta-65944	M2-93	E	S06-07/E36-37	40-50	980 ± 70
Beta-65943	M1-93	E	N00/E17	40-50	820 ± 50
Beta-65947	M5-93	E	N02/E14	10-24	690 ± 70
Beta-65946	M4-93	E	N02/E14	24-51	1250 ± 70
Beta-65945	M3-93	E	N02/E14	51-53	900 ± 110

related stratigraphy in Operation E. A single 1 × 1 m pit, N02/E14 (FIG. 10), was excavated primarily to recover charcoal that was present in the form of small fragments throughout the deposits. Carbon was taken only in the upper black zone immediately above the PMF layer (M5-93), in the upper section of the PMF zone (M4-93), and in the upper centimeters of the lower black zone (M3-93). This was done in the hope of chronicling the timing of the fill and construction sequence at the site. While the samples from the upper and lower layers chronologically conform to their stratigraphic sequence, the PMF date does not. Given that the PMF was extracted from an area relatively distant from Operation E it is quite possible that naturally or culturally carbonized materials were part of the fill material, producing the anomalous date.

Examining the dates for the black layers above and below the PMF does not readily clarify the timing of construction phases in Operation E. Considering the double standard deviations, it is possible that the construction and fill sequence could have taken place during a very short time span, but it is also possible that a century or more transpired between one construction phase and the other. It may be significant, however, that six of the 10 acceptable dates all fall within the 900s in radiocarbon years and all but one of these is associated with monumental architecture. This at least suggests that the primary time during which the monumental sector was in use was the 11th century.

Conclusions

Given our original interest in studying variability in Chiriquí settlements, we have found marked contrasts between Murciélago and Rivas, primarily in the presence of monumental architecture at the latter site. While the cluster of circular houses of Operation A is very similar in pattern to dwelling groups at Murciélago, the monumental architecture is unprecedented for the region. The monumental area of Rivas has counterparts at sites in the Central Valley and Atlantic Slope regions of Costa Rica (Ferrero 1981; Snarskis 1992). Furthermore, before our investigations, not a single sherd from these other regions had been reported for the Southern Zone. Our research has uncovered many examples, including several whole or nearly complete vessels, with only a fraction of our 120,000 sherds analyzed to date. We have also recovered sherds from NW Costa Rica (Nicoya-Guanacaste) and a single example of what appears to be a ceramic fragment from central Panama, but the preponderance of exotic pottery appears to be from areas east and NE of Rivas, across the Talamancan range.

The simplest explanation for the monumental structures

at Rivas is that the site served as an important node in long-distance exchange networks. As the highest-known large site in the drainage system, Rivas could have capitalized on its location, controlling communications across a major pass through the mountains. Local tradition states that three such passes were significant in the lives of native inhabitants of the southern Pacific region. The northernmost was at Rivas, a second was located at the site of the modern town of Buenos Aires, and a third was near the Panamanian border. Furthermore, the site of Ta'Lari (Gonzalez C. and Gonzalez V. 1992: 62-63) is located at roughly the same elevation as Rivas, across the mountains, on the Atlantic side of the Talamancan range, and perhaps the two—or a site similar to Ta'Lari—were “sister” sites engaged in an exchange system.

The Atlantic and Central Valley regions contain numerous large complexes resembling the monumental sector at Rivas. The social and cultural significance of the times of construction and use of these sites, variations in architectural styles, and differences in material culture remain to be fully examined. For many of these sites, only the central core of monumental constructions is well documented, although evidence for extensive areas of construction around them and, in some cases, paved roads stretching several kilometers from the central areas, are known. In general, these sites consistently yield radiocarbon dates that conform to the time of monumental construction at Rivas, between the 10th and 13th centuries (see Snarskis 1992: 151-160).

Despite the presence of many ceramics from outside the region, the majority of the ceramic inventory at the site is clearly Chiriquí. Chiriquí ceramics are thus found within the context of architecture that has not been reported for the region previously. Given the great amount of work still to be done in the region, it is possible that Rivas is not as unique as it seems, and monumental constructions resembling those found on the other side of the mountains may be more common than is currently perceived. If it is not, however, then Rivas represents a unique melding of the cultural traditions of two regions at a key point in the exchange and communication routes between them.

The question of culture area is further complicated by significant variation within the Diquís region itself. The stone balls, mentioned above as one of the hallmarks of the region, are found predominantly in the section of the valley system from Buenos Aires to the delta (Drolet 1992: 232), while the use of natural “pillars” in cemetery areas appears to be more common in the region upstream from Buenos Aires. Furthermore, although the Chiriquí ceramics found at Rivas appear to be generally the same as those found at contemporaneous sites throughout the valley, not

a single sherd of Taragó Biscuit Ware has been recovered from Rivas. This finely made pottery is more frequently encountered in the Buenos Aires-Palmar region. Ferrero (personal communication, 1992) reported observing a small sample of this pottery on the Panteón de La Reina, next to a looted burial, but we have yet to identify a single sherd from our excavations at Rivas.

Given the very long distances some of the exotic goods at Rivas traveled to reach the site, it seems odd that there is such scant evidence for the presence of one of the region's most prestigious ceramics, Taragó Biscuit Ware, suggesting that temporal factors may be the most likely explanation. Alternatively, the patterning may indicate rather distinct and significant cultural and political processes at work which will be elucidated in future research. The distinctive "Central Valley-Atlantic Watershed" architecture, in combination with the predominance of Chiriquí artifact styles certainly offers the opportunity to discern rather specific culture processes at work.

The monumental sector at Rivas also raises questions regarding the nature of social organization at the site. The evidence suggests that there were at least two different social groups living very different lives in close proximity to each other. While we still need to conduct a thorough survey of the site area, the available radiocarbon dates suggest contemporaneity of monumental structures and of less imposing ones.

Operations D and E contain abundant evidence for domestic activities. Charcoal-blackened sherds have been recovered as well as ceramics that almost certainly were used for domestic activities, and lithic debris indicates cutting and scraping were carried out in monumental sectors. In fact, a higher incidence of stone tool fragments in monumental sectors of the site suggests that the inhabitants of such large structures had greater access to goods and services necessary to sustain life, or make it easier, than those outside of them. It thus appears that the monumental sector was an area in which people carried out daily activities. The great amounts of fancy ceramics, such as polychrome wares, even discounting the exotic materials, as well as the presence of fragments of very large open mouth bowls, suggest that the status and activities of the inhabitants of Operations D and E were distinct from those who lived nearby, however. Additional significant patterns include the location of cemeteries near less impressive structures, the absence of cemeteries in similar spatial patterning with respect to the monumental architecture, and the absence of complete metates throughout the site.

But more occurred in the monumental sectors than simple daily life. A great amount of effort was expended to

elaborate areas with PMF fill and with large boulder constructions, including unroofed areas. Fragments of large, open-mouthed bowls, as much as a meter in diameter, suggest the preparation and consumption of food or drink for large numbers of people. The large oval area of PMF fill in Operation E suggests a public stage for the performance of dances or rituals that could have included many dozens of people as participants and perhaps even more as observers. The deposition of complete or near-complete exotic pottery vessels outside of this area indicates conspicuous consumption of not only the vessels themselves but also, very likely, their contents.

Neither our extensive excavations nor the continuous labors of the farm owners have discovered any cemeteries resembling Operation C near the monumental sector of the site. It thus seems more than likely that the burials on the Panteón de La Reina are the remains of the occupants of the monumental architecture, especially as there are reports of graves not only on the top of the Panteón but also along its slopes near the monumental sector. Reports of artifacts found next to looted graves on the Panteón suggest contemporaneity with the Rivas occupation while all of the Rivas radiocarbon dates support contemporaneity for monumental architecture and other areas of the site, as discussed above. As also mentioned above there are reports of a high degree of variability in the burials in the ridge top cemetery, with differences in the nature and quantities of grave goods in individual interments. At the same time, there was an apparent segregation of groups of burials on the ridge top, possibly corresponding to different social units.

Taken together, the available evidence suggests that a hypothetical outline of the sociopolitical structure of the Rivas community can be sketched. There were two major divisions represented by those buried on the Panteón and those buried at the Rivas site. Among those on Panteón there were, possibly, three social divisions within which access to prestige goods varied. For those buried at Rivas, we can currently detect at least three social units represented by the cemeteries reported for Operations A, B, and C. At present, we cannot determine notable differences between the kinds of burial goods found for each cemetery unit. Within the Operation C cemetery, however, there were clear differences in the amounts of artifacts per grave although little variation in the nature of observable grave goods.

While there is some heterogeneity within each of the two major classes of mortuary data, there are greater differences between them. If the Panteón burials are the remains of the inhabitants of the monumental sector, then there are additional marked contrasts between the two

groups. The inhabitants of the monumental sector lived in bigger and more elaborately constructed houses that were integrated into a landscape that included areas for public display and ceremonies. They very likely did not construct this area themselves but were able to convince or coerce other people, possibly the inhabitants of other sectors of the site, to transport PMF fill and move large boulders. The inhabitants of the monumental sector also used and disposed of great amounts of elaborate, exotic pottery while the other residents of Rivas had no access to such ceramics, not even as mortuary goods.

All of this information suggests that the nature of the sociopolitical system of Rivas was highly hierarchical. Whether the inhabitants of the monumental sector held a monopoly of power and controlled the labor and products of the residents of the non-monumental sector cannot fully be determined at present. The marked contrast in the available data, however, suggests a stratified society in which the members of the lower-ranking social unit could not easily enter the ranks of the upper one. The gradations of wealth in graves within each major unit suggests, however, that a relatively egalitarian, kin-based social system was operative in lower-order social groups. Such groups were apparently distinguished, in part, by separate cemetery areas at Rivas, and they likely were roughly socially equivalent. Whether a similar organization existed within the elite sector, buried on the Panteón, or if there was a scalar ranking of them, remains to be investigated in future work.

This attempt at reconstructing sociopolitical organization is an initial formulation in an ongoing research program. If it only approximates the final conclusions of our research it is still of interest given the marked contrasts it presents with the Murciélago data, where hierarchy within the community is not in evidence. The other marked difference between the two sites is that Murciélago abounds in manos and metates while there are very few at Rivas. In fact, less than a half-dozen metates have been found at Rivas. All show signs of damage and almost always are found incorporated into walls as part of the construction. While it is possible that the Rivas occupants processed maize in metates made of wood or away from dwellings, these alternatives seem unlikely. Reconnaissance of the stream banks has not revealed bedrock mortars, and the river is not an easy walk from many areas on the third and fourth terraces. The possibility of metates made of perishable materials also seems unlikely because very few stone manos have been found, in addition to the absence of metates. Drolet (1992) has suggested village specialization in craft production. It may also be that there were communities specializing in food production and that Rivas was a

recipient of such food. How the exchange system operated demands further study.

While it could be that particular cultural practices required totally different maize-preparation techniques at Rivas than at Murciélago and other sites, it is also possible that the inhabitants engaged in little maize preparation at all. It is a traditional practice among the native inhabitants of the region that religious specialists received food as gifts for divination and other services. The use of gold artifacts also was reserved for religious specialists. Thus, the occupants of the monumental sector of Rivas may have held high rank because of their expertise in religious activity. Available ethnohistoric and ethnographic documents (Johnson 1948b) indicate that the Cabecar-Bribri, now residing on the Atlantic slopes of the Talamanca range, were organized in a complex system of ranked orders of religious specialists complemented by another group of non-elite commoners. The dual division of elite and non-elite at Rivas may reflect an ancient variant of this system.

Control of sacred knowledge by members of the Rivas community would have been part of a complex cultural web that also included control and manipulation of long-distance exchange systems. Such systems included the importation of exotic pottery and their contents that were conspicuously consumed, with the containers perhaps being ceremonially destroyed as were stone statues. Such activities may have taken place within the context of large-scale feasting and public ceremonies as evidenced by the large pottery bowl fragments from Operations D and E and the ceremonial spaces in these areas. Long distance exchange may have included not only goods but also esoteric knowledge from far away lands (Helms 1979). All of these activities were carried out in a spectacular setting that likely drew upon concepts of a symbolically charged, sacred landscape, at the junction of rivers, in the shadow of the tallest mountains, in the upper reaches of the valley, near the ancestors on the knife ridge of the Panteón de La Reina, and in the mountains beyond.

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