

ARCHAEOLOGICAL SURVEY IN THE HIGH LLANOS AND ANDEAN PIEDMONT OF BARINAS, VENEZUELA

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ABSTRACT

This is the first of a series of monographs about an archaeological project that the authors carried out in the high llanos and Andean piedmont of the Distrito Pedraza, Barinas, Venezuela. We were interested in documenting the evolution of prehistoric chiefdoms in the western Venezuelan llanos and in assessing the possibility that intersocietal interaction such as exchange and warfare played a role in chiefdom development here. We benefited from reading the early historic accounts of the European explorers and missionaries who encountered chiefdoms in the western Venezuelan llanos in the sixteenth century. Also, we wanted to build on the findings of a few archaeologists who had conducted archaeological investigations in the western Venezuelan llanos to answer questions of chronology, settlement, and subsistence. Our research design called for monitoring prehistoric cultural developments in a study region centered on the Canaguá River valley, extending across the high llanos and up into the adjacent piedmont, wherein we would collect archaeological data on regional settlement patterns, community organization, households and subsistence practices, and artifact distributions within and between settlements. In this volume, we present the Barinas project's research design, introduce the chronological sequences that we established for the Andean piedmont and high llanos, and report the findings of the first phase of field investigations: the five seasons of regional survey we conducted in our 450 km² study region centered on the Canaguá River valley. The bulk of this volume is devoted to detailed descriptions of 103 archaeological sites.

Sites of the Curbatí complex dated to A.D. 300–1000 are restricted to the piedmont, where they are typically located on remnant river terraces overlooking stretches of farmable alluvium. Our survey revealed evidence of a two-level settlement-size hierarchy for Curbatí-complex sites in the Curbatí and upper Canaguá River valleys. While Curbatí-complex sites never have earthworks, some Curbatí-complex sites in the Curbatí River valley are associated with petroglyphs. One of these sites was La Esmeralda (B8), the largest Curbatí-complex settlement, which extended over 8 ha of an alluvial terrace on which stood a large boulder bearing petroglyphs. A similar two-level settlement-size hierarchy obtained for sites in the piedmont of the later Caño Seco complex, dated to A.D. 1000–1550, although there is evidence of population growth in the number and areal extent (≤ 25 ha) of Caño Seco settlements, especially in the upper Canaguá River valley. The only Caño Seco-complex site associated with petroglyphs, however, was the small (3.125 ha) site of La Piedra Herrada (B20) in the Curbatí River valley. All but one of the petroglyphs discovered in our study region were confined to the Curbatí River valley.

Sites with Gaván-complex ceramics dated to A.D. 300–1000 are largely restricted to the high llanos, where our survey revealed a clear regional hierarchy of three levels according to site size and associated mounded architecture. The 33 ha site of El Gaván (B12), with its linear plaza flanked by tall earthen mounds, house mounds, and associated earthworks and causeways stood at the top of the settlement hierarchy. Linked by causeway to the regional center were five second-order settlements with similar mound configurations, only on a smaller scale. The lowest level of the regional settlement hierarchy consisted of 28 habitation sites smaller than 5 ha in area and without visible mounded architecture. We located, mapped, and test-excavated a 35 ha drained-fields facility (B27) southeast of the regional center of El Gaván; another expanse of drained fields may have existed northwest of the regional center at site B52 on the fertile alluvium of the Caño Mitiao Hondo. We estimate that the potential maize yields reaped on these drained fields would have greatly exceeded the subsistence requirements of the nearest habitation sites (B26, B98). Due to the drained fields' proximity to causeways leading to the regional center, we propose that the considerable agricultural surplus produced on the drained fields was delivered to the regional elite at El Gaván (B12). The discovery of four third-order habitation sites with Gaván-complex ceramics in the upper Canaguá River valley, associated with large tracts of fertile alluvium, raises questions about the relationship and intersocietal interaction between the inhabitants of the high llanos and the adjacent forested piedmont in Late Gaván times. The oval causeway that encloses the regional center of El Gaván may have served in part as a defensive earthwork. The degree of centralized regional organization manifested by the Gaván-complex settlement hierarchy, with the array of mounded architecture, the network of intersite causeways, and the implementation of drained-field agriculture, are commensurate with the archaeological manifestations expected for chiefly societies.

The paramount chiefdom centered at El Gaván (B12) did not persist until the European incursions in the sixteenth century. We located eight Caño Seco-complex (ca. A.D. 1000–1550) sites on the high llanos, which adhered to the two-level settlement-size hierarchy obtained for Caño Seco-complex sites in the adjacent piedmont. We also located 10 sites of the early historic period on the high llanos that we assigned to the Chuponal complex and tentatively date to A.D. 1550–1850. The largest and greatest density of Chuponal settlements occurred on the El Chuponal alluvium, east and across the Canaguá River from the town of Pedraza (Ciudad Bolívar), which was founded in 1591.

INTRODUCTION

This is the first monograph about an archaeological project that the authors carried out in the high llanos and Andean piedmont of Barinas, Venezuela, to investigate the evolution of prehistoric chiefdoms. We carried out the fieldwork in the Canaguá River valley, Distrito Pedraza, from 1983 to 1988, and conducted the ensuing laboratory analysis in the archaeological laboratories of the Departamento de Antropología at the Instituto Venezolano de Investigaciones Científicas (IVIC) in Altos de Pipe between 1988 and 1992.

Although various aspects of this research have appeared in earlier papers (Redmond and Spencer, 1989, 1994, 1995; Redmond et al., 1999; Spencer, 1991, 1993, 1994, 1998, 2000; Spencer and Redmond, 1985, 1991, 1992, 1998; Spencer et al., 1994), the purpose of this monograph is to present the comprehensive findings of our regional survey in the high llanos and adjacent piedmont. A companion monograph will feature the results of our excavations at sites of the Gaván complex, a pre-Hispanic culture that thrived between A.D. 300 and 1000 (Spencer and Redmond, n.d.). A third monograph will document the findings of our excavations at sites of the Curbatí and Caño Seco complexes in the Andean piedmont (Redmond and Spencer, n.d.).

By the time we completed graduate school and joined the Anthropology Department at the University of Connecticut in 1981, we knew that we wanted to investigate prehistoric chiefdoms in the Circum-Caribbean basin. We wanted to work in an area of the Circum-Caribbean where prehistoric chiefdoms had persisted until contact, and where we could monitor prehistoric chiefdoms from a macroregional perspective. One reason for considering Venezuela was that it was Redmond's birthplace. Another stemmed from our previous visits to Venezuela, including Redmond's initial visit to Barinas and, specifically, to Hato La Calzada with a fellow Yale graduate student, Adam Garson, when he was wrapping up his pioneering settlement-pattern project

there in December 1976 (Garson, 1980). From our perspective shaped by our previous research in highland Mesoamerica, the potential to investigate mounded chiefly centers linked by causeways and associated with drained field facilities—all without any later overburden or alteration—seemed almost too good to be true. We were well versed in the literature of processual evolutionism of the 1960s and 1970s and considered the development of chiefdoms having centralized leadership on the regional level and institutionalized social ranking to be a challenging research question (Spencer, 1997: 213–214). We audited Irving Rouse's Circum-Caribbean Archaeology course at Yale in the fall semester of 1980 and began familiarizing ourselves with the area's chronological sequences and the ceramic collections stored at the Yale Peabody Museum.

In the summer of 1981 we traveled to Venezuela. We met with Erika Wagner and Alberta Zucchi at IVIC, who advised us about the feasibility of working on chiefdom development in various areas of Venezuela. Wagner recommended that we meet with the late Henriqueta Peñalver about the possibility of working in the Valencia Basin, in the states of Aragua and Carabobo, and we did. We also met with the late José M. Cruxent, who was then director of the Museo del Hombre in Coro. Cruxent recommended that we consider the peninsula of Paria or the delta of the Orinoco River, both areas that needed archaeological attention. Zucchi recommended that we contact Pablo Novoa A. of the Centro Arqueológico “Kuayú” in Barinas, who could arrange for us to visit sites in the high llanos and Andean piedmont. However, the rainy season was not the right time of year to pursue this lead.

We returned to Venezuela in December 1981, and in early January 1982 we drove to Barinas and met Pablo Novoa A., who agreed to show us the sites the Centro “Kuayú” knew of. As described in chapter 1, our fieldwork began with this week-long reconnaissance of sites in the high llanos

and adjacent piedmont of the Andean cordillera in Barinas, accompanied by some members of the Centro Arqueológico "Kuayú". This reconnaissance allowed us to familiarize ourselves with the prehistoric settlements in both the high llanos and the lower piedmont and to plan our investigations. By the end of that week, we had decided to define a study region that would overlap the high llanos and Andean pied-

mont of the Canaguá River (fig. 1.1). We would seek funding for a multistage and multilevel research project that would establish occupational sequences for the high llanos and forested piedmont and attempt to gather archaeological data with which to assess the possibility that intersocietal interaction was an important factor in the development and dynamics of chiefdoms in the western Venezuelan llanos.

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Our fieldwork in Barinas was supported by grants from the National Science Foundation (BNS-85-06192), the Wenner-Gren Foundation (4798), the Connecticut Research Foundation (00220-35-220), and a University of Connecticut Faculty Summer Fellowship.

We conducted the Barinas project as *Colaboradores Visitantes* of the Departamento de Antropología, Laboratorio de Arqueología, at the Instituto Venezolano de Investigaciones Científicas (IVIC), for which we have Dr. Erika Wagner to thank. We are grateful to Dr. Wagner, Dr. Alberta Zucchi, the late Dr. Jesús Eduardo Vaz, and the late Dr. Carlos Schubert for their warm welcome and interest in our research objectives and for their support and friendship. The director of IVIC, the late Dr. Miguel Layrisse, was generous in his support during the initial stages of our field research.

We obtained letters of permission and support for our field investigations in Barinas from the heads of the following governmental agencies in Caracas: the *Comisionado de la Presidencia de la República para la Conservación del Patrimonio Histórico de la Nación*, Dr. Rafael Armando Rojas; the *Ministro de Estado para la Cultura* and *Presidente del Consejo Nacional de la Cultura* (CONAC), Dr. José Francisco Sucre Figarella (with the help of Luis E. Molina); and the *Ministro de Relaciones Interiores*, José Angel Ciliberto.

In Barinas, we obtained letters of permission to conduct our field investigations in the Distrito Pedraza from the *Gobernador del Estado Barinas*, Rafael Rosales Peña,

and from the *Presidente Encargado* of the *Concejo Municipal del Distrito Pedraza*, Etanislao Rodríguez Mora. We thank César Guevara and Pedro Jáuregui for their advice about our meetings with local officials and Dr. Lilliam Arvelo for her willingness, as *Presidente* of the *Asociación Venezolana de Arqueología* (AVA), to fly to Barinas on our behalf in 1988.

Throughout our five seasons of fieldwork in Barinas, Pablo Novoa A. of the Centro Arqueológico "Kuayú" helped us in many ways, beginning in January 1982 when we first visited the region and some of its many sites, as did his brother, Alejo Novoa A. Through Pablo Novoa A. we met María Andueza G., who served as our field assistant for the duration of the project, and with whom we shared the project's many discoveries and vicissitudes. Indeed, during the preparation of this regional survey report, we have continued to contact her in the Departamento de Sociología at the Universidad Nacional Experimental de los Llanos Ezequiel Zamora (UNELLEZ) in Barinas with questions from time to time. During the regional survey we were also assisted by Francisco J. Fernández O., Dr. Rafael Gassón, and Theodora Meijers. *Comisario Miguel Angel Briceño* of Caño Lindo willingly accompanied us in the piedmont of the upper Canaguá River during our 1984 and 1985 survey seasons. We want to express our gratitude to the owner of *Fundo El Gabán*, Lucio Laviano O., who recognized the significance of our investigations on his property and gave us permission to conduct multiple seasons of regional survey, site mapping, and excavation there-

in. Renato Gudiño of neighboring Fundo La Fijanza was a wonderful source of information and help.

During the excavations we were assisted by Dr. Rafael Gassón and Inés Frías B., who, along with María Andueza G., were steadfast in their dedication to the job of recording data, even under the most trying circumstances. The important findings of the 1988 season were in large part due to their hard work and persistence.

In 1988, the artifact collections were transported to Dr. Wagner's Laboratorio de Arqueología in the Departamento de Antropología at IVIC with the help of a truck and two workers of Chocolates El Rey, C.A., for which we thank Jorge M. Redmond S. Both of our field vehicles were also supplied by Jorge M. Redmond S., which made it possible to deploy precious grant funds for other uses. Dr. Wagner generously offered us work space in her laboratory and storage space for our material.

At IVIC we analyzed the artifact collections in the summers of 1988–1992 with the fortunate assistance of Dr. Rafael Gassón and Inés Frías B., who carried on with the analysis throughout the year. They became masters of the ceramic complexes we defined for the study region and of the non-determinative, polythetic attribute analysis we established for recording the ceramic collections. Dr. Gassón helped to identify our historic-period ceramics of the Chuponal complex at the Carnegie Museum of Natural History with the assistance of Dr. David Watters (see chap. 2). Along with Dr. Gassón and Inés Frías B., Arturo Jaimes Q. rendered many of the artifact illustrations. Dr. Carlos Schubert often stopped in to examine and identify our lithics. He arranged for his colleague, Dr. Ramón S. Sifontes G. of the Instituto de Geoquímica at the Universidad Central de Venezuela (UCV), to examine and source some of the chert and amphibolite artifacts in our collections. Dr. Schubert also ar-

ranged for the palynologist Milagro Rinaldi of his Laboratorio de Paleoecología to examine some of our soil samples from the drained fields of La Tigra (Spencer et al., 1994). Dr. Jesús Eduardo Vaz of IVIC's Laboratorio de Arqueometría performed some thermoluminescence dating on our ceramics, as did Dr. Cynthia Peterson in her laboratory at the University of Connecticut.

We have been preparing this monograph at the Anthropology Division of the American Museum of Natural History, where we have been fortunate to have the assistance of Jennifer Beckmann, Thomas Cuddy, Kevin De Vorsey, Christina Elson, Barry Landua, Amy Nyack, and Shoshana Parks. Jackie Beckett, Craig Chesek, Denis Finnin, and Roderick Mickens of the Photo Studio printed all the photographs that appear in this volume. Eliot Spencer scanned all the project's photographs. Christina Elson and Bridget Thomas Macknight helped to prepare the line drawings. Anita Caltabiano photocopied and labeled all the figures.

In the process of preparing the regional survey report, we have directed what must have seemed like a continuous flow of questions to Dr. Rafael Gassón at IVIC—ranging from the fields of botany, *llanero* terminology, and ceramic classification to very practical issues of long-term storage and curation of our material remains. He has generously given of his time and energy to these queries, in spite of his demanding schedule.

There is one person without whose help we would not have been able to carry out the five seasons of fieldwork in Barinas and the four seasons of labwork at IVIC. Raiza R. Ron Andueza of Barinas is a highly talented young woman who cared for our children both in Barinas and in Caracas. She made personal sacrifices to help us, and, after all these years, we trust she knows the high regard and affection we have for her.

CHAPTER 1. RESEARCH DESIGN

INTRODUCTION

This is the first of several monographs that will report the results of archaeological field investigations that we carried out in the western llanos of Venezuela from 1983 to 1988. Prior to carrying out archaeological fieldwork in western Venezuela, we had worked in the southern highlands of Mexico, where we had investigated the rise of the early Zapotec state from preexisting chiefdoms in Oaxaca (Redmond, 1983; Spencer, 1982). We decided to work in Barinas, Venezuela, because our reading of the existing archaeological and ethnohistoric literature convinced us that cultural evolution in that part of South America had led to the emergence of chiefdoms, but not states, before the time of European contact in 1498. Chiefdoms are societies that have centralized political authority and institutionalized social differentiation yet lack the internally specialized, bureaucratic administration characteristic of states (Spencer, 1987; Wright, 1977). In contrast to uncentralized tribal societies that consist of autonomous villages, the chiefdom features centralized leadership on the regional level and has been defined as “an autonomous political unit comprising a number of villages or communities under the permanent control of a paramount chief” (Carneiro, 1981: 45). Accordingly, the chiefdom is interposed between uncentralized tribal societies and bureaucratic states, in terms of both sociopolitical complexity and general evolutionary sequencing (Carneiro, 1981: 38; Earle, 1987: 279).

It is crucial, we believe, for those anthropologists and archaeologists interested in cultural evolution to seek to understand why chiefdoms developed in some places and not others, and why in a relatively few cases the process of cultural evolution led to primary state formation. While the origin of states is rooted in the emergence and development of chiefdoms, the evolutionary trajectories of most chiefdoms resulted in highly fragmented and unstable regions consisting of competitive chiefly

polities subject to oscillating cycles of growth and dissolution (Anderson, 1994; Earle, 1997: 14–15; Wright, 1984). Each trajectory of chiefly development must be monitored and examined within its socio-environmental context, which often sets limits on the chiefdom’s growth and political economy (Anderson, 1996: 190–191; Drennan, 1991: 284–287). Conversely, certain socioenvironmental conditions can offer opportunities that spur the expansion of a paramount chiefdom’s administration and transform it qualitatively into the internally specialized administration of a state (Spencer and Redmond, 2001). Since the resolution of such issues cannot be accomplished without reference to a comparative database of political development, we hoped to make a substantive contribution to such by conducting research on the prehistoric chiefdoms of Barinas.

THE STUDY REGION

THE ENVIRONMENTAL ZONES

Our study region in the western *llanos* (“plains”) of Venezuela covered 450 km² and overlapped portions of the high llanos and adjacent Andean piedmont along the Río Canaguá, about 40 km southwest of the state capital of Barinas (fig. 1.1). The climate of this tropical region is characterized by a dry season from December through March, followed by an eight-month rainy season during which 90% of the yearly precipitation falls (Sarmiento et al., 1971: 55). The mean annual rainfall on the llanos is 1,817 mm and increases to 1,800–2,400 mm in the Andean piedmont (Garson, 1980: 70; Gassón, 1998: 15; Tamayo, 1961: 26). The mean annual temperature is 27°C, with a mean annual variation of 3°C (Garson, 1980: 71; Sarmiento et al., 1971: 55).

The western llanos of the Orinoco Basin can be subdivided into three zones according to altitude: the low llanos near the Río Apure, with elevations below 80 meters above sea level (masl); the middle llanos,

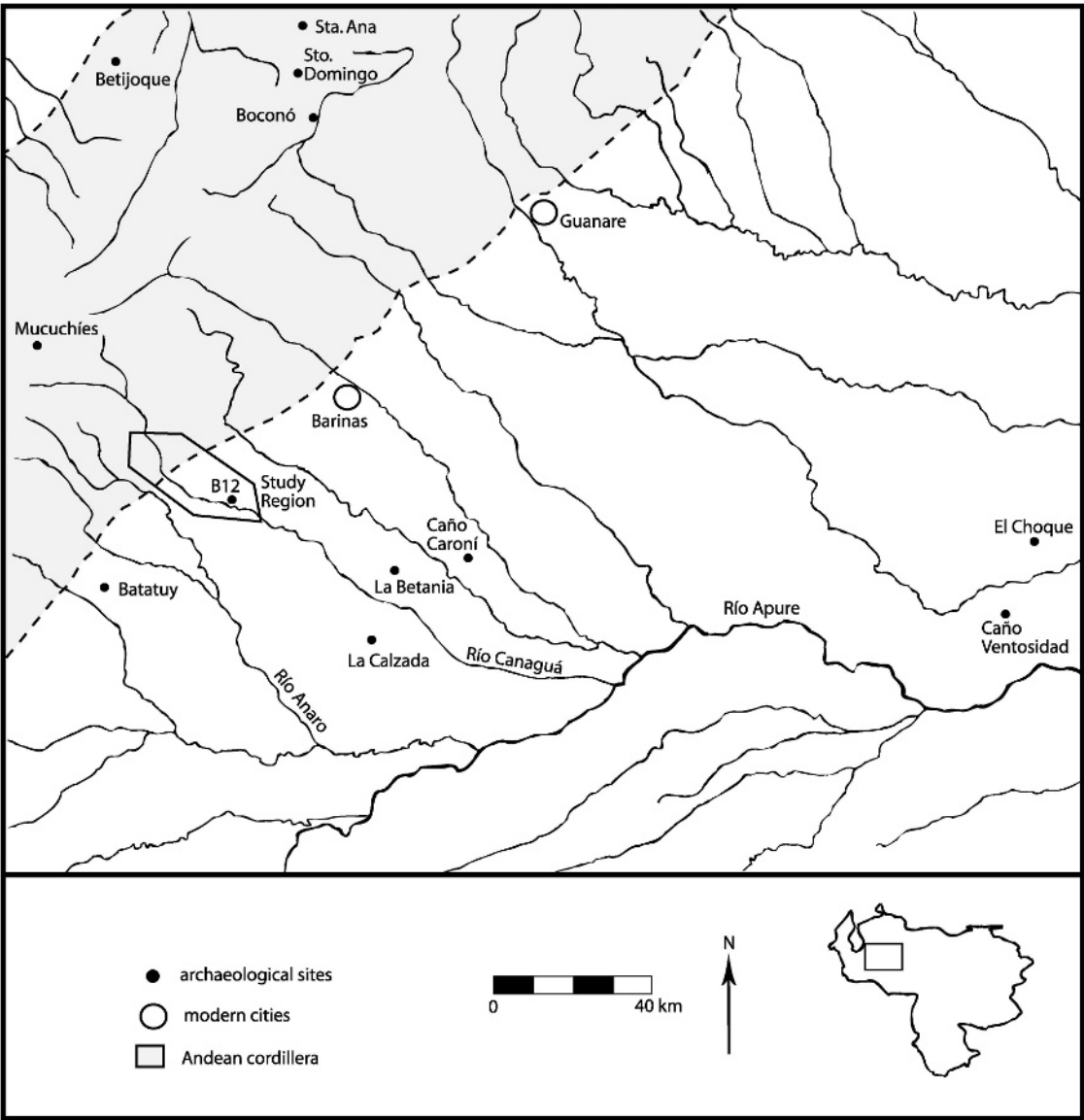


Fig. 1.1. Map of western Venezuela showing the location of the study region in the high llanos and Andean piedmont and previously investigated archaeological sites and modern cities.

with elevations from 80 masl to 180 masl; and the high llanos, with elevations from 180 masl to 240 masl (fig. 1.2) (Tamayo, 1961: 101). The Andean piedmont, adjacent to the high llanos, rises from 240 masl to approximately 600 masl and serves as a transitional zone between the llanos and the Andean Cordillera, whose highest peak (the Pico Bolívar) surpasses 5,000 masl

(fig. 1.3). Numerous rivers, the Río Canaguá among them, originate in the high Andes and descend through the piedmont in narrow valleys before they spill onto the llanos, where they cross the savannas, fed by small tributary streams called *caños*, making their way eventually to the Río Apure. While seasonal inundations occur throughout the llanos, they are more fre-



Fig. 1.2. Cattle dot the savanna on the high llanos, and egrets congregate in a roadside *préstamo* in the early dry season.

quent in the lower elevations, where the topographic gradient is less than 5% (Gassón, 1998: 13; Tamayo, 1961: 78–80; Vila, 1960: 109). Indeed, seasonal excess of water is one of the principal factors governing the vegetation and human use of the llanos (Sarmiento et al., 1971: 54).

The piedmont, with its low hills and remnant alluvial terraces, has relatively well-drained, mineral-rich soils that support a basal forest vegetation (including *Jacaranda superba*, *Ficus* sp., *Parinarium* sp., and *Calocarpum* sp.) (Sarmiento et al., 1971: tabla 1). Some of the lower foothills featuring lateritic soils are covered by the dry savanna grasses *Trachypogon montufari* and *Paspalum carinatum* and *Trachypogon plumosus* or *Trachypogon vestitus*. Arboreal vegetation here amounts only to low, dispersed *chaparro* (*Byrsonima crassifolia*, *Byrsonima coccolobifolia*, *Curatella americana*) and *alcornoque* (*Bowdichia virgilioides*) trees, and *corozo* (*Acrocomia sclerocarpa*) palms (Sarmiento et al., 1971: 58; Silva

and Sarmiento, 1976: 69; Silva et al., 1971: 63).

Prime agricultural land in the piedmont is limited to stretches of low alluvial soils along rivers, which are highly fertile and friable, and which can be cleared for cultivation and easily tilled with hand tools (Tamayo, 1961: 78). Modern-day piedmont inhabitants build their small farmsteads on piedmont spurs or remnant river terraces overlooking these fertile pockets of alluvium (or *vega*) (fig. 4.116). Crops grown in the *vega* zone include maize, beans, sweet manioc, plantains, banana, coffee, and sugarcane.

The western high llanos, while they may appear to be broad, featureless plains of dry savanna grasses (*Trachypogon montufari* and *Paspalum carinatum*), dotted with clumps of deciduous forest (*matas*) (Sarmiento et al., 1971: 56–57, Sarmiento, 1984: 6–8), display patterns of relief that have been shaped by the many rivers and tributary streams (*caños*) that traverse them



Fig. 1.3. In the early morning, the Andean Cordillera is often clear, allowing this view of snow-capped Pico Bolívar from where the high llanos and piedmont meet.

(fig. 1.4). The resulting microtopographic variability on the llanos features higher terrain that is referred to as *bancos*, which are generally former river levees that remain free of seasonal inundations. Lower areas are designated *bajíos* that are subject to inundations for four to six months (Medina, 1980: 312), and *esteros* are deeper, swamp-like depressions that collect the fluvial runoff and retain water for eight to 11 months each year (Sarmiento et al., 1971: 66; Sarmiento, 1990: 38–39; Tamayo, 1961: 31). We will see how the many rivers that traverse the western llanos have deposited some of the most fertile soils anywhere across the Venezuelan llanos (Moran, 1993: 120; Sarmiento, 1984: 162, 1990: 29–31).

On the basis of this variation in topography, parent material, geomorphology, and soils, Sarmiento, Monasterio, and Silva recognized ecologically distinct relief systems, each with their predominant vegetation, for the llanos of northern Barinas (Sarmiento

et al., 1971; Silva et al., 1971). Our study region extends over four distinct relief systems designated the Curbatí, Caño Guacharaca, La Veguita, and Torunos relief systems. The Curbatí relief system extends north, south, and southeast of the town of Curbatí situated along the Panamerican highway and northeast of the Canaguá River (fig. 1.5) (Silva et al., 1971: figs. 1, 2). Formed by a massive alluvial fan of coarse, quartzitic sandy deposits of Pleistocene origin, the Curbatí relief system is nearly flat closest to the piedmont, with yellowish brown-colored sandy soils that support savanna grasses (*Axonopus purpusii*) and few trees. Elsewhere the relief is more uneven; the soils are dark, loose, and sandy; and the grassland vegetation includes *Imperata contracta* and *Panicum tricholaenoides* (Silva et al., 1971: 65).

The southwestern edge of our study region overlapped the Caño Guacharaca relief system, which extends across the high llanos between the Canaguá and Ticoporo

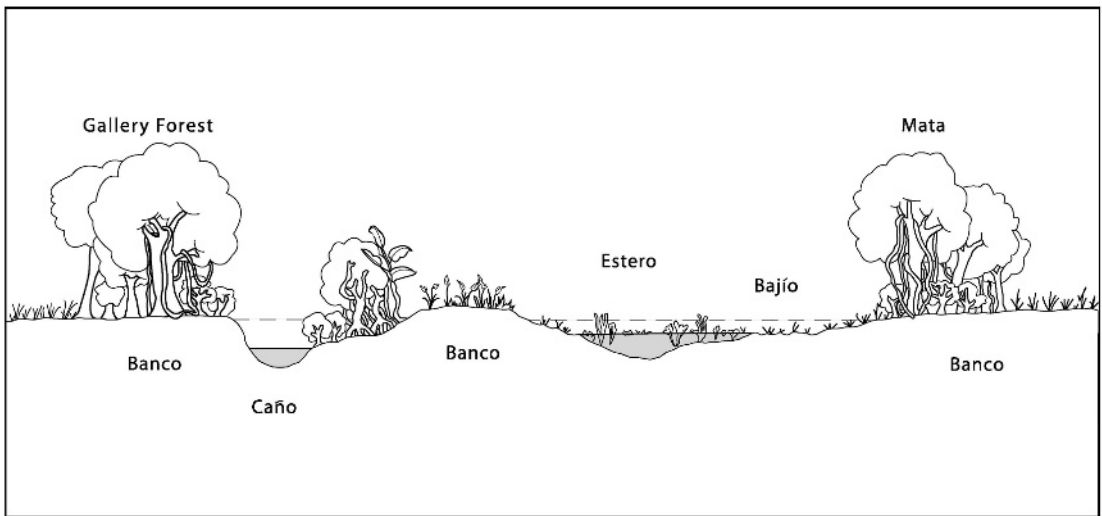


Fig. 1.4. Schematic cross-section of western Venezuelan llanos, showing the microtopographic units (redrawn from Gassón, 1998: Fig. 1.3).

rivers (fig. 1.5) (Silva et al., 1971: figs. 1, 2). The Caño Guacharaca relief system consists of an ancient terrace of hydromorphic sandy white sediments formed during the Pleistocene-Riss period and subjected to the forces of erosion. Today, the Caño Guacharaca relief system consists of extensive areas of high ground broken by narrow gullies and other depressions. The high ground, with its brown to yellowish brown-colored sandy soils containing small iron concretions, features dry savanna grassland (*Trachypogon vestitus*) and low, twisted *chaparro* trees (*Curatella americana*) and shrubs (*Byrsonima verbascifolia*). Topographically lower areas are covered with *Axonopus purpusii* and *Andropogon bicornis* grasses and dotted with swamps (*esteros veraneros*) that retain water during the dry season (Silva et al., 1971: 65).

The center of our study region lies within the La Veguita relief system, which consists of massive alluvial fans deposited in recent geological times where the Canaguá, Acequia, and other major rivers descending from the Andean Cordillera meet the llanos (fig. 1.5) (Silva et al., 1971: figs. 1, 2). The modern landscape is a fluvial one laced with many *caños*, as is the area north of the Canaguá River known as El Chuponal, which displays a broken relief composed of elevat-

ed *bancos*, sunken *bajíos*, and inundated *esteros*. The young soils are largely sandy and drain well during the rainy season but then retain water during the height of the dry season.

The southeastern edge of our study region overlapped the Torunos relief system, comprising the narrow alluvial terraces flanking the river valley bottoms of the Canaguá, Acequia, and other major rivers as they traverse the llanos (fig. 1.5) (Silva et al., 1971: figs. 1, 2). The recently deposited alluvial soils are loamy and rich in mica, organic carbon, and nitrogen (Sarmiento, 1984: table 11; Silva et al., 1971: 69). The low topographic inclination makes drainage moderate to restricted, with a relatively high water table available throughout the year (Sarmiento, 1984: 135–36).

Both the La Veguita relief system and the Torunos relief system support luxuriant gallery forests (Silva et al., 1971: 68–69). Most tree growth on the llanos develops in the gallery forests that line the rivers and *caños*, where the best soils occur (Sarmiento, 1984: 150, 162; Tamayo, 1961: 78–80). Given the proximity of watercourses, until the 1960s some gallery forests were more extensive and formed broad evergreen forests (*montañas*) (fig. 4.86) (Armand, 1975: 43–45; Vila, 1960: 110). In addition

RECONOCIMIENTO ECOLOGICO DE LOS LLANOS OCCIDENTALES
Norte del Estado Barinas
SISTEMAS DE RELIEVE

1. Río Yuca

2. Curbatí

3. La Veguita

4. Barrancas

5. Torunos

6. Caño San Silvestre

7. Caño Guacharaca

8. Calzada de Páez
9. San Rafael de Canaguá

10. Caño Uverito

11. Delta del Canaguá

12. Barinas

13. Toreños

14. Sabanas de Obispos

15. La Luz

16. Boconó

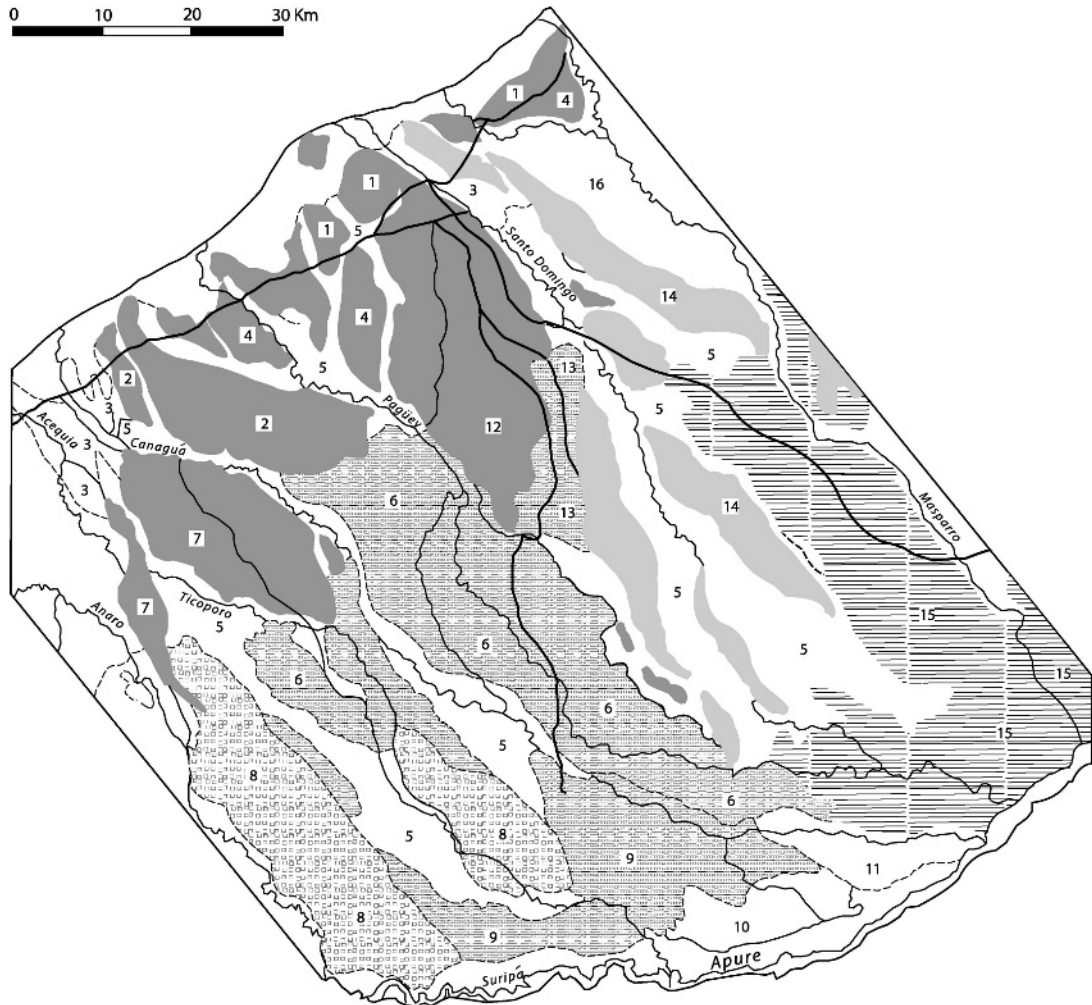


Fig. 1.5. Map showing the relief systems defined by G. Sarmiento, M. Monasterio, and J. Silva for the llanos of northern Barinas (redrawn from Silva et al., 1971: Fig. 2).

to their base saturation, the forest soils are rich in nutrients:

The forest soils of the llanos, in comparison to savanna soils, have 33% more nitrogen; almost double the base saturation; 80% more exchangeable potassium; five times more exchangeable calcium, and 13 to 15% more cation exchange capacity and extractable phosphorus (Sarmiento, 1984: 162, table 18).

The gallery forest on *bancos* and other higher ground features *Pterocarpus podocarpus*, *Spondias mombin*, *Ceiba pentandra*, *Platymiscium pinnatum*, *Sterculia apetala*, and *Acrocomia sclerocarpa*. In lower elevations, where the soils are of finer texture and drainage is more moderate, the dominant tree species are *Pithecellobium saman*, *Anacardium excelsum*, *Attalea maracaibensis*, and *Roystonea* sp. (Silva et al., 1971: 68; Sarmiento et al., 1971: tabla 2).

The gallery forest lining the segment of the Canaguá River that traverses the high llanos of our study region is known as Montaña El Chuponal. Like other gallery-forested portions of the La Veguita and Torunos relief systems, the Montaña El Chuponal boasts some of the western llanos region's best soils due to the interacting factors of topography, parent material, geomorphological processes, and annual water availability and moisture retention. High in organic matter are the deep topsoils designated mollisols found here, along with clay-rich vertisols and alfisols, in a savanna landscape dominated by less fertile oxisols, ultisols, and inceptisols (Instituto Geográfico de Venezuela, 2003; Sánchez, 1977: 537–542; Sánchez and Salinas, 1981: tables I–II; Sarmiento, 1984: table 18, 1990: 29–31; Silva and Sarmiento, 1976: tabla I). Accordingly, the area's agricultural potential is large:

[T]he western portion of the llanos of Venezuela is crisscrossed by narrow valleys with superb soils (mollisols, vertisols, alfisols, and entisols). The presence of these "islands of fertility" in an ocean of poor soils has permitted the agricultural devel-

opment of the savannas in the llanos of Venezuela (Moran, 1993: 120).

La potencialidad agrícola del Paisaje es muy grande, dada las características edáficas e hídricas de la región, representando un polo de desarrollo de los Llanos Altos Occidentales (Silva et al., 1971: 68).

Modern-day settlements on the high llanos are found along the forested rivers and *caños* on remnant river levees (*bancos*) that are free of seasonal inundations. Slash-and-burn cultivation is practiced in the *vega* zones of the rivers and *caños*, where the alluvial deposits are not only fertile but also friable enough for hand tilling (figs. 4.150, 4.151) (Silva et al., 1971: 68; Tamayo, 1961: 80, 104; Zucchi and Denevan, 1979: 20). At the same time, the rainy season often brings floods to the alluvial zones, which generally limits farmers to a single harvest per year, unless water-management technology is introduced (Spencer et al., 1994; Zucchi and Denevan, 1979: 74). Contemporary farmers cultivate the major foodstuffs in their *conucos*: maize, beans, sweet manioc, yams, taro, plantains, and bananas. During our years of fieldwork in the area, we saw some groves of cacao and coffee, as well as some tomatoes and citrus fruits (Zucchi and Denevan, 1979: 20; Tamayo, 1961: 80). Also, we observed that portions of the gallery forest were being cleared for the large-scale agricultural production of maize, sorghum, cotton, and tomatoes.

The gallery forests and larger forests of the western llanos have long been exploited for their timber; the sight of flatbed trucks hauling a stack of logs wrapped in chains to sawmills is common on the Panamerican highway between Barinas and Santa Barbara. The forested landscape of our study region also has been shrinking steadily due to the influx of inhabitants to the area and their farming activities. Extensive cattle ranching, which predominates on the open savannas, has also been responsible for the destruction of forest landscapes and their conversion to secondary savannas (Sarmiento et al., 1971: 58; Silva et al., 1971: 68).



Fig. 1.6. Map showing the territories of diverse Indian groups in western Venezuela at contact (from Jahn, 1927).

THE MOSAIC OF ETHNIC GROUPS

The ethnohistoric literature for the western llanos indicates that the indigenous societies encountered by sixteenth-century European explorers were organized as chiefdoms (*cacicazgos*). Caquetío (or Caquítiós) was the name of a series of autonomous but ethnically related Arawakan chiefdoms that were distributed through numerous river drainages over a large area extending from the sub-Andean valley of Barquisimeto well into the llanos of the Orinoco Basin (fig. 1.6) (Jahn, 1927: 200–202; Morey, 1975; Oliver, 1988: 113–119). Nicolaus Federmann, who traveled through the llanos in 1530–

1531, encountered the Caquetío (Federmann, 1958), as did Georg Hohermuth von Speyer in 1535 (Oviedo y Valdés, 1852: 303), Antonio Sedeño in 1536 (Castellanos, 1962: 95–98), Alonso Pérez de Tolosa in 1548 (Aguado, 1963: 305), and Galeotto Cey in 1550 (Cey, 1995: 77; Jahn, 1927: 207). Some Caquetío groups were reportedly encountered southwest of the Apure River along the Casanare River in 1535 and 1538 (Castellanos, 1962: 98–99, 213–214; Oliver, 1988: 119; Oviedo y Valdés, 1852: 303–304), and there were continued reports of Caquetíos referred to as *tiaos* south of the Apure River in the first half of the seventeenth century (Carvajal, 1956: 224;

Morey, 1975: 295; Rivero, 1956: 52–53, 56). Nevertheless, it has been argued that the Caquetío polities were well established in the high llanos along the many rivers draining the Andean Cordillera from Acarigua in the state of Portuguesa as far west as Santa Barbara in the state of Barinas, north of the Apure River (Fernández de Piedrahita, 1962: 255; Jahn, 1927: 201–202; Morey, 1975: 33; Oliver, 1988: 113). Achagua and Otomaco were ethnic designations that referred to other llanos chiefdoms that inhabited areas along the Apure River (fig. 1.6), although some Achagua communities may have occupied parts of the southern Barinas state (Carvajal, 1956: 132–135; Morey, 1975: 37–38; Rivero, 1956: 21).

The size, density, and warlike character of Caquetío populations greatly impressed Federmann. They built large, fortified villages on riverbanks or along major tributary streams of a large river (Cey, 1995: 78; Federman, 1958: 64, 67, 110; Morey, 1975: 97). Federmann (1958: 109) reported big Caquetío settlements some 0.8 km long and one or two streets wide, home to as many as 2,000 warriors. Cey and Fray Jacinto de Carvajal described impressive earthworks built by the Caquetío in the form of tall, bastion-like causeways that allowed travel between settlements during the rainy season and steep-sided mounds that served in times of war as lookout posts, whose construction would have required the support of a large population:

[T]enían poblaciones en las riberas de los ríos, en los bosques, con árboles frutales plantados a mano y cultivados, y para que en invierno se pudiese ir de un pueblo a otro, habían hecho ciertos caminos altos, de tierra, como un bastión, donde más o menos, según creciera el agua, tenían ciertos montículos con árboles, todo hecho a mano, donde se quedaban los que hacían de centinelas, para ver en la distancia si venían enemigos; cosas laboriosas y de no poca admiración, que dan a entender que se necesitaba, para hacerlas, un concurso de pueblo grandísimo (Cey, 1995: 78; see also Carvajal, 1956: 117–118, 224).

In verse, Juan de Castellanos (1962: 98–99) described a Caquetío settlement situated on high ground on the llanos and surrounded by what he referred to as a ravine (*quebrada*), whose inhabitants mounted a resistance to Sedeño's expedition. Inside, the settlement was notable for its plan of streets and plazas and abundant maize and salt. A long causeway facilitated the expedition's journey across the llanos during the rainy season, along which lay the remains of former settlements and drained fields:

En continuación de su jornada
Tierra se descubrió mas andadera
Mas en tiempo de aguas anegada
En su disposición y en su manera,
Do vieron prolijísima calzada
Que fue mas de cien leguas duradera,
Con señales de antiguas poblaciones
Y de labranzas, viejos camellones
(Castellanos, 1962: 98).

Federmann noted that allied Caquetío villages were relatively closely spaced, making it possible to muster a fighting force of as many as 20,000 warriors (Federman, 1958: 108–109). Along one river valley, 23 villages were politically united under the rule of one paramount chief, or *diao*, the Caquetío designation for a supreme or sovereign chief (Oviedo y Valdés, 1855: 598). Federmann (1958: 67) estimated that this paramount chief could raise a fighting force of 30,000 men in half a day. Two other such chiefdoms, he claimed, could raise forces of 16,000 and 8,500 men, respectively (Federman, 1958: 81; Morey, 1975: 96, 108, 309). In the northern llanos, Federmann (1958: 93) met with the chief of Itabana, who was introduced as the *cacique* of many villages and Caquetío subjects (Oliver, 1988: 116–117). Chiefly alliances were celebrated with feasts held in the chief's house, during which much *chicha* or *caçá* (maize beer) was served to rows of male participants; members of the chiefly elite sat on stools while the others squatted or sat on the ground, and all joined in the common cause of singing, music making, and ritualized discourse (*mirrayes*) (Gassón, 2003: 182–186; Oviedo y Valdés, 1855: 595; Rivero, 1956: 111–114,

117). During such prewar rituals, Caquetío chiefs sought the counsel of a diviner (*boratio*) (Oviedo y Valdés, 1855: 595). To this end, Castellanos (1962: 196) specified that a Caquetío chief took a certain narcotic powder (most likely *yopo*) and drank a fermented beverage before he mobilized and supplied arms to his troops. Caquetío paramounts commanded their allied war parties (Castellanos, 1962: 217–218, 220).

Social differentiation in Caquetío society was expressed in the size of one's house, the number of wives a man had, and a number of sumptuary privileges (Morey, 1975: 100–101, 109). Oviedo y Valdés (1852: 322–323, 330) discussed the social mobility of brave warriors, whose military exploits gained them elite status and certain sumptuary privileges. Chiefly sumptuary privileges included sitting on stools, sleeping in hammocks rather than on mats or animal skins, and the wearing of strings of freshwater-shell beads (*quiripa*) as necklaces, bracelets, and girdles (Carvajal, 1956: 156; Mercado, 1966: 47; Morey, 1975: 259; Rivero, 1956: 111). Other adornments took the form of body and face painting and the highly prized feathers of parrots, which the Achagua kept and raised for this purpose (Castellanos, 1962: 89, 195; Rivero, 1956: 7–10). One Caquetío paramount was described as traveling in a litter borne on the backs of many bearers (Carvajal, 1956: 224). Funerary practices were also determined by the deceased's social rank, with paramounts receiving the most elaborate treatment (Oviedo y Valdés, 1852: 297). Mercado described the subfloor burial of an Achagua individual in the center of his residence, along with his weapons, hammock, strings of shell beads (*quiripa*), and other belongings and containers of food:

En medio de la casa abren la sepultura; en ella echan el cuerpo y con él la macana, arco, flechas y su cama misma, cazabe y otra comida y todos los demás trastes que eran propios del difunto como caracoles, cuentas y otras baratijas, y luego terraplean el hoyo que llaman en su lengua *nirri* (Mercado, 1966: 26; see also Rivero, 1956: 116).

A Caquetío chief's residence (*bohío*) was spacious enough for him to preside over official gatherings inside and contained a large bin for storing shelled maize, raised atop four posts at its center and large enough for 12 warriors to hide in with their wooden broadswords (*macanas*) (Federman, 1958: 93, 112–113). Oviedo y Valdés (1855: 595) specified that a *bohío* was a house or dwelling built of wood, cane, and thatch that had an elliptical shape. A chiefly *caney*, by contrast, was circular in shape (Oviedo y Valdés, 1855: 595). Caquetío villagers resided in family household compounds (Castellanos, 1962: 99, 196; Federman, 1958: 109, 111; Morey, 1975: 92).

The Caquetío were primarily agriculturalists, cultivating two varieties of maize, squash, manioc, sweet potatoes, tobacco, and other crops (Carvajal, 1956: 147; Cey, 1995: 20, 22, 25, 103–104, 109–110; Federman, 1958: 112; Morey, 1975: 51, 85). There is evidence that the Caquetío had developed forms of intensive agriculture. One river valley was said to have had some 12 miles of irrigated fields on both banks (Morey, 1975: 51; see also Cey, 1995: 22–23). Also, not only did Juan de Castellanos (1962: 98) refer to the remains of raised fields on the llanos, but the Jesuit Padre José Gumilla reported the use of artificially drained or raised fields among the Indian groups of the llanos (Gumilla, 1963: 429–431; see also Cey, 1995: 78; Morey, 1975: 147). Carvajal (1956: 147) remarked on the region's agricultural productivity and the surpluses reaped in maize, manioc, and other foodstuffs. In the eighteenth century, Padre Basilio Vicente de Oviedo (1962: 419) referred specifically to the very fertile land of the settlement of Pedraza on the Canaguá River that abounded in cacao, maize, manioc, plantains, and tobacco. The tobacco cultivated in the region was heralded as the best by many historic sources and was used for divination (Alcedo, 1967:I: 143; Carvajal, 1956: 155; Cey, 1995: 129; Zamora, 1962: 367). Hunting deer was a dry-season activity, when in some cases deer and other game were driven with fires set by hunters. The dry season was also a time of year when communal fishing parties laid traps across

narrow river courses and released a plant poison upstream to great effect. In the rainy season, wild boar and tapirs were hunted (Cey, 1995: 109–110; Rivero, 1956: 7–10). Jesuit Padre Juan de Rivero reported that palm fruits were collected from April through July for food and oil; he noted that vanilla pods were collected in the gallery forests in the dry season (Rivero, 1956: 4–5). Wild cacao was abundant in the forests along the tributaries of the Apure River, and its seed pods were collected by Indian groups for medicinal uses (Cey, 1995: 133; Gumilla, 1963: 217–218, 247).

Bordering the llanos to the north in the Andean piedmont lived the Jirajara (also known as the Jirara), another agricultural group recorded by sixteenth-century explorers (fig. 1.6) (Aguado, 1963: 217; Castellanos, 1962: 215; Cey, 1995: 56, 61, 156; Federman, 1958: 40; Jahn, 1927: 257–258; Mercado, 1966: 14; Morey, 1975: 34; Rivero, 1956: 56). Jirajara villages did not approach the size of the largest Caquetío settlements. In contrast to the Caquetío pattern of family compounds, Jirajara villages were composed of one or more large communal houses (*caneyes*) holding many families. One Jirajara settlement, albeit a seventeenth-century missionized one, consisted of 18 *caneyes* that housed a total of 450 people (Rivero, 1956: 79). Jesuit Padre Pedro de Mercado's account contains the most detailed description of seventeenth-century Jirajara *caneyes*, which were rectangular in shape:

Caneyes se llaman las casas en que los indios viven. Los giraras las forman muy largas y angostas, tendrán de ancho treinta pies y casi doscientos de longitud. En las dos extremidades del caney hacen dos puertecillas tan pequeñas que casi se ha de entrar arrastrando por ellas. Todo lo demás está cerrado por todas partes (Mercado, 1966: 28; see also Aguado, 1950: 315–316; Aguado, 1963: 147, 306; Rivero, 1956: 117–118).

In addition to maize, the Jirajara cultivated manioc, yams, and plantains (Aguado, 1963: 147; Cey, 1995: 56; Mer-

cado, 1966: 30). Rivero (1956: 120, 127, 131) specified that manioc and plantains were the principal cultigens grown by the Jirajara in their forest plots. The Jirajara hunted game—especially deer and wild boar—with bows and arrows and blowguns and fished with plant poisons in the dry season (Cey, 1995: 79; Mercado, 1966: 30; Morey, 1975: 69; Rivero, 1956: 120).

The Jirajara formed intervillage alliances that were maintained in times of peace as well as war; on occasion, they established alliances with other ethnic groups to defeat a common enemy (Aguado, 1963: 201; Castellanos, 1962: 215; Mercado, 1966: 30; Rivero, 1956: 126–127). Seventeenth-century missionaries characterized the Jirajara as troublesome warmongers (Oviedo, 1962: 419; Rivero, 1956: 56, 79, 117, 169). Allied Jirajara villages reportedly recognized the leadership of a principal chief who commanded allied raids, arbitrated disputes, and organized communal activities (Morey, 1975: 111–112; Zamora, 1962: 379). One such Jirajara leader was handed a staff to mark his chiefly authority (Rivero, 1956: 347). Mercado (1966: 28–30) described the eight-day-long feasts celebrated by Jirajara war parties in their *caneyes*, during which the male participants imbibed much *masato* (manioc beer), sounded their gourd trumpets and hollowed-log drums, and recounted their grievances, all the while holding their wooden broadswords in their hands. Jirajara villages practiced revenge warfare that in some cases could be traced back more than four or five generations to pre-Hispanic times (Mercado, 1966: 31–32, 34; Rivero, 1956: 131, 140). Jirajara war parties launched raids against neighboring villages armed with bows and arrows for long-distance attacks and lances and *macanas* for face-to-face combat (Mercado, 1966: 78). They waged chronic warfare with what eyewitnesses described as “barbaridad y fiereza” (Rivero, 1956: 117, 169). In contrast to the Caquetío, the taking of captives and their enslavement was not reported for the Jirajara, who reportedly sought only to kill their enemies (Morey, 1975: 286). Hostilities were sometimes settled with duels and peace treaties (Mercado, 1966: 32–33).

Interpolity relations in the llanos and piedmont consisted of both trading and raiding. Among the items produced and exchanged by llanos groups were strings of freshwater-shell disks (*quirípa*), turtle eggs and oil, slaves, pottery, foodstuffs, the hallucinogen *yopo* (*Piptadenia peregrina*), cotton, palm products, tree resins, and animal skins (Cey, 1995: 110–111; Gassón, 2000a: 589–590; Mercado, 1966: 46–47; Morey, 1975: 257–269; Rivero, 1956: 5). Imported from regions to the east and south of the llanos were the poison curare (*Strychnos guianensis*), vegetable dyes, and manioc graters. Trade ties extended as far east as the mouth of the Orinoco River and the island of Trinidad (Mercado, 1966: 46–47). Trade goods from the Andes included salt, gold ornaments, woven cotton fabric, and probably workable stone for tools (Carvajal, 1956: 72, 155; Cey, 1995: 78, 124; Langebaek et al., 2000: 18–19; Morey, 1975: 252–255). The foothills of the Andes featured salt springs that were of interest to the inhabitants of the llanos who lacked any sources of salt (Langebaek et al., 2000: 19). Stone tools suitable for clearing and gardening tasks would have been another important trade item for the Caquetío and other groups on the stone-poor llanos, and the Jirajara may well have served as middlemen in such exchanges. There was also trade in slaves, which became even more extensive after European contact (Cey, 1995: 77, 119; Morey, 1975: 260–264; Rivero, 1956: 28–30). In pre-contact times, slaves were often war captives, and the Caquetío were especially notable for the taking, keeping, and trading of slaves (Cey, 1995: 119; Morey, 1975: 110, 282–283). Oviedo y Valdés's list of indigenous terms includes a Caquetío gloss for chief, or *dati-hao*, which he defined as “señor; el que presta su nombre al esclavo,” and refers to a chief as an owner of slaves (Oviedo y Valdés, 1855: 598; see also Jahn, 1927: 213).

Federmann experienced and described the frequent and expansionist warfare waged by the Caquetío against neighboring groups (Federman, 1958: 63–64, 67, 108, 110–114). The Caquetío ringed their villages with fortifications and were able to

raise a fighting force on short notice. A seventeenth-century Achagua settlement was both fortified and readied:

[E]stá cercado de murallas, fabricadas de árboles, maderas y tierra; al rededor del muro no se halla más que una puerta, y ésta muy alta, sobre la cual tienen prevenidos, como si fuera artillería, varios instrumentos de guerra á su modo y usanza, para defenderse del enemigo, cuando lo pide la ocasión, arrojándolos desde lo alto (Rivero, 1956: 46).

Fire was used to signal an enemy's approach to neighboring villages (Carvajal, 1956: 122, 127). Another defensive tactic observed by Federmann was the flight of women and children (Federman, 1958: 111). Offensive warfare took the form of surprise raids on enemy villages by war parties armed with bows and arrows and lances and darts for fighting at a distance and deployed in units to surround the enemy. Caquetío tactics included setting houses and fields on fire, looting, and taking captives (Cey, 1995: 102, 105; Federman, 1958: 108; Morey, 1975: 277–278, 282–283). Buffer zones existed between the Caquetío and the neighboring groups that were forced to abandon their territories (Federman, 1958: 63–64, 107). Through warfare the Caquetío obtained good farmland and expanded their territory; according to Federmann, the Caquetío nation

ha obligado a todas las naciones circunvecinas, merced a su poderío, a abandonar el llano y a retirarse a las montañas para poseer y habitar ella sola la más bella llanura y el lugar más fértil (Federman, 1958: 63–64).

AN INTERSOCIETAL FRAMEWORK FOR INVESTIGATING THE EVOLUTION OF PREHISTORIC CHIEFDOMS

The ethnohistorical information about the indigenous societies that existed in the western Venezuelan llanos in the sixteenth

century made it clear to us that, to understand the dynamics and development of chiefdoms such as these, it was necessary to focus not on a single society or regional system, but on networks of interacting societies. For this reason, our study region in the Canaguá River valley overlapped the high llanos and Andean piedmont, which constitute distinct environmental zones and whose respective inhabitants in the sixteenth century—the Caquetío and the Jirajara—were known to have raided and traded with each other (figs. 1.1, 1.6). An inter-societal framework was compatible with the view that intersocietal or peer-polity interaction among networks of autonomous chiefdoms serves to establish, perpetuate, and extend the centralized leadership of the participating chiefs over the villages under their control. Through their alliance-building activities and the exchange of material goods and information with distant chiefdoms, paramount chiefs legitimize and perpetuate their authority over the member villages of their own polity (Helms, 1979: 75; Pauketat, 1994: 11–12; Renfrew, 1986: 7–8; Spencer, 1987: 376; Welch, 1996: 86). Their military campaigns can serve the same purpose (Redmond, 1994: 123–124).

To monitor the development of chiefdoms and the nature of their intersocietal interactions with neighboring groups, we needed a research design appropriate to the task. We took inspiration from Flannery (editor, 1976) and formulated a multilevel research design that would allow for the collection of diachronic data pertaining to various levels of cultural organization—such as the household, community, regional, and interregional levels. We expected that the political centralization and social differentiation that characterize chiefdoms would manifest themselves in the structure of variability on the various organizational levels of the prehistoric cultural systems under investigation.

For example, on the regional level of a chiefdom, we would expect to find evidence of centralized political control exerted by a regional leadership over a number of communities (Earle, 1987: 289; Peebles and Kus, 1977: 431–433; Spencer, 1987: 371–372). This should be manifested ar-

chaeologically in a regional settlement hierarchy of two or three levels based on settlement size. If one were to construct a histogram or bar graph of occupation areas for sites in an archaeological chiefdom, an expected result is a site-size distribution with two or three modes (Flannery, 1998: 16; Spencer and Redmond, 2004; Wright and Johnson, 1975). At the very top of a chiefdom's two- or three-level settlement hierarchy, we would expect to observe a regional capital or first-order center, the largest site in terms of occupation area and with the most impressive public constructions in the region. The community plan of the first-order center might have a relatively formalized layout focused on a central zone of public architecture (such as a plaza), while second-order sites in the region would be likely to have a less formal and less imposing arrangement (Oyuela, 1987: tabla 11.1). Overall, we would not expect to observe as much morphological or functional diversity among public buildings in a chiefly center as in a state capital, in keeping with the generalized (non-bureaucratic) internal structure of chiefly administration, much of which is carried out in the chief's residence or compound (Flannery and Marcus, 1976: 220; Hally, 1996: 93–94; Spencer, 1987: 373). Artifactual evidence of the alliance-building feasts hosted by the chiefly elite might be expected in the chief's mounded precinct (Blitz, 1993a, 1993b: 92–97; Gassón, 1998: 117, 120–125; 2003: 193–194).

Within a given settlement, we would expect to find evidence of the social differentiation so characteristic of chiefdoms. For example, social differences among families could be manifested through variability among residential units in terms of size and elaborateness of construction, as well as in associated artifacts, including imported prestige goods such as shell beads and polished green stones (Blick, 1998: 78–79; Boomert, 1987; Castaño Uribe, 1987; Gassón, 2000a; Spencer, 1982: 131–136, 162–163). Individual differences in social status might be expressed archaeologically through patterns of differential burial treatment (Boada Rivas, 1998; Creamer and Haas, 1985; Peebles and Kus, 1977).

Based on the ethnohistoric descriptions of subfloor burials by llanos groups, we would expect to find burials in domestic contexts (Curet and Oliver, 1998: 231–234).

The centralized nature of chiefly administration usually allows for a much quicker decision-making process than does the consensual decision-making of uncentralized tribal societies (Rappaport, 1971: 38–39). At the same time, a chiefly administration is also much more expensive to maintain because surplus has to be mobilized to support the chiefly elite. Thus, the effective management of the political economy becomes the key to chiefly survival (Carneiro, 1981: 61; Earle, 1997: 12, 70–75; Flannery, 1972: 412; Peebles and Kus, 1977: 425–426). We might expect to find archaeological evidence of intensified agricultural production capable of producing a surplus above what is required for local subsistence needs, along with infrastructural improvements in transportation and communication facilities that would enhance the leadership's control over such surplus (Denevan, 1991; Earle, 1978, 1991: 12–13; Heckenberger et al., 2003).

Patterns of interregional interaction among chiefdoms like the sixteenth-century Caquetío and Jirajara often include exchange and warfare. Especially characteristic is the long-distance exchange of prestige goods among paramount chiefs (Boomert, 1987: 36–37; Gassón, 2000a; Helms, 1979: 66; Wagner and Schubert, 1972). Prestige-good exchange usually appears in the archaeological record in the form of exotic goods, most notably in high-status contexts (Blick, 1998: 78–79; Peebles, 1987: 33–34; Welch, 1991: 171–176). Warfare in chiefdoms frequently consists of large-scale raids directed by the leadership of one chiefdom against the regional center of a rival chiefdom. The impact of chiefly warfare might be manifested archaeologically on the regional and interregional levels of analysis by settlements located in defensible positions, settlement nucleation, and the creation of buffer zones. At individual settlements, the occurrence of offensive and defensive warfare activities should be detectable in certain artifacts, features, and facilities, including weapons, fortifications,

and sacrificed captives, as well as in the widespread destruction of settlements by fire (Redmond, 1994: 93–102).

PREVIOUS ARCHAEOLOGICAL RESEARCH ON VENEZUELAN CHIEFDOMS

In the first half of the twentieth century, the Venezuelan scholars Lisandro Alvarado (1945, 1984: 439) and Alfredo Jahn (1927: 217–220) used the ethnohistorical accounts and their own fieldwork to assert that the mounds and causeways throughout the western llanos had been built by pre-Columbian societies such as the Caquetío. The archaeologist José María Cruxent (1952: 285) described some of these pre-Columbian earthworks in Barinas and alluded to the organized labor that would have been necessary to build them.

In the 1970s, archaeologists were beginning to recover data pertaining to the organization and development of pre-Hispanic chiefdoms in Venezuela. Alberta Zucchi (1967, 1972a, 1972b, 1973) conducted excavations at the sites of La Betania and La Calzada in the middle llanos of Barinas (fig. 1.1). She defined the Osoid series, which comprised two phases: the Caño del Oso phase (230 B.C.–A.D. 650), and the La Betania phase (A.D. 650–1200). Her work represented a refinement of the chronological scheme for the llanos that had earlier been proposed by Cruxent and Irving Rouse (1958: 183–187). Zucchi (1972a, 1972b, 1973) proposed that mounded earthworks were first constructed in the middle of the sixth century A.D. and continued in use through the end of the La Betania phase (ca. A.D. 1200). The earliest mound builders of the Caño del Oso phase were producing elaborate ceramic vessels with composite silhouettes and bichrome painted motifs (Zucchi, 1972b). They were also cultivating maize. In test pit 2 (1.50 m DBS or below the surface) at La Betania, Zucchi recovered three maize (*Zea mays*) cobs of the Pollo race, dated to 1820 ± 130 B.P. or A.D. 130, and associated with ground-stone *manos* and *metates* (Wagner and Zucchi, 1966: 37; Zucchi, 1967: 116, 159, 231, fig. 161; Zucchi, 1973: 188).

Zucchi did not conduct a settlement-pattern survey in the La Betania region, so we do not know whether the La Betania site can be considered a first-order center, presiding over a number of smaller village sites. Nevertheless, both the size of the site and the presence of mounded architecture would be consistent with an interpretation of the site as a chiefly center. The occupation covers an estimated 15–20 ha, and the site map shows five large earthen mounds, the tallest mound at the northern end reaching a height of 3.6 m (Zucchi, 1967: fig. 4). Zucchi excavated 15 test pits at La Betania. Among her discoveries were seven burials that yielded some evidence of social differentiation at the site. Four of the burials lacked offerings, but the other three had two items each; two of them had a pair of ceramic vessels, and one had a ceramic vessel and a stone ax (Zucchi, 1967: 117–120).

Zucchi and William Denevan carried out a mapping and excavation project at a 15.5 km² drained-field system along the Caño Ventosidad in southeastern Barinas (fig. 1.1). They recorded 250 pairs of parallel ridges (*camellones*) running perpendicular to the natural levees of the *caño* (Denevan and Zucchi, 1978: map 2). Denevan and Zucchi interpreted the ridged fields as artificial extensions of the natural *caño* levees. Such a facility, they suggested, could have extended the natural growing season in this area of seasonal inundations and, perhaps, permitted the harvesting of two crops per year (Denevan and Zucchi, 1978: 242–243; Zucchi and Denevan, 1979: 36–37). Since very few artifacts were found in the Caño Ventosidad excavations (just three non-diagnostic potsherds), it was not possible to date the field system with any certainty. Nor did the investigators locate any nearby habitation sites that could have been used to date the field system through association; they suggested, however, that such sites probably exist and presumably could be found through survey (Denevan and Zucchi, 1978: 243). The nearest habitation sites they recorded were 15–20 km from the drained fields. One of these sites was El Choque (fig. 1.1), where four test pits yielded pottery similar to the sherds from

Caño Ventosidad (Denevan and Zucchi, 1978: 243). The researchers assigned the El Choque ceramics to the Arauquinoid series of the latter part of Period III (A.D. 300–1000) and Period IV (A.D. 1000–1500) in the chronological framework of Rouse and Cruxent (1963: 22, 90–95).

In the former Hato La Calzada bordering the Ticoporo River, Adam Garson (1980) conducted the first regional archaeological survey in Barinas. In a study region of 120.2 km², he located a total of 22 sites that he assigned to the Osoid series—dating either to the Caño del Oso or the La Betania phase (Garson, 1980: 98). He also mapped nine *calzadas* linking mounded settlements that he assigned to the Osoid series (Garson, 1980: 98, 324). On the basis of mounded architecture and causeway linkage, Garson proposed a regional settlement hierarchy for his study region. At thirteen Osoid sites he recorded artificial earthen mounds, but at nine others he recorded no mounds. In addition, he noted considerable variation in site area (Garson, 1980: 99–121, 291–302, 305–307). The largest site in his study region was the La Calzada site itself (fig. 4.19). Garson reported that the site was “larger than 15 hectares,” and he noted that ceramics were eroding for “several hundred meters” along the banks of the adjacent Caño del Oso (Garson, 1980: 105, 294). The 4 ha portion of the La Calzada site that has been mapped corresponds to the three largest mounds (fig. 4.19; Zucchi, 1972a: fig. 3; Garson, 1980: map 11). The only excavation at the site consists of a trench that Zucchi (1973) placed in the tallest mound. This Mound I reaches 12.9 m in elevation and was the tallest mound observed by Garson in the La Calzada study region (Garson, 1980: 105). Radiocarbon samples from Zucchi’s excavation indicated that the mound was probably built in a single construction effort in the middle of the sixth century A.D. (Zucchi, 1973: 187). In addition, Garson discovered a drained-field system on the eastern bank of the Ticoporo River, 1.8 km from a major Osoid mound site and less than 1 km from a major intersettlement causeway that passes by it, but he was reluctant to date

the field system to the Osoid series because he located it through an examination of aerial photographs after the fieldwork period (Garson, 1980: 129–130).

Farther to the east, along the middle Orinoco River, Roosevelt carried out a project in the Parmana region that documented nine phases of occupation, beginning around 2100 B.C. and lasting until the contact period (Roosevelt, 1980: table 15; Spencer, 1998: fig. 4.1). Roosevelt's three earliest phases make up the La Gruta tradition (2100–800 B.C.), during which people lived in sedentary villages and pursued a subsistence procurement strategy that combined hunting, collecting, and manioc agriculture; maize had not yet appeared (Roosevelt, 1980: table 20). The La Gruta-tradition sites are the earliest sedentary village occupations thus far documented in Venezuela. Maize agriculture, of the same Pollo race of *Zea mays* recovered in Barinas, appeared during the fifth phase of occupation, the Corozal II phase (400 B.C.–A.D. 100), and was associated with a growing human population in the Parmana region (Roosevelt, 1980: 239, 243). Clear signs of chiefdom organization in the Parmana region are not detectable until the Camoruco III phase (A.D. 1100–1500), when there is the first solid evidence of a regional settlement hierarchy, in the form of a bimodal distribution of site sizes (Spencer, 1998: fig. 4.7). Interestingly, this is several hundred years later than the appearance of chiefdom organization in the western llanos, as documented by the investigations of Zucchi, Garson, and the present authors. Even though sedentary villages appeared earlier in the middle Orinoco River, for the time being we must conclude that chiefdoms developed earlier in the western llanos than along the middle Orinoco River. We will discuss this developmental contrast further in the concluding chapter.

THE 1983–1988 BARINAS PROJECT: FIELDWORK METHODOLOGY

Building on the results of Zucchi's, Denevan's, and Garson's projects in Barinas, we decided to investigate the development

of prehistoric chiefdoms in Barinas. Our study region centered on the Canaguá River and overlapped portions of the high llanos and Andean piedmont because, as noted earlier, these zones were occupied by ethnically distinct societies at the time of European contact, and because one of our research goals was to investigate whether intersocietal interaction played a role in chiefdom development here.

We also had some prior information about archaeological sites in the study region, gleaned during our first trip to Barinas in January 1982. We had met beforehand with Erika Wagner and Alberta Zucchi of the Departamento de Antropología at the IVIC in Altos de Pipe. Zucchi had given us the name of Pablo Novoa A. (fig. 3.2), who owned and operated a dry-cleaning business by the name of Tintorería Primera Spencer on the Plaza Zamora in downtown Barinas. In his spare time, Novoa A. was a serious photographer and president of a local explorers club called the Centro Arqueológico "Kuayú". Composed largely of students, the Centro "Kuayú" since 1977 had been locating petroglyphs in the piedmont along the Panamerican highway from the Curbatí River in the Distrito Pedraza west to Santa Barbara in the Distrito Ezequiel Zamora. The group took photographs and made rubbings of the petroglyphs, erected signs that designated them archaeological zones, mounted photographic exhibits, sponsored lectures in the state to inform the public about the region's prehistoric sites, and had just published a handbook on their findings (see Centro Arqueológico "Kuayú", 1981). Also mentioned in the handbook were some mound sites south of the Panamerican highway, out on the expanse of high llanos.

Whether it was providential for two archaeologists—and one by the name of Spencer—to show up at his dry-cleaning business early in the dry season, which is the best time of year to get around the high llanos, Novoa A. readily agreed to show us the sites he knew. Our fieldwork began with this reconnaissance of sites in the high llanos and adjacent piedmont of the Andean cordillera in Barinas state in early January

1982. Accompanied by some members of the Centro Arqueológico “Kuayú”, and aided by their handbook (Centro Arqueológico “Kuayú”, 1981), we briefly surveyed what became our study region and learned that both the high llanos and the adjacent piedmont had numerous archaeological sites. We visited a dozen sites, including the mound sites of Cerro Mijaguas (B1) and Los Morritos (B2) and the petroglyphs of Las Lajitas (B5), and ending with the impressive petroglyphs and adjacent habitation site at Capitanejo (B7, B14) (see fig. 3.1).

There were intriguing differences between the sites of the two environmental zones. On the llanos, we visited sites with earthen mounds, sometimes associated with earthen causeways (*calzadas*). In the piedmont, the sites we visited lacked *calzadas* and earthen mounds; however, some of the piedmont sites were associated with large boulders covered with petroglyphs. During our 1982 reconnaissance, we also noted that the archaeological sites of the two environmental zones had distinctive ceramics. At some of the piedmont sites, we found ceramics of a style that we eventually decided to call the Curbatí complex (see chap. 2). This pottery is relatively thin-walled (usually less than 8 mm thick), moderately coarse-tempered, well burnished, and often decorated with deep grooves and incisions. Painting is infrequent. Vessel shapes include hemispherical bowls, composite silhouette bowls, and *ollas* (necked jars). In terms of stylistic affinities, Curbatí-complex pottery is similar in some respects to that of the Lagunillas complex of the Maracaibo Basin, placed in the latter half of the first millennium B.C. by Wagner and Tarble de Ruíz (1975: 109–117); it also resembles the possibly contemporaneous Santa Ana complex and Betijoque material from the Andean cordillera (fig. 1.1) (Cruxent and Rouse, 1958: 145–148; Tarble, 1977), as well as the Agua Blanca complex in the Andean piedmont zone of the neighboring state of Portuguesa (fig. 1.1) (Rouse and Cruxent, 1963: 68).

The sites with mounds on the high llanos were associated with a distinctive ceramic

complex that we eventually called the Gaván complex (see chap. 2). The Gaván-complex pottery is coarse-tempered, with wall thicknesses ranging from approximately 6 mm to 10 mm. Representative vessel shapes include convex-wall bowls and composite-silhouette bowls, some with solid or hollow feet, along with a variety of *ollas* and *tecomates* (neckless jars). Slipping and painting are the most common form of decoration. The Gaván complex is stylistically similar to, and broadly contemporaneous with, the Osoid series defined for the middle and low llanos by Zucchi (Zucchi, 1967, 1972b).

This initial reconnaissance allowed us to familiarize ourselves with the nature of the region's prehistoric settlements in both the high llanos and the lower piedmont and to plan our investigations. We defined a study region of some 450 km² that overlapped the high llanos and Andean piedmont of the Canaguá River (fig. 1.1). For each zone we would have to establish a chronological sequence and recover information on regional settlement patterns, community patterns, and the distribution of artifacts both within and between settlements. To document the development of prehistoric chiefdoms, we sought to recover archaeological data on various analytical levels—the individual feature, the household, the community, the region and even the interregional level, as discussed in an earlier section of this chapter. We would have to correlate the chronological sequences with one another and then establish whether any evidence of chiefdom emergence was associated with evidence of increased interaction between the prehistoric societies inhabiting the neighboring environmental zones. Consequently, we put together a fieldwork plan that consisted of several seasons of regional survey (1983–1985), followed by two seasons of excavation during the dry seasons (January–May) of 1986 and 1988.

SURVEY

As described in more detail in chapter 3, through regional survey we aimed for complete coverage of the 450 km² study region,

locating sites on aerial photographs and topographic maps. We tried to determine the occupation area of each site. Wherever possible, we made a surface collection of artifacts at each site and recorded data on visible architecture, local environment, and present-day land use. We quickly learned, however, that we could not simply apply the regional-survey techniques that we had been taught as students working in highland Mesoamerica (e.g., Parsons, 1971). Barinas receives 1,100–1,800 mm of annual rainfall, nurturing dense vegetation that is the bane of the survey archaeologist. Artifacts are typically scarce on the ground surface, and sites that lack earthworks or carved boulders can sometimes be nearly undetectable on survey. We therefore found it necessary to supplement the intensive “field-by-field” approach to regional survey with informant survey and the systematic examination of road cuts, riverbanks, drainage ditches, construction sites, and other places where subsurface deposits were exposed. Our survey located 103 archaeological sites, each of which is described in this volume (see chap. 4).

EXCAVATION

After completing the regional survey in 1985, we began to plan our excavation strategy. For sites on the llanos of the Gaván complex, we decided to obtain excavated samples from sites on all three levels of the regional settlement hierarchy (see chap. 5). We could then use such samples to assess the variability in artifacts and features among first-order, second-order, and third-order sites. We mapped (with an alidade and plane table) and carried out a program of test excavations at sites B12, B21, B97, B17, and B26. At each site, we chose excavation locations using both probability-based and purposive sampling criteria, the objective being to obtain a representative sample of intrasite variability in artifacts

and features. The final 1988 field season involved horizontal block excavations at the first-order center of El Gaván (B12). Also during the 1988 season we made an alidade and plane-table map of the B27 drained-field site and excavated four test pits in three of its fields. The specific sampling strategies used, along with descriptions of the stratigraphy, features, and artifacts deriving from the excavations at all the Gaván-complex sites, will be presented in a subsequent volume (Spencer and Redmond, n.d.). In the process of excavating site B21, we were able to distinguish and test-excavate a later Caño Seco and Chuponal-complex habitation site on the bank of the Caño Mericacoy (B99).

In the piedmont, we conducted a program of test excavations at B8 in the upper Curbatí River valley (figs. 4.1, 4.4), because this site featured a large boulder with petroglyphs on its western edge and Curbatí-complex ceramics. We carried out a program of test excavations upstream and across the Curbatí River at B20, which also featured a large boulder with petroglyphs and was associated with ceramics of the Curbatí and Caño Seco complexes (figs. 4.1, 4.3, 4.4). Finally, we conducted test excavations at the Curbatí-complex site B40 in the upper Canaguá River valley, where we did not record any boulders bearing petroglyphs. The results of the excavations at Curbatí-complex and Caño Seco-complex sites in the piedmont are the subject of a future volume (Redmond and Spencer, n.d.).

At the conclusion of the final field season in May 1988, the laboratory analysis was initiated in the archaeological laboratories of the IVIC. With the assistance of Inés Frías B. and Rafael Gassón, we concluded the laboratory analysis of the artifact collections in 1992. The artifact collections from our investigations in Barinas are stored permanently in the Departamento de Antropología at the IVIC.

CHAPTER 2. CERAMIC COMPLEXES

INTRODUCTION

Following the final season of fieldwork in 1988, we directed a four-year session of analysis. Dr. Erika Wagner kindly provided us with laboratory space in the Departamento de Antropología at the Instituto Venezolano de Investigaciones Científicas (IVIC). Rafael Gassón and Inés Frías B. worked as laboratory assistants, and the success of this phase of our research was due in no small part to their diligent participation. The ceramics and other artifacts were recorded according to a detailed coding scheme, and key artifacts were illustrated. A full presentation of these analytical results is scheduled to appear in future volumes (Spencer and Redmond, n.d.; Redmond and Spencer, n.d.). In the present chapter we offer an overview of the Gaván, Curbatí, and Caño Seco ceramic complexes, describing the pottery in terms of variables of paste, surface finish, vessel form, rim form, special form features, and decoration. Note that we provide approximate relative frequencies of occurrence for particular ceramic variables, computed as a fraction or percentage of the total “diagnostic sherds” or “diagnostics” (i.e., rims, base angles, special form features, and decorated body sherds). Sherds that could not be easily classified were considered “indeterminate”; thus, in many sections, the percentages given for the variables under dis-

cussion will not add up to 100%. Finally, in this survey volume we present only a summary data table of the occurrence of ceramics of the Gaván, Curbatí, Caño Seco, and Chuponal complexes in our surface collections (table 4.1).

GAVÁN COMPLEX

Gaván-complex ceramics are stylistically related to the Osoid series defined by Zucchi based on her excavations at the sites of La Betania and Hato de La Calzada (Zucchi, 1967, 1972a, 1972b, 1973) (fig. 1.1). Zucchi dated the Osoid series to 230 B.C.–A.D. 1200 and divided it into two phases: the Caño del Oso phase (230 B.C.–A.D. 650) and the La Betania phase (A.D. 650–1200). In view of a series of radiocarbon and thermoluminescence dates obtained from samples excavated at the B12 site (Spencer and Redmond, 1992: tables 2, 3), we have dated the Gaván complex to A.D. 300–1000 (table 2.1). We have tentatively subdivided the Gaván complex into an Early Gaván phase (A.D. 300–550) and a Late Gaván phase (A.D. 550–1000), which would be roughly contemporaneous with Zucchi’s Caño del Oso phase and La Betania phase, respectively. A detailed discussion of ceramic change between the Early Gaván and Late Gaván phases will appear in a future monograph (Spencer and Redmond, n.d.).

TABLE 2.1
Chronology of Ceramic Complexes in the Study Region

Date (A.D.)	High llanos	Piedmont
1850		
	Chuponal	
1550		
	Caño Seco	Caño Seco
1000		
	Late Gaván	Late Curbatí
550		
	Early Gaván	Early Curbatí
300		

PASTE

Approximately half of all Gaván-complex diagnostic sherds were noted to have a paste color in the reddish yellow range (Munsell 5 YR 6/6). The paste color of about one-third of the Gaván diagnostics was reddish brown (Munsell 5 YR 4/4; 5 YR 5/4–5/8). Paste colors less commonly observed were pale yellowish brown or light brown (Munsell 7.5 YR 6/4; 10 YR 6/3–6/4); gray (Munsell 2.5 YR 6/; 7.5 YR 7/; 6/); and dark gray (Munsell 5 YR 4/1).

About nine-tenths of Gaván-complex diagnostics showed evidence of complete oxidation. (No dark core or sections along the edge of a broken sherd were observed.) The rest displayed a dark core or dark sections that indicate incomplete oxidation.

Gaván-complex pottery was noted to have a homogeneous texture, with sand used as the main tempering agent.

SURFACE FINISH

Two-thirds of the Gaván-complex diagnostics had a surface finish recorded as unburnished and unslipped. Slipped surfaces occurred on about one-fourth of the diagnostic sherds, while burnished (but unslipped) surfaces were noted on less than one-tenth of the diagnostics.

The surface color of about one-half of the burnished, unslipped diagnostic sherds was orange (Munsell 7.5 YR 6/4; 5 YR 6/6, 7/6). The second most common surface color was brown-gray (Munsell 5 YR 4/1, 4/2, 6/1–6/3), which occurred on one-third of the burnished, unslipped diagnostics. The third most frequent surface color was pale yellow-orange (Munsell 7.5 YR 8/4, 7/4; 10 YR 8/4, 7/4), noted on about one-tenth of the burnished, unslipped diagnostic sherds.

Approximately one-half of the slipped diagnostics had a surface color of cream (Munsell 10 YR 8/2; 2.5 Y 8/2). A fairly close second was orange (Munsell 2.5 YR 5/8), which we observed on about four-tenths of the slipped diagnostics. Rarely noted surface colors were brown and red.

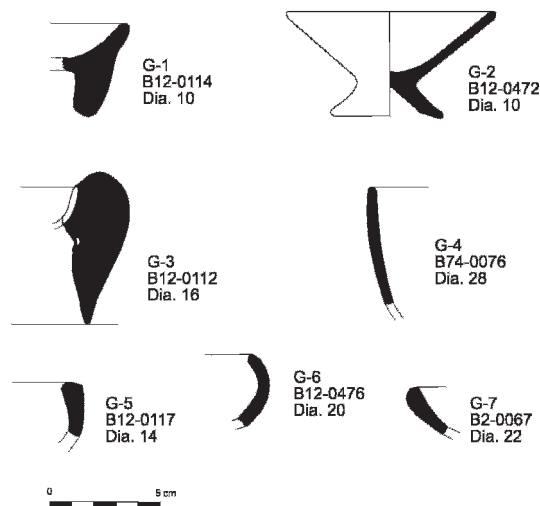


Fig. 2.1. Gaván-complex ceramic illustrations G-1 through G-7 (rim diameter in cm). All are convex-wall bowl rims, except G-2, which is a complete outleaned-wall bowl with a pedestal base. G-1 has a cylindrical foot; G-3 has a *piri-forme* (pear-shaped) foot. Cream slip was noted on the interior and exterior of G-4.

VESSEL FORM

Convex-wall bowl (CWB) rims made up about 8% of the Gaván-complex diagnostics. CWB rims are depicted in G-1, G-3, G-4, G-5, G-6, G-7, G-9, G-10, G-12, G-13, G-14, G-15, G-16, G-17, G-18, G-19, G-20, G-21, G-22, G-27, G-28, G-31, G-33, G-34, G-35, G-42, and G-43 (figs. 2.1, 2.2, 2.3, 2.4). Our CWB rims are similar to Zucchi's (1967) A.1 forms.

The most common vessel form in the Gaván complex was the outleaned-wall bowl (OWB), making up about one-fourth of the total. OWB rims are illustrated in G-47, G-50, G-51, G-52, G-53, G-54, G-55, G-56, G-57, G-58, G-59, G-60, G-62, G-63, G-65, and G-66 (figs. 2.4, 2.5, 2.6). Our OWB rims fall within the range of variation of the forms classified as A.1 by Zucchi (1967).

Vertical-wall bowl (VWB) rims were not common, amounting to just 2–3% of the Gaván-complex diagnostics. Illustrations of VWB rims are presented as G-45 and G-48 (fig. 2.4). Zucchi's (1967) A.2 forms are similar to our VWB rims.

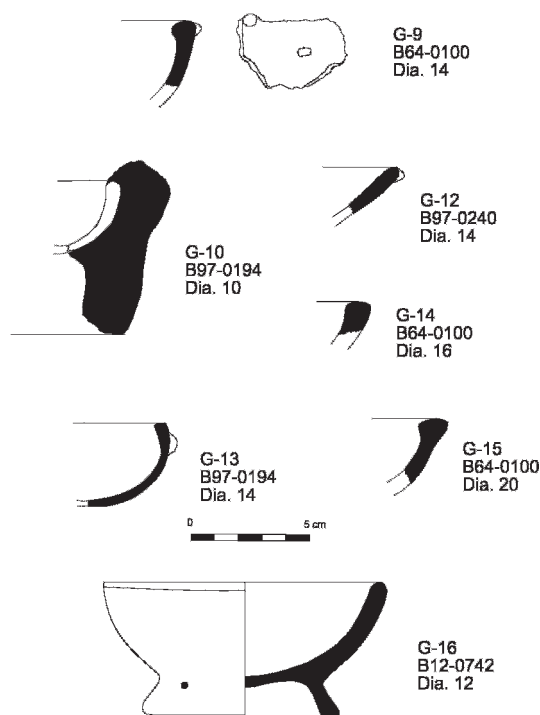


Fig. 2.2. Gaván-complex ceramic illustrations G-9 through G-16 (rim diameter in cm). All are convex-wall bowl rims. G-10 has a cylindrical foot. G-16 is a complete convex-wall bowl with an annular base, a cream slip, and a drilled hole in the base. G-9, G-12, and G-13 have appliqué on the exterior. Cream slip was noted on the exterior of G-9 (small spot) and G-13 and on the interior and top of the rim of G-14.

Plates were also not frequent. They made up 1–2% of the Gaván diagnostics. They are depicted in G-67 and G-68 (fig. 2.6). The forms labeled B.3 by Zucchi (1967) are similar to our plate rims.

Composite-silhouette bowls made up just under 3% of the Gaván diagnostic sherds. Drawings of composite-silhouette bowl (CSB) rims can be found in G-71, G-72, G-73, G-74, G-75, and G-76 (fig. 2.7). Our CSB form is similar to Zucchi's (1967) C.1 form.

Tecomates (neckless jars) were not a common form, making up less than 1% of the Gaván diagnostics. Illustrations of *tecomate* (TEC) rims are presented as G-78, G-79, G-80, G-81, G-82, G-83, and G-84

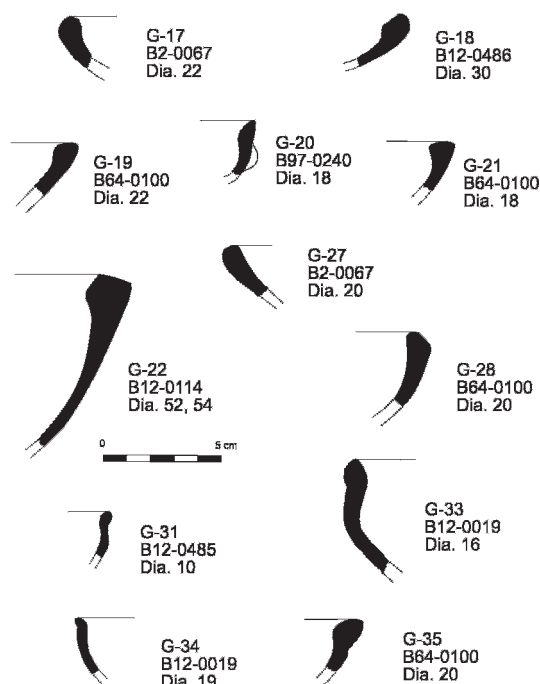


Fig. 2.3. Gaván-complex ceramic illustrations G-17 through G-35 (rim diameter in cm). All are convex-wall bowl rims. G-20 has appliqué on the exterior. Cream slip was noted on the exterior of G-28, the interior of G-33, and the interior and exterior surfaces of G-17 and G-35.

(fig. 2.8). Zucchi's (1967) vessel form D is very much like our *tecomate*.

Ollas (necked jars) were the second most common vessel form in the Gaván complex, making up 12–13% of the diagnostics. Illustrations of *olla* rims include G-85, G-86, G-87, G-88, G-89, G-90, G-91, G-92, G-94, G-95, G-96, and G-158 (figs. 2.9, 2.10, 2.16). Our *olla* rims are similar to Zucchi's (1967) E form.

Bottles made up 1–2% of the Gaván diagnostic sherds, while bottle inflections and bases made up about 3% of the diagnostics. We present drawings of bottle (BOT) rims as G-100, G-101, G-103, G-104, G-105, G-106, G-107, G-108, and G-109 (figs. 2.10, 2.11, 2.12). Zucchi's (1967) form G is very similar to our bottle rims.

Lid rims and handles were relatively scarce, making up just under 1% of the Gaván diagnostics. An illustration of a lid with a handle is presented as G-110 (fig.

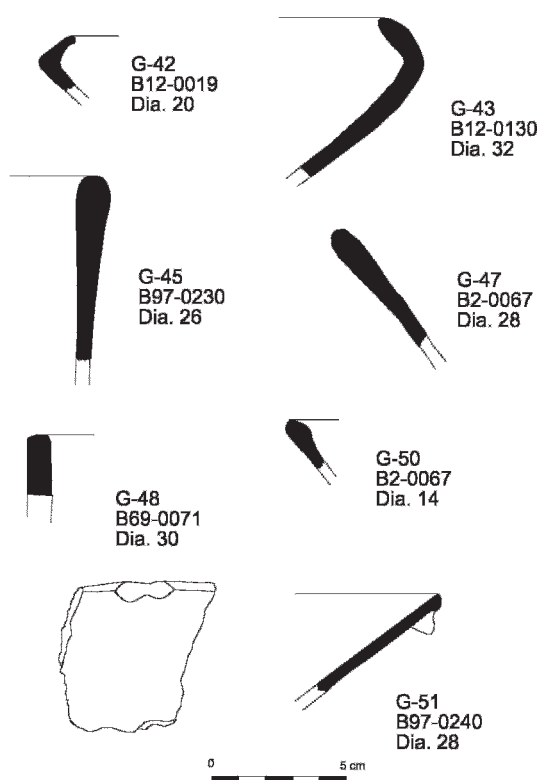


Fig. 2.4. Gaván-complex ceramic illustrations G-42 through G-51 (rim diameter in cm). G-42 and G-43 are convex-wall bowl rims. G-45 and G-48 are vertical-wall bowl rims. G-47, G-50, and G-51 are outleaned-wall bowl rims. G-51 has appliqué on the exterior.

2.12). This form is similar to Zucchi's (1967) form H.

Base angles from convex-wall, outleaned-wall, and vertical-wall bowls made up about 1% of the diagnostic sherds. Representative illustrations are presented as G-112 and G-113 (fig. 2.13). These forms are similar to Zucchi's (1967) basal form 1b.

Annular bases made up nearly 4% of the Gaván diagnostics. Illustrations of annular bases are presented in G-16, G-120, and G-122 (figs. 2.2, 2.13). Our annular bases resemble the basal form that Zucchi (1967) calls form 2.

Bowls with pedestal bases constituted 1–2% of the diagnostic sherds. Examples of these bases are depicted in G-2, G-125, and G-126 (figs. 2.1, 2.13).

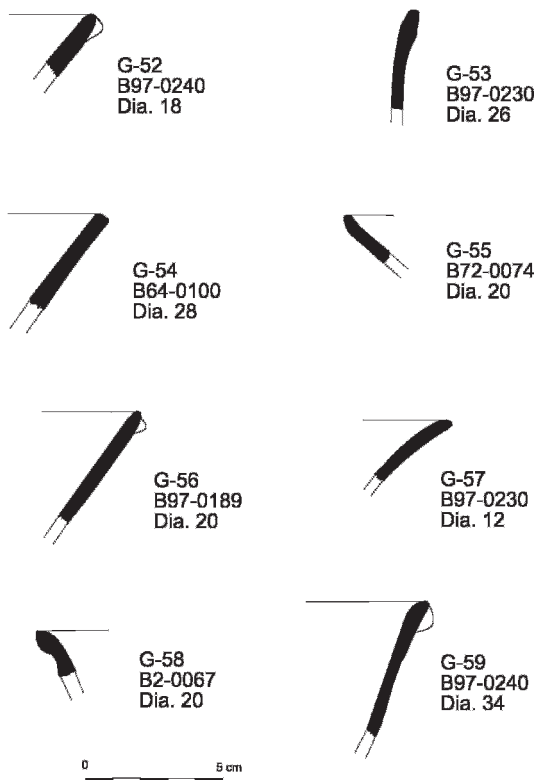


Fig. 2.5. Gaván-complex ceramic illustrations G-52 through G-59 (rim diameter in cm). All are outleaned-wall bowl rims. G-52 and G-59 have appliqué on the exterior.

Footed annular bases (G-127) (fig. 2.14) were a distinctive, though not common, form that constituted 1–2% of the Gaván diagnostics.

RIM DIAMETER

Three-fourths of the convex-wall bowl (CWB) rims were determined to have rim diameters that were less than or equal to 20 cm. About 18% of the CWB rims had diameters that measured between 20 cm and 40 cm, and less than 2% had rim diameters that were greater than or equal to 40 cm.

Roughly half of the outleaned-wall bowl (OWB) rims and vertical-wall bowl (VWB) rims had diameters that were less than or equal to 20 cm, while about one-third had rim diameters that ranged between 20 cm

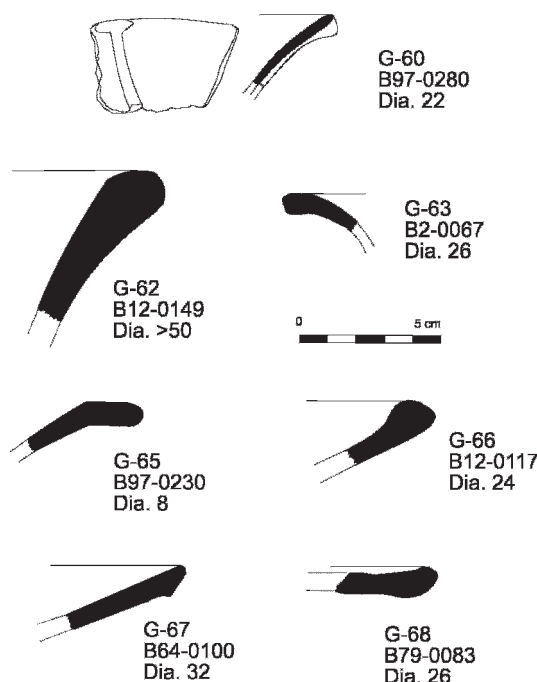


Fig. 2.6. Gaván-complex ceramic illustrations G-60 through G-68 (rim diameter in cm). All are outleaned-wall bowl rims, except G-67 and G-68, which are plate rims. G-60 has appliqué on the exterior.

and 40 cm. Just under 3% of the OWB and VWB rims fell into the large vessel size category (≥ 40 cm).

Approximately eight-tenths of the Gaván-complex plate rims had diameters that were less than or equal to 26 cm. Just under 20% of the plate rims had diameters that were greater than 26 cm.

Nearly half of the composite-silhouette bowl (CSB) rims had diameters that varied between 20 cm and 40 cm. Just under one-third of the CSB rims had diameters that were less than or equal to 20 cm, while just under one-fifth of the CSB rims had diameters that were greater than or equal to 40 cm.

CONVEX-WALL BOWL (CWB) RIM FORM

Just over four-tenths of the CWB rims had direct rims with a round lip (illustrated as G-1, G-3, G-4, and G-16) (figs. 2.1, 2.2). Direct rims with a flat lip (G-5) constituted

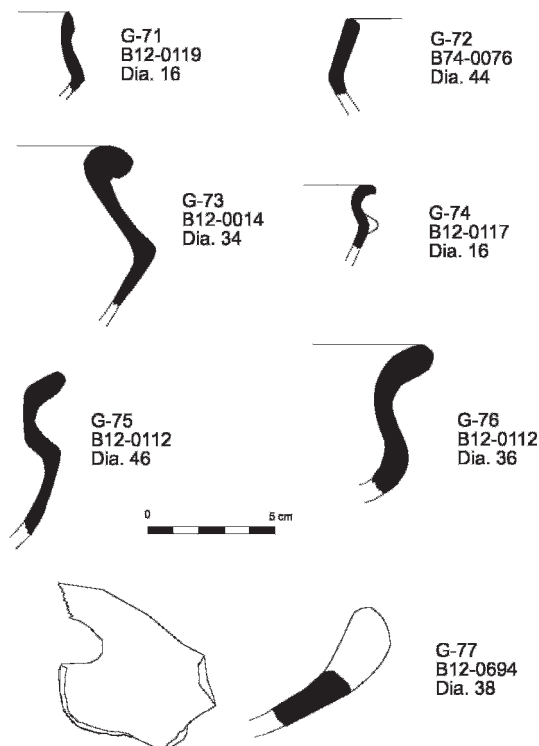


Fig. 2.7. Gaván-complex ceramic illustrations G-71 through G-77 (rim diameter in cm). All are composite-silhouette bowl rims, except G-77, which is a *budare* (griddle) rim. G-74 has appliqué on the exterior. Cream slip was noted on interior and exterior of G-72 and on the exterior of G-76.

about 3% of all the CWB rims. CWB rims with an incurved rim (G-6) made up about 5% of all the CWB rims. CWB rims that were thickened on both sides with no breaks (G-7, G-10, and G-12) accounted for a bit over 9% of the CWB rims. CWB rims that were thickened on both sides with an interior break (G-13) constituted 1–2% of the CWB rims. CWB rims that were thickened on both sides with an exterior break (G-14) also amounted to just 1–2% of the CWB rims. CWB rims that were thickened on both sides with interior and exterior breaks (G-15) made up 3–4% of the CWB rims. CWB rims that were thickened on the interior with no breaks (G-9 and G-17) (figs. 2.2, 2.3) constituted 7–8% of the CWB rims. CWB rims that were thickened on the interior with an interior break (G-18)

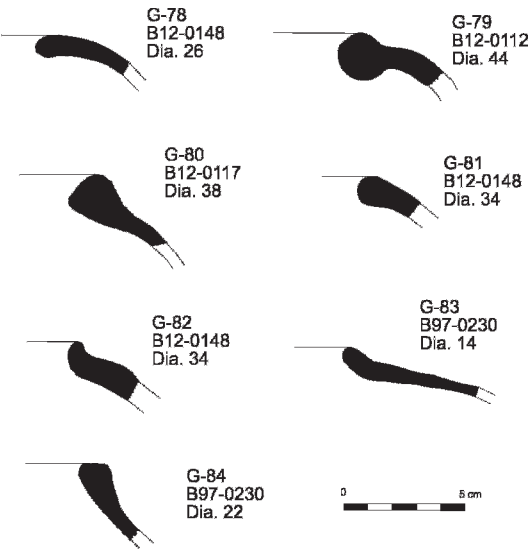


Fig. 2.8. Gaván-complex ceramic illustrations G-78 through G-84 (rim diameter in cm). All are *tecomate* (neckless jar) rims.

accounted for about 2% of the CWB rims. CWB rims that were thickened on the interior with an exterior break (G-19 and G-20) made up about 3% of the CWB rims. CWB rims that were thickened on the interior with both interior and exterior breaks (G-21 and G-22) constituted 3–4% of the CWB rims. CWB rims that were thickened on the exte-

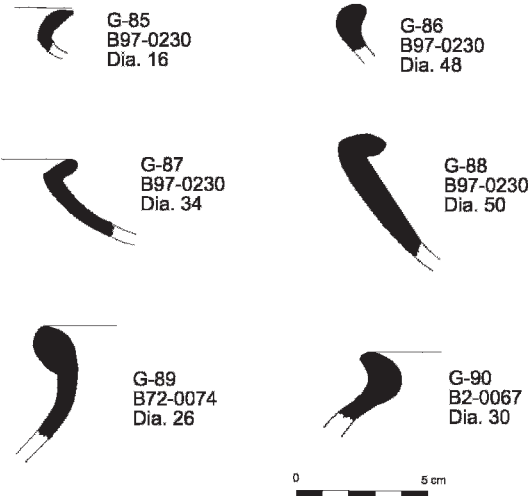


Fig. 2.9. Gaván-complex ceramic illustrations G-85 through G-90 (rim diameter in cm). All are *olla* (necked jar) rims.

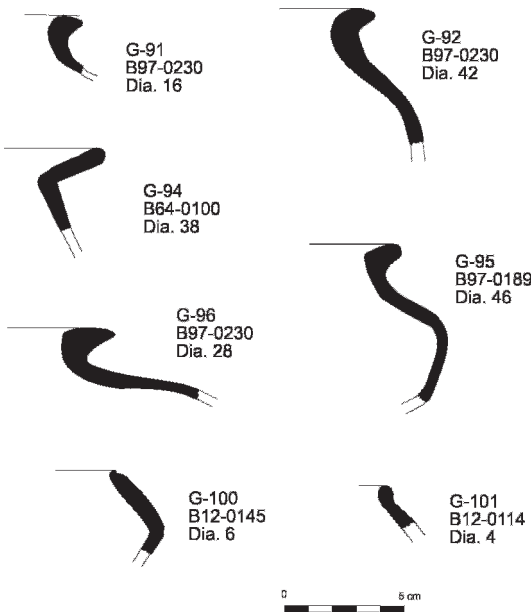


Fig. 2.10. Gaván-complex ceramic illustrations G-91 through G-101 (rim diameter in cm). All are *olla* rims, except G-100 and G-101, which are bottle rims.

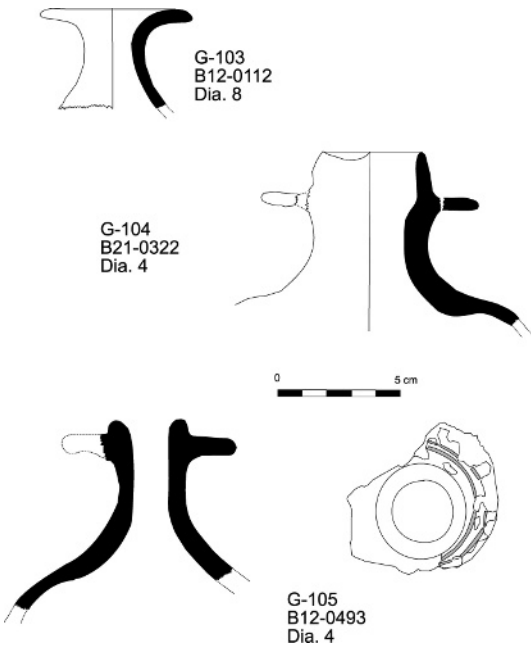


Fig. 2.11. Gaván-complex ceramic illustrations G-103 through G-105 (rim diameter in cm). All are bottle rims. G-105 has brown painted lines on a cream-slipped background on the top surface of the rim flange.

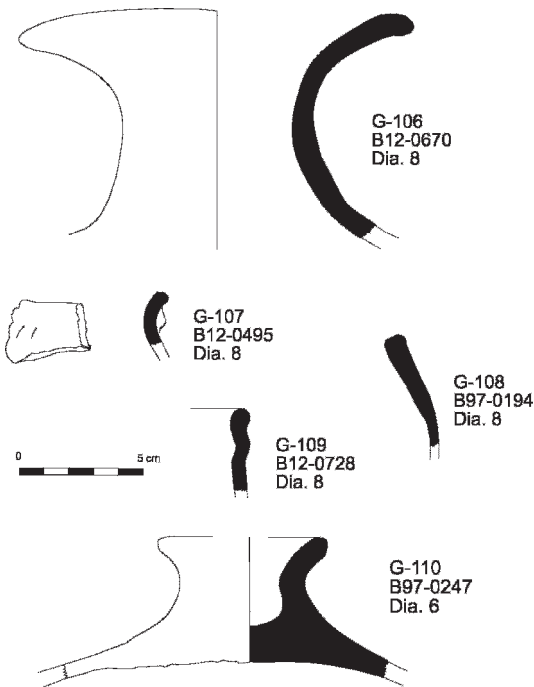


Fig. 2.12. Gaván-complex ceramic illustrations G-106 through G-110 (rim diameter in cm). All are bottle rims, except G-110, which is a lid rim. G-107 has appliqué on the exterior.

rior with an exterior break (G-27 and G-28) accounted for 1–2% of the CWB rims. CWB rims that were S-shaped, outflared (not to horizontal), and had no thickening and no break (G-31) made up 5–6% of the CWB rims (fig. 2.3). CWB rims that were S-shaped, outflared (not to horizontal), and showed interior thickening with no break (G-33, G-34, and G-35) made up 3–4% of the CWB rims. CWB rims that were carinated (G-42 and G-43) constituted about 3% of the CWB rims (fig. 2.4).

OUTLEANED WALL BOWL (OWB) AND VERTICAL-WALL BOWL (VWB) RIM FORM

OWB and VWB rims that were direct and not thickened (G-48, G-51, G-52, G-54, and G-56) constituted nearly 30% of all the OWB and VWB rims (figs. 2.4, 2.5). Note that G-51 had a direct, unthickened rim with an exterior-thickened lip (fig. 2.4). OWB and VWB rims that were direct and thickened (G-45) made up about one-eighth

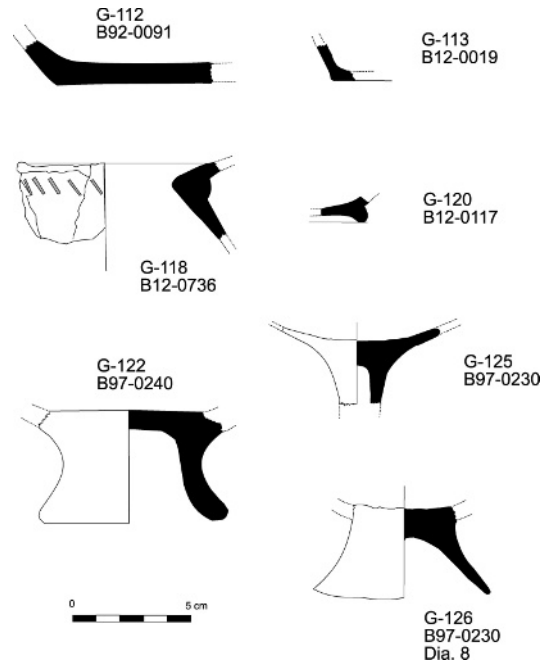


Fig. 2.13. Gaván-complex ceramic illustrations G-112 through G-126 (rim diameter in cm). G-112 and G-113 are base angles from outleaned-wall bowls. G-118 is an inflection from a bottle; it has orange slip on the exterior and a series of parallel incised lines. G-120 and G-122 are annular base fragments. G-125 and G-126 are pedestal-base fragments.

of the OWB and VWB rims. OWB and VWB rims that were outflared (not to horizontal) and not thickened (G-57, G-58, G-59, and G-60) made up one-fourth of the OWB and VWB rims (figs. 2.5, 2.6). G-58 had an exterior beaded lip. OWB and VWB rims that were outflared (not to horizontal) and thickened (G-47, G-50, G-53, and G-62) accounted for just over one-fifth of the OWB and VWB rims. OWB and VWB rims that were outcurved (to horizontal) and thickened (G-63) made up 3–4% of the OWB and VWB rims.

COMPOSITE-SILHOUETTE BOWL (CSB) RIM FORM

CSB rims that were direct and not thickened (G-72) constituted about 5% of all the CSB rims (fig. 2.7). CSB rims that were outflared (not to horizontal) and not thickened

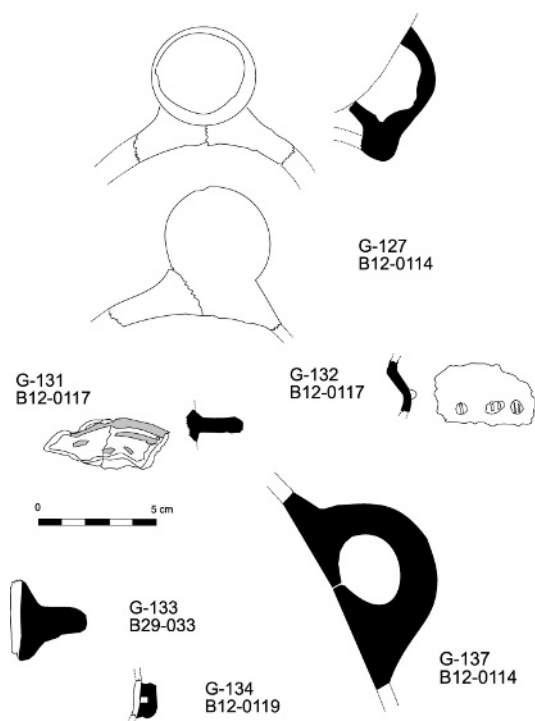


Fig. 2.14. Gaván-complex ceramic illustrations G-127 through G-137 (rim diameter in cm). G-127 is a footed annular base. G-131 is a body sherd with a flange and painted designs (indistinct motif) in brown on a cream-slipped background (on the top surface). G-132 is a body sherd (probably from a composite-silhouette bowl or a bottle) with appliqué on the exterior. G-133 is a lug without a hole, while G-134 is a lug with a hole. G-137 is a handle.

accounted for roughly one-fifth of the CSB rims. CSB rims that were outcurved (to horizontal) and not thickened (G-74) made up about 6% of the CSB rims. CSB rims that were outflared (not to horizontal) and thickened (G-71, G-75, and G-76) made up four-tenths of the CSB rims. CSB rims that were outcurved (to horizontal) and thickened (G-73) made up nearly one-fifth of the CSB rims.

TECOMATE RIM FORM

The rim form of one-fifth of the *tecomate* rims was direct and not thickened (G-78). The most frequent *tecomate* rim form was direct and thickened on both sides (G-79)

(fig. 2.8), constituting nearly one-third of all the *tecomate* rims. *Tecomate* rims that were direct with exterior thickened (G-80) accounted for one-fifth of the *tecomate* rims. *Tecomate* rims that were direct with interior thickened (G-81) accounted for just over one-tenth of all the *tecomate* rims. *Tecomate* rims that were outflared and not thickened (G-82) made up just under one-tenth of all the *tecomate* rims, a relative frequency similar to that of *tecomate* rims that were outflared and thickened (G-83 and G-84).

OLLA RIM FORM

The most common *olla* rim form was outflared (not to horizontal) and thickened, with no breaks (G-86, G-89, and G-90), which made up one-third of all the *olla* rims (fig. 2.9). *Olla* rims that were outflared (not to horizontal) and not thickened, with no breaks (G-85), made up about one-seventh of the *olla* rims. *Olla* rims that were outflared (not to horizontal) and not thickened, with an interior break (G-87), were not common, amounting to less than 3% of all the *olla* rims. Equally rare were *olla* rims that were outcurved (to horizontal) and not thickened, with an interior break (G-88). More numerous were *olla* rims that were outcurved (to horizontal) and thickened, with no breaks (G-91 and G-92), which made up one-seventh of all the *olla* rims. Similarly abundant were *olla* rims that were outflared (not to horizontal) and thickened, with interior break (G-94 and G-95) (fig. 2.10). *Olla* rims that were outcurved (to horizontal) and thickened, with interior break (G-96 and G-158), made up 7–8% of all the *olla* rims (figs. 2.10, 2.16).

BOTTLE RIM FORM

The most frequent bottle rim form was flared up (G-101) (fig. 2.10), which constituted four-tenths of all the bottle rims. Roughly one-seventh of all bottles had direct rims (G-100). Everted rims (G-103) made up about one-twentieth of all bottle rims. A similar frequency was noted for bottle rims with a rim flange (G-104 and

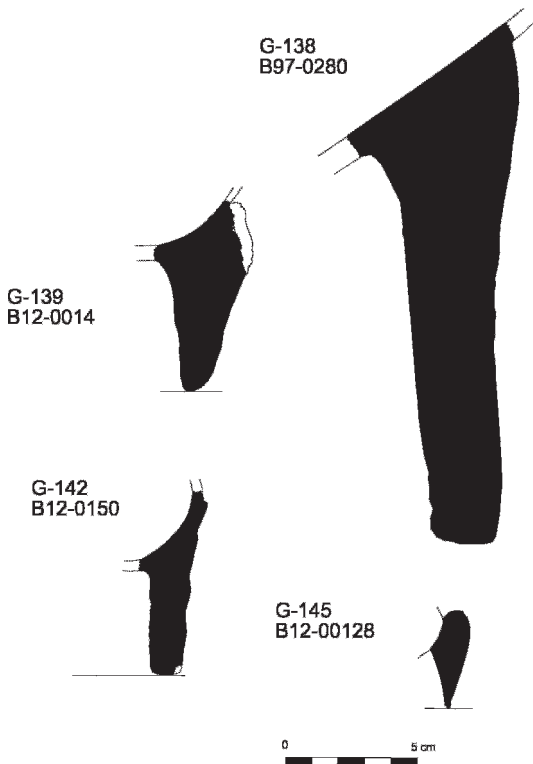


Fig. 2.15. Gaván-complex ceramic illustrations G-138 through G-145 (rim diameter in cm). G-138 is a solid foot. G-139 is a conical foot. G-142 is cylindrical foot. G-145 is a *piriforme* (conoidal) foot.

G-105). The second most common bottle rim was outflared (G-106 and G-107) (fig. 2.12); it made up just under one-fifth of all the bottle rims.

SPECIAL FORM FEATURES (SFF)

Handles (G-77 and G-137) were by far the most commonly observed special form feature, accounting for more than half of the total SFF sample. Lugs without holes (G-133) made up about 7% of all the total SFF sample, while lugs with holes (G-134) (fig. 2.14) made up a bit more than 3% of the total SFF sample.

FEET

Feet constituted 8.4% of all the diagnostic sherds in the Gaván complex. Hollow feet

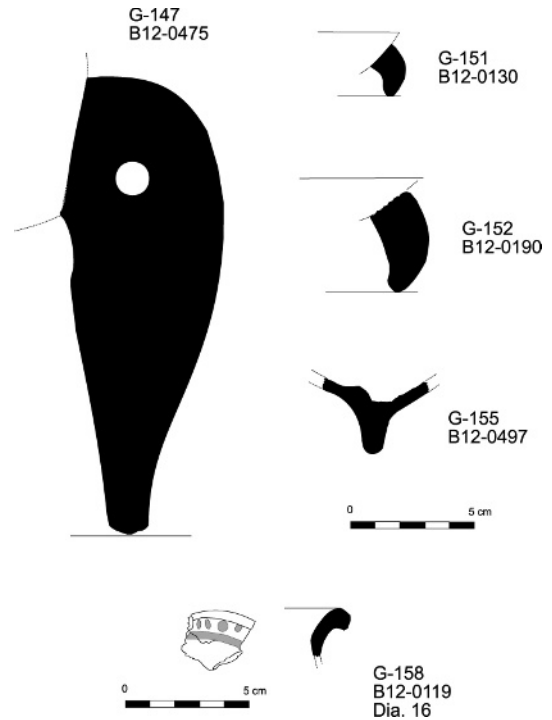


Fig. 2.16. Gaván-complex ceramic illustrations G-147 through G-158 (rim diameter in cm). G-147 is a *piriforme* (conoidal) foot. G-151 and G-152 are *corniforme* (horn-shaped) feet. G-155 is an unspecified foot fragment. G-158 is an *olla* rim with a dot-and-line motif painted in brown on a cream-slipped background (on the exterior).

were the most common form, making up nearly three-tenths of the total sample of foot supports. Unfortunately, there were no examples complete enough to merit illustration. Solid feet (G-138) (fig. 2.15) made up almost one-fifth of all the foot supports, while conical feet (G-139) and cylindrical feet (G-1, G-10, and G-142) each made up about one-twentieth of the total sample of foot supports. *Piriforme* (conoidal, pear-shaped) feet (G-3, G-145, and G-147) (figs. 2.1, 2.15, 2.16) were a distinctive form that made up about one-eleventh of all the feet (Garson, 1980: 179, fig. 37; Zucchi, 1967: 71). *Corniforme* (cylindrical, horn-shaped) feet (G-151 and G-152) (fig. 2.16) were also a distinctive form, constituting 4% of all the foot supports in our Gaván sample (Garson, 1980: 179, fig. 37; Zucchi, 1967: 72).

DECORATION

Decorated sherds made up about one-fourth of the diagnostic sherds in our Gaván-complex sample. Sherds with incising (G-107 and G-118) accounted for about 2% of all the decorated sherds, while sherds with appliqué (G-9, G-12, G-13, G-20, G-51, G-52, G-56, G-59, G-74, G-107, and G-132) (figs. 2.2–2.5, 2.7, 2.12, 2.14) made up 3% of the decorated sherds. By far the most common form of decoration was slipping, which was found on nine-tenths of all the decorated sherds. Sherds that had slipping are illustrated in G-4, G-9, G-13, G-14, G-16, G-17, G-28, G-33, G-35, G-55, G-58, G-63, G-72, G-76, G-118, and G-147. Sherds with monochrome painting on slipped background amounted to less than 1% of the decorated sherds. Illustrated examples are G-105, which had brown-painted line motifs on a cream-slipped background on the top surface of the rim flange of a bottle; G-131, which had brown painting (indistinct motif) on a cream-slipped background, also on the top of a rim flange; and G-158, an *olla* rim with a dots-and-line motif in brown paint on a cream-slipped background.

CURBATÍ COMPLEX

Curbatí-complex pottery, which we found at sites in the Andean piedmont portion of our study region, does not resemble material of the Gaván complex. Rather, Curbatí ceramics show stylistic similarities to the Lagunillas phase of the the Maracaibo Basin, placed in the latter half of the first millennium B.C. by Wagner and Tarble de Ruíz (1975: 109–117). The Curbatí complex also resembles the Santa Ana complex in the Andes (Tarble, 1977) (fig. 1.1), as well as the Agua Blanca complex of the Andean piedmont in the neighboring state of Portuguesa (Rouse and Cruxent, 1963: 68) (fig. 1.1). A series of radiocarbon and thermoluminescence dates associated with our Curbatí-complex material have mid-points ranging from A.D. 350 to A.D. 1000 (Spencer and Redmond, 1992: tables 2, 3) (see table 2.1).

PASTE

Between 40% and 50% of the Curbatí-complex diagnostic sherds had a paste color of reddish yellow, sometimes grading into pink (Munsell 5 YR 6/6). The paste color of about one-sixth of the diagnostics was reddish-brown, or brick (Munsell 5 YR 5/4, 5/8, 4/4). One-eighth of the diagnostics had a paste color of brown (Munsell 7.5 YR 6/4, 5/4; 5 YR 5/3, 5/4), while pale yellowish brown, ranging to buff brown (7.5 YR 6/4; 10 YR 6/3, 6/4), was the paste color of one-ninth of the Curbatí diagnostics. Paste colors of light-medium gray (Munsell 2.5 YR 6/; 2.5 Y 7/) and dark gray (5 YR 4/1) were each found on less than one-tenth of the diagnostics.

Just over one-half of the Curbatí-complex diagnostics showed even oxidation (no dark core or sections). The remainder (just under one-half of the total) showed evidence of partial or complete reduction, ranging from dark cores to cross-sections that were completely dark. The Curbatí complex thus shows nearly five times as much evidence of partial or complete reduction than the Gaván complex.

The paste texture of nearly four-fifths of the Curbatí-complex diagnostics was judged to be medium. About one-fifth of the diagnostics were recorded as having a fine paste, and less than 1% of the diagnostics had a coarse paste. The paste texture of the Curbatí complex was somewhat more variable than that of the Gaván complex.

SURFACE FINISH

Just over four-fifths of the Curbatí-complex diagnostics had an unburnished and unslipped surface finish. Slipped surfaces were noted on about one-tenth of the diagnostics, while burnished and unslipped surfaces characterized less than one-twentieth of the diagnostics. The Curbatí complex had relatively more unburnished and unslipped surfaces than the Gaván complex.

The surface color of one-half of the burnished, unslipped diagnostics was grayish orange. Brown was almost as common, occurring on about four-tenths of the bur-

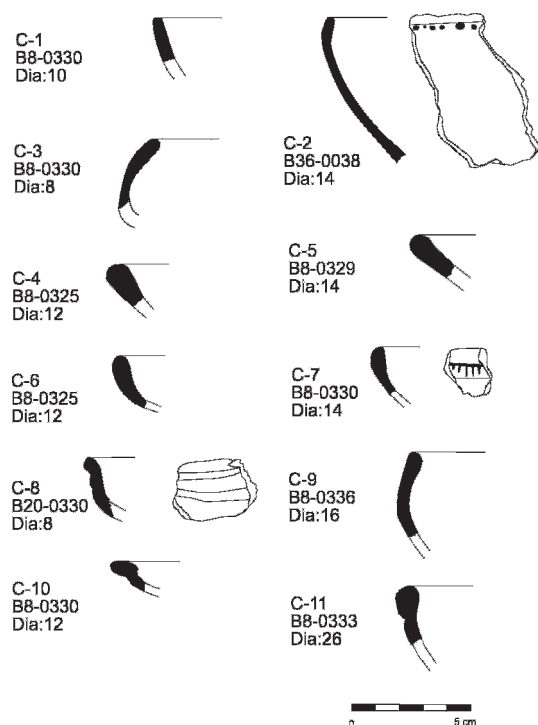


Fig. 2.17. Curbatí-complex ceramic illustrations C-1 through C-11 (rim diameter in cm). All are convex-wall bowl rims. C-2 has punctations on the exterior. C-7 has incising on the exterior. C-8 has engraving on the exterior.

nished, unslipped diagnostics. Far less frequent were dark gray and pale yellow-orange.

Orange was the surface color observed on 40–50% of the slipped sherds, while the surface color of about one-third of the slipped sherds was red. About one-seventh of the slipped sherds had a cream surface color. Only one-twentieth of the slipped sherds had a brown surface color.

VESSEL FORM

Convex-wall bowl (CWB) rims made up just under 9% of the Curbatí-complex diagnostics. CWB rims are illustrated in C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, C-9, C-10, and C-11 (fig. 2.17).

Outleaned-wall bowls (OWB) were the most common vessel form, making up almost three-tenths of all the diagnostics. Drawings of OWB rims are presented as

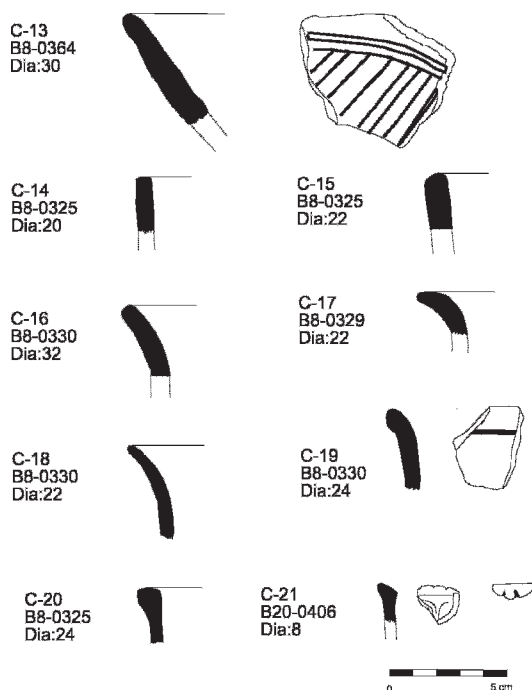


Fig. 2.18. Curbatí-complex ceramic illustrations C-13 through C-21 (rim diameter in cm). All are outleaned-wall bowl rims, except C-14 and C-15, which are vertical-wall bowls. C-13 has incising on the interior. C-15 has incising on the exterior. C-19 has incising on the exterior. C-21 has engraving on the exterior.

C-13, C-16, C-17, C-18, C-19, C-20, C-21, and C-36 (figs. 2.18, 2.21).

Vertical-wall bowls (VWB), a very steep-sided variant of outleaned-wall bowls, were not common, making up about 2% of all the diagnostics. VWB rims are illustrated in C-14 and C-15 (fig. 2.18).

Vasos made up about one-ninth of all the diagnostics of the Curbatí Complex. *Vaso* rims are depicted in C-22, C-23, C-24, C-25, C-26, and C-37 (figs. 2.19, 2.21). This vessel form was not observed in our Gaván collections.

Plates, however, were more common in our Gaván sample than in our Curbatí sample, where they made up less than one-half of 1% of the diagnostics.

Just as rare in our Curbatí collections were composite-silhouette bowls (C-27). Composite-silhouette bowls were more abundant in our Gaván sample.

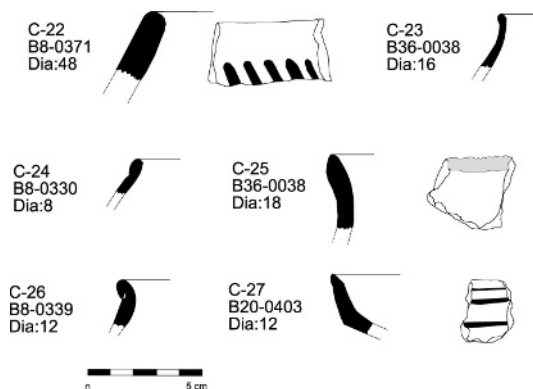


Fig. 2.19. Curbatí-complex ceramic illustrations C-22 through C-27 (rim diameter in cm). All are *vaso* rims, except C-27, which is a composite-silhouette bowl rim. C-22 and C-27 have engraving on the exterior. C-25 has a strip of orange-colored slip on the interior rim.

Tecomates also were not common, making up less than 1% of the Curbatí diagnostics. A *tecomate* rim is illustrated in C-44.

Ollas made up 4–5% of the Curbatí diagnostics. *Olla* rims are depicted in C-28, C-29, C-30, C-31, C-32, C-33, and C-38 (figs. 2.20, 2.21). *Ollas* were less common in our Curbatí sample than in our Gaván

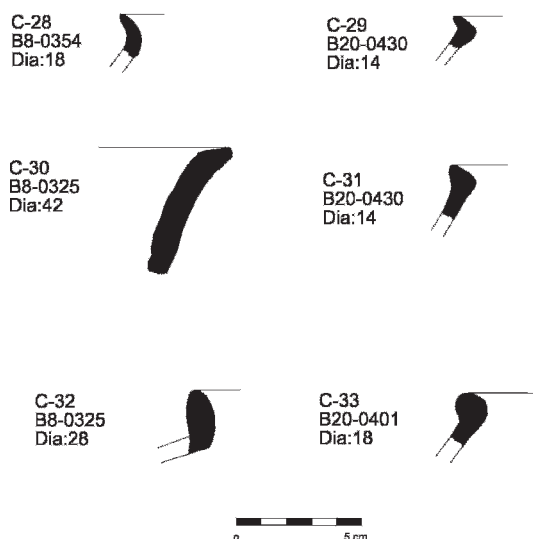


Fig. 2.20. Curbatí-complex ceramic illustrations C-28 through C-33 (rim diameter in cm). All are *olla* (necked jar) rims.

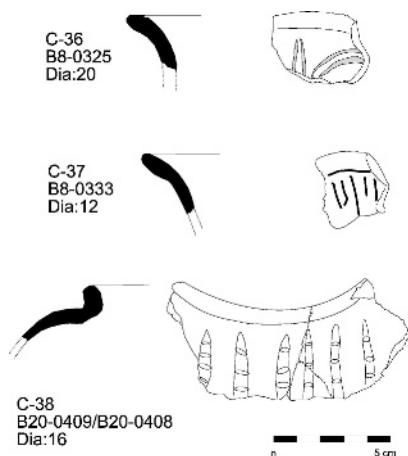


Fig. 2.21. Curbatí-complex ceramic illustrations C-36 through C-38 (rim diameter in cm). C-36 is an outleaned-wall bowl rim with strips of appliqué on the exterior. C-37 is a *vaso* rim with incising on the exterior. C-38 is an *olla* rim with appliqué strips of clay with gashes on the exterior.

collections (where they made up 12–13% of the diagnostics).

Bottle rims were rare (< 1% of the diagnostics) in our Curbatí sample. In retrospect, we think these few examples might more appropriately be considered small jars or *vasos*, since there were no recorded bottle inflections or bases. By comparison, in our Gaván collections, bottle rims made up 1–2% of the diagnostics, and bottle body inflections and bases made up about 3% of the diagnostics.

Annular bases (C-41) made up 1–2% of the Curbatí diagnostics, less than half the frequency of annular bases observed in our Gaván collections.

Bowls with pedestal bases made up less than one-half of 1% of the diagnostics in our Curbatí sample, whereas this vessel form made up 1–2% of the Gaván diagnostics.

RIM DIAMETER

Just under four-tenths of the convex-wall bowl (CWB) rims had diameters that were less than or equal to 10 cm, while one-third of the CWB rims had diameters between 10 cm and 20 cm. Thus, about seven-tenths

of the CWB rims had diameters of less than 20 cm, a relative frequency that is slightly less than that observed for the Gaván complex (i.e., three-fourths). About 7% of the Curbatí CWB rims were determined to have diameters between 20 cm and 40 cm, about half the relative frequency noted for the Gaván complex. There were no CWB rims of the Curbatí complex that had diameters that were greater than or equal to 40 cm, in contrast to the Gaván complex, which had about 3% of the CWB rims in that size category. Nearly one-fifth of the Curbatí CWB rims were too small to measure, a figure much larger than was noted for the Gaván complex (one-twentieth).

About one-third of the outleaned-wall bowls (OWB) and vertical-wall bowls (VWB) had rim diameters less than or equal to 10 cm. Four-tenths of the OWB and VWB rims had diameters that fell between 10 cm and 20 cm. This means that nearly three-fourths of the OWB and VWB rims had diameters that were less than 20 cm, a relative frequency that exceeds what we determined for the Gaván complex, where about half of the OWB and VWB rims were less than or equal to 20 cm. About one-tenth of the Curbatí OWB and VWB rims had diameters that ranged between 20 cm and 40 cm, a smaller relative frequency for this size class than was observed for the Gaván OWB and VWB rims (about one-third). Fewer than one-half of 1% of the Curbatí OWB and VWB rims were determined to be greater than or equal to 40 cm, in contrast to the Gaván complex, where about 3% of the OWB and VWB rims fell in that category. About one-tenth of the Curbatí OWB and VWB rims had indeterminate diameters.

Vaso rim diameters were evenly distributed in the two smallest size categories, with just under four-tenths of the *vaso* rims measuring ≤ 10 cm and four-tenths falling between 10 cm and 20 cm. One-sixth of the *vaso* rims measured between 20 cm and 40 cm in diameter. Less than 1% of the *vaso* rim diameters were larger than 40 cm, and the rest were not measurable. This vessel form was not found in the Gaván complex.

None of the composite-silhouette bowl (CSB) rims had diameters that were less

than or equal to 10 cm. About two-thirds of the CSB rims had diameters that fell between 10 cm and 20 cm. The diameters of one-sixth of the CSB rims were determined to lie between 20 cm and 40 cm. No CSB rim diameter measured larger than 40 cm, and the rest were indeterminate.

CONVEX-WALL BOWL (CWB) RIM FORM

Slightly more than one-half of the Curbatí-complex CWB rim forms were classified as direct (see illustration C-1) (fig. 2.17). Incurved rims (C-2, C-3, and C-9) made up almost 9% of all the CWB rims (fig. 2.17). CWB rims that were thickened on both sides (C-4) made up 5–6% of the CWB rims. CWB rims that were thickened on the interior only (C-5 and C-6) constituted a bit over 8% of the CWB rims. CWB rims that were thickened on the exterior only (C-7) made up almost 6% of the CWB rims, and an equivalent relative frequency was recorded for CWB rims that were outflaring (not to horizontal) (C-8). CWB rims that were outcurving (to horizontal) (C-10) made up just over 1% of the CWB rims, while CWB rims that had exterior thinning or a groove on the exterior (C-11) made up 4–5% of the CWB rims. Sharply upturned rims constituted a bit more than 1% of the CWB rims.

OUTLEANED-WALL BOWL (OWB) AND VERTICAL-WALL BOWL (VWB) RIM FORM

OWB and VWB rims that were direct and not thickened (C-13, C-14, and C-15) constituted one-fourth of all the OWB and VWB rims (fig. 2.18). OWB and VWB rims that were direct and also thickened (C-20) made up one-twentieth of the OWB and VWB rims. Fully one-third of the OWB and VWB rims were classified as outflared (not to horizontal) and not thickened (C-16 and C-18). OWB and VWB rims that were outcurved (to horizontal) and not thickened (C-17) made up almost 7% of the OWB and VWB rims. A bit more than one-fifth of the OWB and VWB rims were outflared (not to horizontal) and thickened (C-19), while just one-twentieth of the OWB and VWB rims were

outcurved (to horizontal) and thickened. A short (< 1 cm) everted rim (C-21) was noted on less than 1% of the OWB and VWB rims.

VASO RIM FORM

About 5% of all the *vaso* rims were direct (C-22) (fig. 2.19). By contrast, nearly one-third of the *vaso* rims were recorded as flared (not to horizontal) and not thickened (C-23) (fig. 2.19). *Vaso* rims that were outcurved (to horizontal) and not thickened made up less than 3% of all the *vaso* rims. However, almost three-thirds of the *vaso* rims were flared (not to horizontal) and thickened (C-25). *Vaso* rims that were outcurved (to horizontal) and thickened made up less than 7% of all the *vaso* rims. One-fourth of the *vaso* rims were flared and rolled (C-26).

COMPOSITE-SILHOUETTE BOWL (CSB) RIM FORM

One-half of the CSB rims were classified as direct and not thickened (C-27) (fig. 2.19). One-third of the CSB rims were outflared (not to horizontal) and not thickened. The rest of CSB rims were indeterminate.

OLLA RIM FORM

Three-tenths of all *olla* rims were classified as outflared (not to horizontal) and not thickened, with no breaks (C-28) (fig. 2.20). Similarly frequent were *olla* rims that were outflared (not to horizontal) and thickened, with no breaks (C-32 and C-33). About one-fourteenth of the *olla* rims were outflared (not to horizontal) and not thickened, but with an interior break (C-29, C-30). About one-ninth of all *olla* rims were classified as outflared (not to horizontal) and thickened, with an interior break (C-31).

SPECIAL FORM FEATURES

Handles (C-45) were the most common special form feature; they occurred on just one-half of 1% of the Curbatí diagnostics.

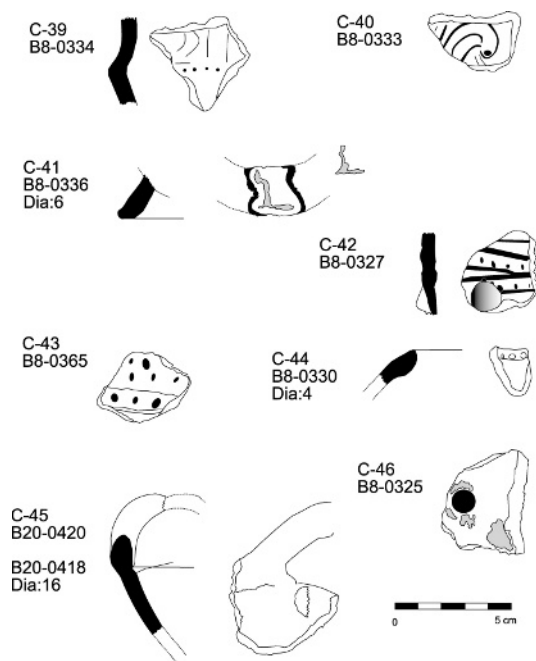


Fig. 2.22. Curbatí-complex ceramic illustrations C-39 through C-46 (rim diameter in cm). C-39 is an inflection piece (probably from a composite-silhouette bowl) with punctations and incising on the exterior. C-40 has incising and a strip of curved appliqué ending in a punctation. C-41 is an annular base with red slip in the shape of an irregular L on a cream-slipped background, plus a hole pierced through. C-42 is a body sherd with appliqué as well as engraving and punctations. C-43 is a body sherd with gashes and a strip of appliqué. C-44 is a *tecomate* (neckless jar) rim with punctations. C-45 is a handle. C-46 is a body sherd with patches of orange-colored slip and a hole drilled partially through the sherd.

FEET

Feet were not common in the Curbatí complex, making up just 2.12% of the total diagnostics. By comparison, feet constituted 8.4% of the Gaván-complex diagnostics and 7.75% of the Caño Seco-complex diagnostics.

DECORATION

About 38% of the Curbatí-complex diagnostic sherds had some form of decoration, and the most common form of decoration was incising, which occurred on about 44%

of the decorated sherds. The Curbatí complex showed more evidence of decoration than the Gaván complex, in which one-fourth of the diagnostics had decoration and only 2% of the decorated sherds had incising, with slipping accounting for nine-tenths of the decorated Gaván sherds. Expressed another way, incising occurred on 17% of the Curbatí-complex diagnostics but only on 0.6% of the Gaván-complex diagnostics. Clearly, incising is much more characteristic of the Curbatí complex than the Gaván complex. Curbatí sherds with incising are illustrated in C-7, C-13, C-19, C-37, C-39, C-40, C-42, and C-44 (figs. 2.17, 2.18, 2.21, 2.22). Engraving (a deeper and usually wider form of incision) appeared on about one-seventh of the Curbatí decorated sherds; engraving is depicted in C-8, C-22, and C-27 (figs. 2.17, 2.19). Punctations were noted on about one-twelfth of the decorated sherds; punctations are shown in C-2, C-39, C-42, C-43, and C-44 (figs. 2.17, 2.22). Appliqué appeared on 6–7% of the decorated sherds; examples of appliqué are illustrated in C-36, C-38, C-40, C-42, and C-43 (figs. 2.21, 2.22). About one-twentieth of the decorated sherds had gashes (C-21, C-38, C-43). Slipping appeared on just under three-tenths of the decorated sherds; a *vaso* rim that had a strip of orange-colored slipping on the rim is illustrated in C-25; an annular base that had red-on-white slipping is illustrated in C-41; and a sherd with patches of orange slip is shown in C-46, which also had a drilled hole that did not perforate the sherd completely. Painting was infrequently noted on Curbatí-complex pottery.

CAÑO SECO COMPLEX

Caño Seco-complex ceramics pertain to a later time period than the Gaván complex and Curbatí complex. We have dated the Caño Seco complex to A.D. 1000–1550 (Spencer and Redmond, 1992: table 1) (see table 2.1), which would make it approximately contemporaneous with the Caño Caroní complex defined for the middle and lower llanos by Zucchi (1975) (fig. 1.1). Caño Seco-complex material was

found in both the llanos and the piedmont locations, although the latter was more common than the former (fig. 4.3, table 5.4).

PASTE

Nearly one-half of the Caño Seco-complex diagnostic sherds were observed to have a paste color of red-yellow (Munsell 7.5 YR 8/6, 7/6, 6/6; 5 YR 7/7, 7/6, 7/8). One-fifth of the diagnostics had a paste color of red-brown (Munsell 2.5 YR 6/8, 5/6, 5/8, 4/6, 4/8). The paste color of one-seventh of the diagnostics was pale yellowish brown or buff brown (Munsell 7.5 YR 8/2, 8/4, 7/4; 10 YR 8/3, 8/4). One-eighth of the diagnostics had a paste color of light-medium brown (Munsell 7.5 YR 6/4, 5/4; 5 YR 5/3, 5/4). Relatively rare paste colors included dark brown (Munsell 7.5 YR 4/2, 4/4; 5 YR 4/3, 4/4) and dark gray (Munsell 5 YR 4/1, 3/1), which were observed on about one-seventeenth of the diagnostics and one-fiftieth of the diagnostics, respectively.

The paste of just over four-tenths of the Caño Seco diagnostics showed even oxidation (no dark core or sections). About 46% of the diagnostics showed evidence of partial reduction, with a dark core or sections, and one-tenth of the diagnostics were completely reduced (totally dark, with no “sandwich” effect).

Nine-tenths of the Caño Seco diagnostics had a paste texture that we recorded as medium. The paste texture of the remaining diagnostics was distributed evenly between fine and coarse.

SURFACE FINISH

About four-fifths of the Caño Seco diagnostics displayed a surface finish that was smoothed, but not burnished or slipped. About one-eleventh of the diagnostics had a slipped surface, while one-fourteenth of the diagnostics had a burnished (but not slipped) surface finish.

A bit more than one-half of the Caño Seco burnished, unslipped diagnostics had a surface color of brown-gray (Munsell 5 YR 6/4, 6/3, 5/4, 5/3). About one-third of the bur-

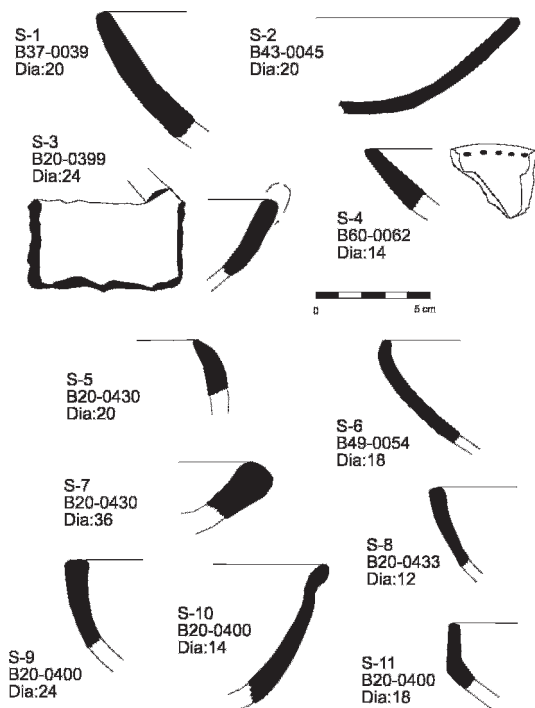


Fig. 2.23. Caño Seco-complex ceramic illustrations S-1 through S-11 (rim diameter in cm). All are convex-wall bowl rims. S-3 has a handle. S-4 has rectangular punctations on the interior. Red slip was noted on the exterior of S-6.

nished, unslipped diagnostics had a surface color recorded as orange (Munsell 7.5 YR 7/6, 6/6; 5 YR 7/6, 6/6). Less than one-thirtieth of the burnished, unslipped diagnostics had a surface color of pale yellow-orange (Munsell 10 YR 8/3, 8/4, 7/3, 7/4).

Just under four-tenths of the slipped sherds had a surface color of orange, while less than one-third had a cream surface color. Not quite one-fifth of the slipped sherds had a surface color of brown, while red was the surface color for about one-tenth of the slipped sherds.

VESSEL FORM

Convex-wall bowl (CWB) rims made up almost 14% of the Caño Seco-complex diagnostics. CWB rims are depicted in S-1, S-2, S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, and S-11 (fig. 2.23). Convex-wall bowls were about

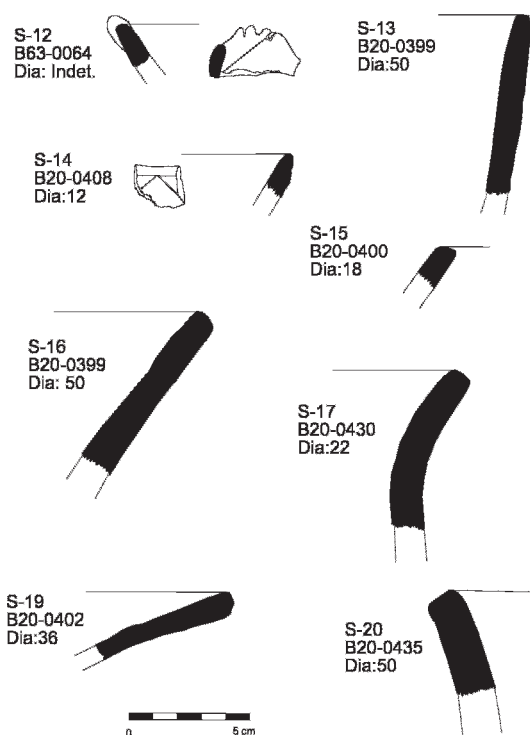


Fig. 2.24. Caño Seco-complex ceramic illustrations S-12 through S-20 (rim diameter in cm). All are outleaned-wall bowl rims. S-12 has a modeled rim with indentations. S-14 has incising on the exterior.

half again as frequent in the Caño Seco complex as in the earlier Curbatí complex.

The most commonly observed vessel form for the Caño Seco complex was the outleaned-wall bowl (OWB), which made up about one-fifth of all the diagnostic sherds. Illustrations of OWB rims are provided as S-12, S-13, S-14, S-15, S-16, S-17, S-19, and S-20 (fig. 2.24). Outleaned-wall bowls were relatively less frequent in the Caño Seco complex than in the Curbatí complex (where they made up three-tenths of the diagnostics).

Vertical-wall bowl (VWB) rims made up about one-eighth of the diagnostics. VWB rims are shown in S-21, S-22, S-23, and S-24 (fig. 2.25). Vertical-wall bowls were about six times as frequent in the Caño Seco complex as in the Curbatí complex.

Vasos were a relatively rare vessel form, constituting less than 1% of the diagnostics.

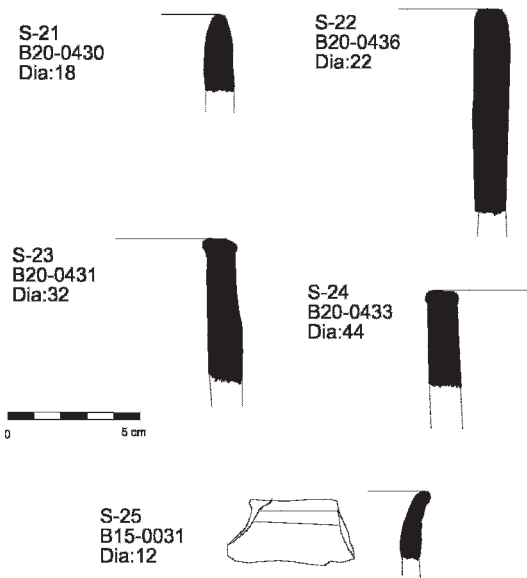


Fig. 2.25. Caño Seco-complex ceramic illustrations S-21 through S-25 (rim diameter in cm). All are vertical-wall bowl rims, except S-25, which is a *vaso* rim.

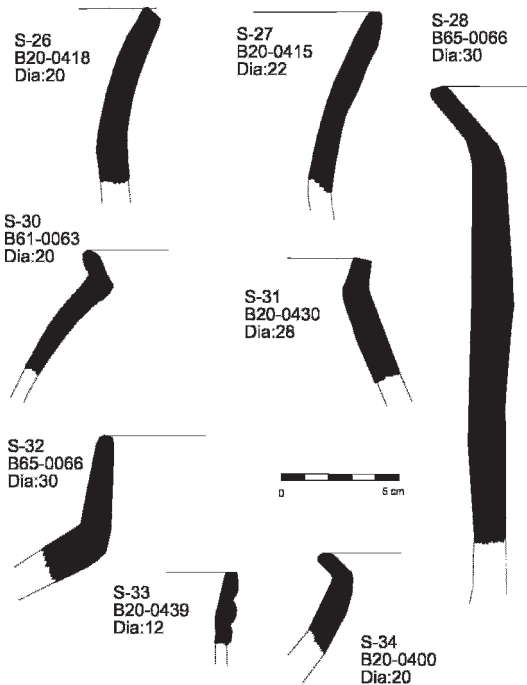


Fig. 2.26. Caño Seco-complex ceramic illustrations S-26 through S-34 (rim diameter in cm). All are *olla* (necked jars) rims. S-32 is an *olla* rim with cream slip on the exterior and brown slip on the interior rim.

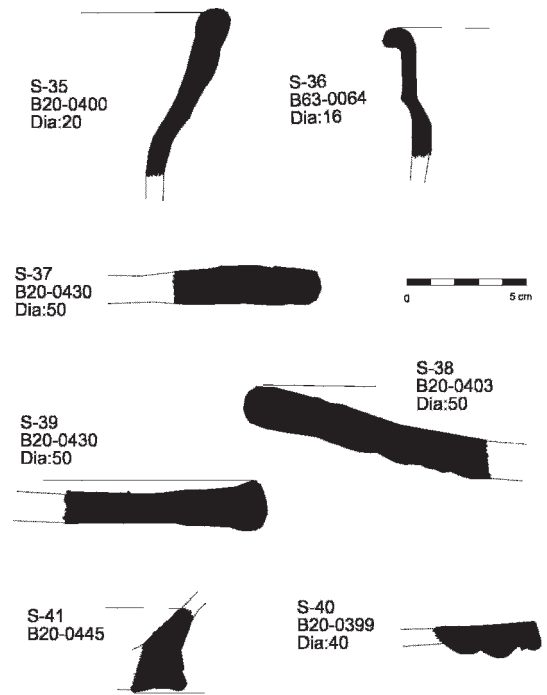


Fig. 2.27. Caño Seco-complex ceramic illustrations S-35 through S-41 (rim diameter in cm). S-35 is a rim from a wide-mouthed conoidal jar, referred to as a "*vasija piriforme*" by Zucchi (1975: fig. VI: i, j). S-36 is a rim from a composite-silhouette bowl. S-37 through S-40 are griddle (*budare*) rims. S-41 is a base fragment from a *budare*.

A *vaso* rim (with two incised lines on its exterior) is illustrated in S-25. *Vasos* were much more common in the Curbatí complex than in the Caño Seco complex.

Ollas made up about one-eleventh of the diagnostics. Drawings of *olla* rims are presented as S-26, S-27, S-28, S-30, S-31, S-32, S-33, and S-34 (fig. 2.26). *Ollas* were relatively more common in the Caño Seco complex than in the Curbatí complex.

Wide-mouthed conoidal jars were a distinctive vessel form, similar to the "*vasijas piriformes*" recovered by Zucchi (1975: fig. VI: i, j). Although distinctive, these were not common, making up less than 1% of the Caño Seco diagnostics. This vessel form is illustrated in S-35 (fig. 2.27).

Composite-silhouette bowl (CSB) rims also made up less than 1% of the diagnostics. An example is illustrated in S-36. CSB

RIM DIAMETER

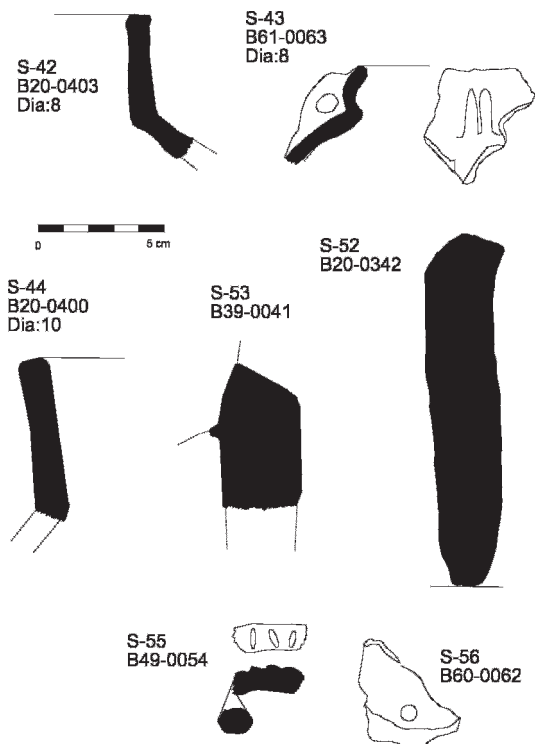


Fig. 2.28. Caño Seco-complex ceramic illustrations S-42 through S-56 (rim diameter in cm). S-42 through S-44 are bottle rims. S-43 has an appliqué handle. S-52 is a solid conical foot, while S-53 is a fragment of what appears to be a cylindrical foot. S-55 has incised notches. S-56 has an indentation.

rim were equally rare in our Curbatí-complex collections, although they were more numerous in the Gaván sample.

Budare (griddle) rims made up almost 2% of the Caño Seco diagnostics, and *budare* body sherds made up nearly 4% of the diagnostics. This vessel form is virtually absent in our Curbatí and Gaván collections, although it was observed by Zucchi in her Caño Caroní sample (Zucchi, 1975: 28, fig. VII). *Budares* are illustrated in S-37, S-38, S-39, S-40, and S-41 (fig. 2.27).

Bottles made up less than 1% of the Caño Seco diagnostics, a relative frequency similar to what we observed for the Curbatí complex; they were much more frequent in the Gaván complex. Bottle rims are illustrated in S-42, S-43 (which has an appliqué handle), and S-44 (fig. 2.28).

About four-tenths of the Caño Seco convex-wall bowl (CWB) rims had diameters that were less than or equal to 20 cm. This is a lower relative frequency for this size category than was observed for the Curbatí complex (seven-tenths) or the Gaván complex (three-fourths). A bit more than four-tenths of the Caño Seco CWB rims had diameters that fell between 20 cm and 40 cm; this is a substantially greater relative frequency for this size category than was observed for the Curbatí complex (about 7%) or the Gaván complex (about 18%). About 2–3% of the Caño Seco CWB rims had diameters that were greater than or equal to 40 cm, approximately the same relative frequency that we observed for the Gaván complex. By contrast, our Curbatí sample had no CWB rims in this large size category.

About three-tenths of the outleaned-wall bowl (OWB) rims had diameters that were less than or equal to 20 cm. This is a smaller relative frequency for this size category than was observed for the OWB and vertical-wall bowl (VWB) rims of the Curbatí complex (three-fourths of the diagnostics) or the Gaván complex (one-half of the diagnostics). About one-half of the Caño Seco OWB rims had diameters that fell between 20 cm and 40 cm, a larger relative frequency for this size category than was observed for the Curbatí and Gaván OWB and VWB rims (one-tenth and one-third of the diagnostics, respectively). Just under 5% of the Caño Seco OWB rims had diameters greater than or equal to 40 cm. This is a larger relative frequency for this size category than was observed for the Curbatí and Gaván OWB and VWB rims (less than 1% and about 3% of the diagnostics, respectively).

Approximately one-third of the Caño Seco VWB rims had diameters that were less than or equal to 20 cm, a lower relative frequency for this size category than was observed for the Curbatí and Gaván OWB and VWB rims (three-fourths and one-half of the diagnostics, respectively). Just over four-tenths of the Caño Seco

VWB rims had diameters that ranged between 20 cm and 40 cm, a somewhat larger relative frequency for this size category than was observed for the Curbatí and Gaván OWB and VWB rims (one-tenth and one-third of the diagnostics, respectively). About 9% of the Caño Seco VWB rims had diameters greater than or equal to 40 cm, a substantially larger relative frequency for this size category than was observed for the Curbatí and Gaván OWB and VWB rims (less than 1% and about 3% of the diagnostics, respectively).

CONVEX-WALL BOWL (CWB) RIM FORM

The most common form for CWB rims in the Caño Seco complex was the direct rim, which amounted to seven-tenths of all the CWB rims (see illustrations S-1, S-2, S-3, and S-4) (fig. 2.23). Incurved rims (see S-5 and S-6) made up a bit less than 8% of the CWB rims. Rims that were thickened on both sides with no breaks (S-7) accounted for nearly 4% of all the CWB rims. Rather less common were CWB rims that were thickened on the interior (S-8 and S-9); they made up a bit more than 1% of all the CWB rims. A similarly low relative frequency was noted for outflaring (or S-shaped) rims (see S-10), as well as for carinated rims (S-11).

OUTLEANED-WALL BOWL (OWB) RIM FORM

The most frequent form we observed for OWB rims was the direct rim (see S-12, S-13, and S-14) (fig. 2.24); it constituted about 46% of all the OWB rims. Direct rims with thickening (see S-15) were much less common, making up 7–8% of the OWB rims. Second only to direct rims in popularity were OWB rims that were outflared, not to horizontal, and not thickened (S-16 and S-17) (fig. 2.24); they made up a bit more than 36% of all the OWB rims. Far less common were OWB rims that were outflared, not to horizontal, and thickened (S-19 and S-20); they made up just under 4% of the OWB rims.

VERTICAL-WALL BOWL (VWB) RIM FORM

The most commonly noted form for VWB rims was the direct rim (S-21 and S-

22) (fig. 2.25), accounting for approximately six-tenths of all the VWB rims. The second most frequent VWB rim form was the direct rim with thickening (S-23), which made up about one-sixth of the VWB rims. Roughly one-tenth of the VWB rims were flared but not thickened, while one-fifteenth of the VWB rims had a small tab on the exterior (S-24).

OLLA RIM FORM

The most common rim form observed for Caño Seco *ollas* was outflared (not to horizontal), not thickened, and with no breaks (see S-26 and S-27) (fig. 2.26); this form accounted for just over one-half of all the *olla* rims. The second most common *olla* rim form was outflared (not to horizontal), not thickened, and with an interior break (S-28); this form made up one-sixth of the *olla* rims. *Ollas* with short (i.e., ≤ 1 cm) direct rims (see S-30 and S-31) made up 3–4% of all the *olla* rims, while *ollas* with long (i.e., > 1 cm) direct rims (S-32) made up almost 12% of the *olla* rims. A rare but distinctive *olla* rim form was the direct rim with exterior coils (S-33) (fig. 2.26), accounting for less than 1% of all the *olla* rims. This rim form shows similarities to the “*rodetes de arcilla*” that Zucchi (1975: fig. IV: 43–46, d; lam. 11-B) has identified for the Caño Caroní complex of the lower llanos (fig. 1.1). Another uncommon but distinctive *olla* rim form was tall and straight, with an outflared lip (S-34) (fig. 2.26); this form made up about 2% of all the *olla* rims.

BUDARE RIM FORM

The most frequently observed *budare* (or griddle) rim form was straight (see S-37 and S-38) (fig. 2.27); this form accounted for four-tenths of all the *budare* rims. The second most common *budare* rim form was upturned (S-39), making up about three-tenths of the *budare* rims. The third most common *budare* rim form was straight with exterior coils (S-40), which made up one-fifth of all the *budare* rims.

FEET

Feet were observed on 7.75% of the Caño Seco-complex diagnostics. This is a higher relative frequency than was noted for the Curbatí complex (2.12% of all diagnostics), but lower than that of the Gaván complex (8.4% of all diagnostics). Solid feet made up four-tenths of all Caño Seco foot supports, while conical feet (see S-52) made up about one-tenth of all supports, and cylindrical or tubular feet (S-53) made up a bit less than one-fifth of all supports (fig. 2.28).

DECORATION

About 12–13% of the Caño Seco-complex diagnostic sherds displayed some kind of decoration. This is a lower relative frequency than was observed for the Gaván complex (about 26% of diagnostics) or the Curbatí complex (about 38% of diagnostics). The most common form of Caño Seco decoration was slipping, which was found on seven-tenths of the decorated sherds. The convex-wall bowl rim in S-6 had red slip on the exterior (fig. 2.23). The example shown in S-32 is an *olla* rim with cream-colored slip on the exterior surface and brown-colored slip on the interior rim (fig. 2.26). Monochrome painting was observed on about 13% of the decorated sherds. Incising (S-14, S-25, and S-55) (fig. 2.28) was noted on roughly 7% of the decorated sherds. Expressed in terms of total diagnostics, incising was found on just 0.8% of all the Caño Seco diagnostics. This is a lower relative frequency than we recorded for the Curbatí complex (17% of diagnostics) but slightly higher than we observed for the Gaván complex (0.6% of diagnostics). Punctations (S-4, S-56) were recorded on about 5% of the decorated Caño Seco sherds.

CHUPONAL COMPLEX

As reported in chapter 4, our regional survey discovered at least 10 sites with artifacts that clearly postdated the pre-Hispanic period, including fired bricks, glazed pottery, porcelain, glass, and metal artifacts (fig. 4.5, table 5.5). We assigned these occu-

pations to the Chuponal complex, which we would tentatively date to A.D. 1550–1850 (table 2.1). In 1993, Rafael Gassón conducted a preliminary classification of Chuponal materials from the sites of B99, B44, B76, and B42. Gassón was assisted in this analysis by Dr. David Watters of the Carnegie Museum of Natural History, Pittsburgh. Gassón assigned type designations to the Barinas materials by drawing on the classification developed for Dr. Watters's Lesser Antilles collections. In the following section we present a summary of Gassón's report.

B44-0932 (FUNDO NUEVA ESPARZA)

There were four sherds in this provenience from B44 of Type 19: "blue and green-edged pearlware," the date range for which was given as 1780–1830. The vessel forms represented were all shell-edged plates. Gassón gave the origin as British and cited these comments by Hume (1970: 129–131): "Pearlware is undoubtedly the most common ceramic item found on sites of the early nineteenth century. ... Although pearlware had been used for everything from closetool pans to eggcups, it is most commonly found in the form of shell-edged plates with rims painted in either blue or green".

There was one sherd noted of Type 4: "underglaze polychrome pearlware, directly stenciled floral patterns in bright blue, orange, green, and a pinkish red" (Hume 1970:129). Gassón gave a date range of 1820–1840 and recorded the origin as British. Gassón commented that this was a "very common and popular ware among the poorer classes in England. Very abundant and cheap".

Gassón reported a single sherd of Type 13: "annular wares" pearlware (Hume 1970:131). He noted a date range of 1790–1820 and gave the origin as British. He commented that this was a "very popular ware too". Since the fragment is too small, the identification is only tentative. Gassón also reported two other types of pottery from this collection at site B44, noting that "they could not be classified," as well as some pieces of fired bricks.

B44-0046 (FUNDO NUEVA ESPERANZA)

In surface collection B44-0046, Gassón identified three fragments of Type 19: blue and green-edged pearlware (specifically, two blue and one green). He also noted one piece of Type 4: underglaze polychrome pearlware. Finally, he noted nine other pottery types that he could not identify, as well as some fragments of fired bricks.

B76-0078 (FUNDO LAS DELICIAS)

Gassón identified three Spanish olive-jar fragments (probably all from the same ves-

sel) from surface collection B76-0078. Citing Deagan (1987: 34), he suggested that these were from a “Middle-to-Late” olive jar, basing his suggestion on their wall thickness—about 10 mm, “somewhat thicker than early-style jars.” He also noted one fragment of unidentified porcelain.

B42-0044 (FUNDO SAN ANTONIO)

From surface collection B42-0044 Gassón reported six fragments of contemporary pottery, consisting of rim sherds with black and blue lines.

CHAPTER 3. THE REGIONAL SURVEY

Our fieldwork in the high llanos and adjacent piedmont of the Andean cordillera in Barinas state began with a reconnaissance in early January 1982. Prior to this first trip to the region, we had met with Erika Wagner and Alberta Zucchi of the Departamento de Antropología at the Instituto Venezolano de Investigaciones Científicas (IVIC) in Altos de Pipe. Alberta Zucchi had given us the name of an avocational archaeologist in Barinas named Pablo Novoa Alvarez (fig. 3.2), who in his spare time was a serious photographer and president of the Centro Arqueológico “Kuayú” (see chap. 1). The “Kuayú” group had just published a report on the petroglyphs and other sites they had explored (see Centro Arqueológico “Kuayú”, 1981). Also mentioned in the report were some mound sites, which were located south of the Panamerican highway, out on the expanse of high llanos.

Novoa Alvarez kindly agreed to show us the sites he knew. We visited a dozen sites, including the petroglyphs of Las Lajitas (B5) and the mound sites of Cerro Mijaguas (B1) and Los Morritos (B2), and ending with the impressive petroglyphs and adjacent habitation site at Capitanejo (B7, B14) (see fig. 3.1). This initial reconnaissance allowed us to familiarize ourselves with the nature of the region’s prehistoric settlements, in both the high llanos and the lower piedmont, and to plan our investigations in the region.

We returned to Barinas in July 1983 to establish our field headquarters in Barinas city and to begin the first of five seasons of systematic regional survey in our 450 km² study region. We carried out regional survey from July 15–August 23, 1983; January 5–10, 1984; July 19–August 16, 1984; January 4–8, 1985; and July 10–August 23, 1985. Additional survey was carried out before and sporadically during our 1986 season of test excavations, usually to follow up on additional information given to us about sites in the vicinity of the sites undergoing excavation.

We adapted the regional survey techniques that we were familiar with from

highland Mesoamerica to the highly vegetated and demarcated landscape in the western Venezuelan llanos. We had blue-print copies of 1:25,000 aerial photographs taken in October–December 1976 from the Ministerio de Agricultura y Cría; unfortunately, the aerial photo coverage available to us in 1983 stopped north of the Panamerican highway that skirts the lower Andean piedmont because the forested Andean Cordillera lies close to the border with Colombia and was deemed politically sensitive at the time. Nevertheless, we did have topographic maps of the entire study region at the scale of 1:100,000 with 20 m contour intervals prepared in 1977 by the Dirección de Cartografía Nacional of the Ministerio de Obras Públicas.

The regional survey began on July 15, 1983, as an informant-based survey, with the assistance of María Andueza G., a student member of the Centro Arqueológico “Kuayú”. First, we returned to the sites that we had visited in January 1982. Practically all the prehistoric sites in this cattle-ranching and farming region are located within fenced-in ranches and farms (*fundos*). The informant-based survey procedure involved entering each ranch or farm through the multistranded, barbed-wire *falso* or metal-tube swinging gate (*portón*) at the road and stopping at the main house to show the letters of permission that we had to carry out this work to the owner—or, more likely, the manager (*encargado*)—and to ask permission to survey the ranch. There was a clear and sometimes protracted protocol that we observed in these first encounters with the region’s friendly inhabitants; often, wooden chairs were brought out for us to sit on, and tiny cups of coffee (*cafecitos*) were offered. Frequently, the *encargado* was in a distant pasture, and we waited for him to return; if the *encargado* was not on the premises, we returned later in the day or the next day. Occasionally, the *encargado* felt compelled to check with the owner either by ham radio or when the owner next visited the ranch on a weekend or holiday before giving us permission to

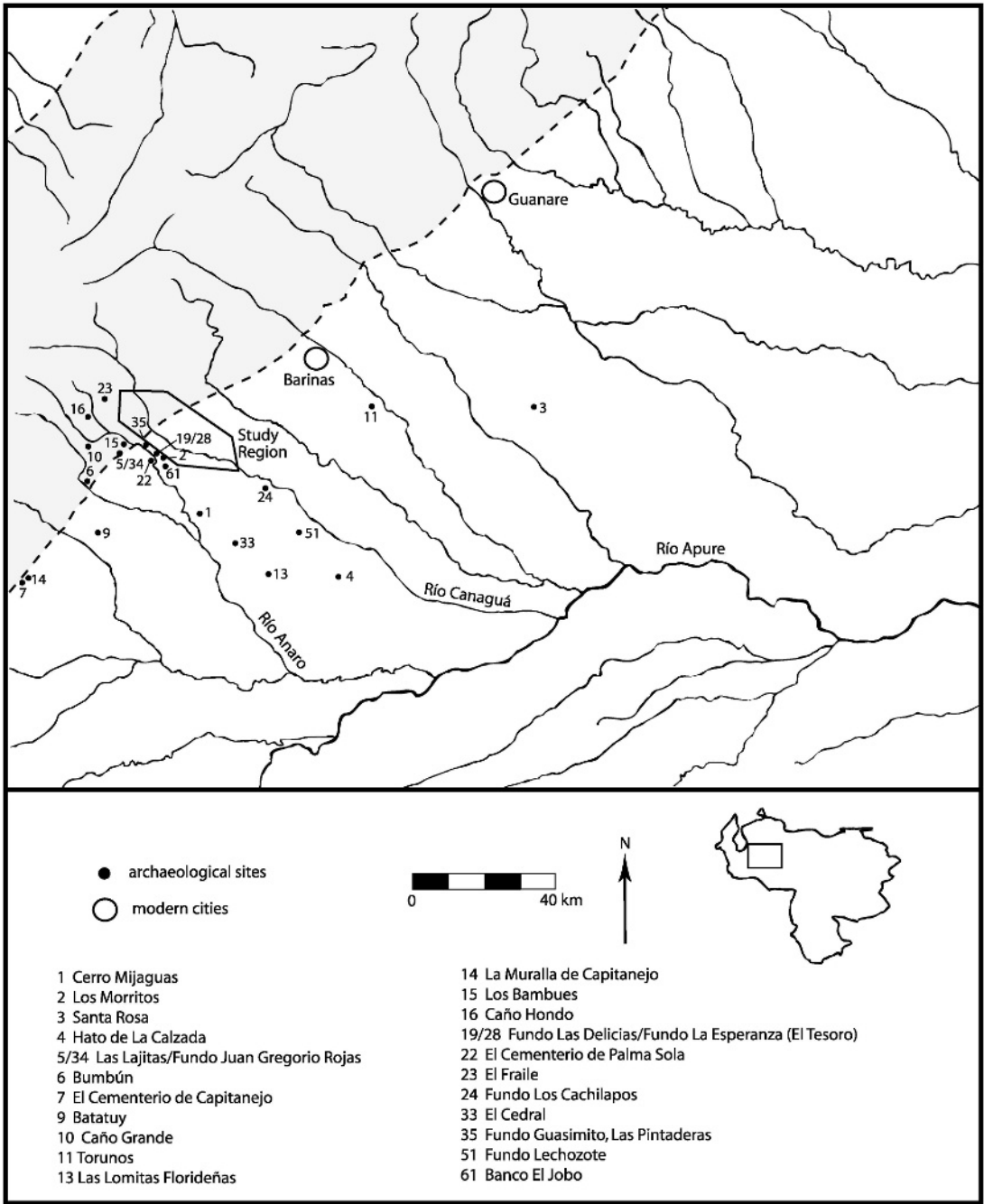


Fig. 3.1. Map showing location of study region in high llanos and Andean piedmont and the locations of other archaeological sites described in this report.



Fig. 3.2. Pablo Novoa Alvarez of the Centro Arqueológico “Kuayú” tests the inundated trail across the savanna on one of our first visits to the regional center of El Gaván in July 1983.

walk over the property. During the coffee-drinking sessions, we solicited information about any mounds (*cerritos*), causeways (*calzadas*), stone or ceramic artifacts (*tiestos*), or petroglyphs on the property. Sometimes the sight of a ground-stone *metate* being used by the inhabitants as a basin at the house’s water pump was a starting point of inquiry. Occasionally, our informants showed us artifacts that they had collected over the years from a site on the property and stored in their house (fig. 4.114). We acquired a tremendous amount of information about sites this way, not only about findings on a ranch itself in years past, usually when holes were dug to erect the ubiquitous barbed-wire fence posts, but also about other sites “over yonder” (fig. 3.3). We jotted this information down in notebooks: the name and general location of the ranch on which a purported site lay; directions to get there; the name of the owner or the *encargado*; and the purported ar-

chaeological remains. These leads would be followed up on another day.

At the conclusion of our meeting, a member of the family would lead us to some feature of interest on the property or to a spot where some artifacts had been discovered in the past (figs. 4.257, 4.265). We then surveyed the ranch on our own, by walking across pastures and along roads and paths, searching for any surface remains and artifacts that might be visible in exposed road cuts, ditches, construction zones, agricultural plots (*conucos*), corrals, and fence posts. When we identified a site, we assigned it a number with a “B” prefix (for Barinas), as in the B1 designation for the site of Cerro Mijaguas. We spent considerable time searching for surface remains to: (1) determine the site’s areal extent; and (2) collect a general sample of ceramics, lithics, polished-stone and ground-stone artifacts. Surface collecting proved to be challenging in this savanna



Fig. 3.3. Armando Jiménez, standing at the entrance to Juan de Dios's house on the *vía* Las Peñitas, gives María Andueza G. information about sherds turning up (at a depth of two "*cuartas*") in the fence-post holes at Fundo La Providencia (B63).

grassland and forested environment. We scoured the present-day ground surface to fill a cloth bag with sherds. Although our surface collections consisted of up to 269 sherds and weighed up to 5,050 grams (table 4.1), there were a handful of sites for which our surface collections were made up of one or two sherds, and there were a few sites where we were not able to recover any sherds. The sites in the latter category were identified using other criteria as well as on informants' reports about artifactual findings in the past. Each surface collection was assigned a provenience number consisting of the site designation followed by a hyphen and the collection number (e.g., B7-0001). We used a continuous numbering system for the surface collections, irrespective of site, to avoid the possibility of any later confusion about surface-collection provenience.

The site's location and extent was recorded on our topographic maps and aerial

photographs in the field (fig. 3.4). A site report was written in a field notebook that included information about the site's local name, which was usually the name of the ranch or farm in which it lay and the name of the owner. We recorded the site's location with respect to modern-day towns and roads, but also with respect to topographic setting and nearby watercourses. We recorded the present-day vegetation and land use and noted any evidence of looting or other forms of destruction to the site. María Andueza G. prepared petroglyphs for photography by outlining the motifs with chalk (figs. 4.202, 4.294). We also described the number and nature of the petroglyphs (fig. 4.27). All mounded architecture was described, with approximate basal dimensions and mound heights. We also took photographs in black-and-white and color at each site to record its location and to document any petroglyphs, mounded architecture, and other features of interest. We



Fig. 3.4. Spencer records the location of site B81 on a topographic map and an aerial photograph.

recorded the associated surface collection and sometimes noted “sherd hot spots” (Gassón, 1998: 60) produced by some sub-surface disturbance. There were sites where we performed multiple surface collections because they offered either multiple sherd hot spots or a relatively abundant distribution of sherds on their surfaces. We made a preliminary assessment of the site’s chronological occupation or ceramic phase on the basis of the material we collected and the presence of any mounded architecture and earthworks at sites on the high llanos.

A site-size estimate was recorded, as well, using an areal measurement of the site’s extent on the aerial photograph or topographic map.

Finally, a sketch map was drawn of the mound sites on an 8 ½” by 11” sheet of millimetric graph paper that included the visible mounds with their basal dimensions and their heights, and any causeways, house mounds, and other surface finds. The maps included notes about tape-measured or paced distances, as well as about the locations of multiple surface collections.

CHAPTER 4. BARINAS SURVEY SITE DESCRIPTIONS

INTRODUCTION

The 1983–1986 Barinas survey located 103 sites. A description of each site follows, based on our field report, aerial photographs and topographic maps, surface-collection data (table 4.1), photographs in black and white and color, and sketch map or topographic map (when applicable). We rely also on previous reports about some of the sites we visited in January 1982 and then revisited at the start of our regional survey in July 1983.

The sizes of the sites drawn on the aerial photographs were measured with a compensating polar planimeter (K&E 620005). The estimated sizes of the sites that were located only on the topographic maps are based on site measurements taken in the field with a tape measure or by pacing.

Sites in the piedmont of the Curbatí, Gaván, and Caño Seco complexes were classified simply as petroglyph sites and habitation sites. For the sites in the high llanos of the Gaván complex, we were able to construct a site classification based on their estimated size or surface area measured in hectares, the nature and amount of visible mounded architecture on their surfaces, and their degree of connectivity to the region's network of causeways. The following site classification was used for the Gaván-complex site descriptions:

- (1) Regional center: A large site more than 10 ha in size with large-scale mounded architecture and elongated plaza, associated with several causeways that lead from the center to other lower-order settlements.
- (2) Second-order center: A site of 5–10 ha that features visible mounded architecture, often reminiscent of the regional center's linear layout of mounds. A second-order center is generally linked by causeway to the regional center.
- (3) Third-order habitation site: A site of 1–5 ha with no visible mounded architecture. Some third-order habitation

sites in the high llanos are located near or along a causeway leading to a higher-order center.

- (4) Drained-fields site: An area of the floodplain that was artificially modified in pre-Hispanic times to create a network of canals and fields on which to cultivate maize, manioc, and other crops (see B27, B52, and possibly also B92).

The site descriptions are brief and of a general nature; their coarse-grained quality reflects the challenges of identifying and defining sites in a highly alluviated landscape that today features savanna grassland and forest vegetation. The lengthy entries for site location reflect the relative accessibility of many sites on farms and cattle ranches (*fundos*). We arbitrarily chose the Panamerican highway bridge over the Canaguá River as the demarcation between the lower Canaguá River and the upper Canaguá River; in the western half of the study region, the highway does coincide with the ecotone between the high llanos and the Andean piedmont. The reader should keep in mind that the regional survey was carried out in the days before GPS (Global Positioning System) instruments became widely used in archaeology to record site locations. As discussed in chapter 3, the site sizes are of an approximate nature due to the paucity of sherds and other artifacts visible on the ground surface (tables 5.1–5.5). For the classification of sites on the high and middle llanos outside of our study region (fig. 3.1) we erred on the side of caution by assigning them to a more general category as Osoid sites, probably related to the Gaván complex (see chap. 2). Together with the accompanying settlement-pattern maps (figs. 4.1–4.5), surface-collection data (table 4.1) photographs, contour maps, and sketch maps, the site descriptions constitute a general report of our findings during the extensive regional survey, the first phase of our multistage investigations in the high llanos and Andean piedmont.

TABLE 4.1
Summary Ceramic Data from Surface Collections

Provenience	Total weight (g)	Total count	Curbatí count	Gaván count	Caño Seco count	Chuponal count	Comments
B2-0067	1,885	212		212			
B2-0068	412	54		54			
B7-0001	191	41	41				
B7-0002	302	62	62				
B8-0006	225	72	72				looters' pit by Piedra 1
B12-0005	404	20		20			principally from Mound A
B12-0023	90	10		10			from <i>madrevieja</i> edge
B13-0003	720	27		27			
B15-0004	2,382	96		8	88		
B15-0031	1,829	69		39	30		
B15-0050	45	10			10		
B16-0007	1,320	86	86				
B16-0030	5,050	269		269			
B17-0021	350	41		41			
B17-0090	353	18		18			
B19-0025	419	16		16			
B20-0018	1,774	59		1	58		
B22-0024	2,763	86		86			
B25-0026	37	2		2			from Mound A
B25-0931	1,635	111		105	6		
B26-0028	203	24		24			
B28-0032	484	26			26		
B29-0033	2,152	75			75		
B30-0034	1,228	132		132			from <i>laguna</i>
B30-0035	208	42		42			from Mound B
B30-0048	14	1		1			from Mound D
B33-0037	1,302	59		59			
B35-0036	987	38				38	
B36-0038	175	59	58	1			
B37-0039	1,310	53			53		
B38-0040	358	51		51			
B39-0041	1,462	125			125		
B39-0047	290	13		9	4		
B40-0042	155	56	56				
B40-0081	140	43	41	2			
B40-0878	55	9	9				
B41-0043	1,063	89		89			
B42-0044	55	24				24	
B43-0045	1,825	54			54		
B44-0046	442	80				80	
B44-0932		8				8	see chap. 2
B45-0049	236	13		13			
B47-0051	8	4		4			
B48-0052	450	51		25	26		
B48-0053	533	67		67			
B49-0054	2,422	85		3	82		
B50-0055	150	4			4		
B51-0056	157	20		20			from main mound
B53-0057	321	78		78			

TABLE 4.1—(Continued)

Provenience	Total weight (g)	Total count	Curbatí count	Gaván count	Caño Seco count	Chuponal count	Comments
B56-0058	177	20			20		
B57-0059	15	1		1?		1?	
B58-0060	84	9			9		
B59-0061	63	6			6		
B60-0062	1,913	183		10	173		
B61-0063	2,000	62			62		
B63-0064	1,265	61			61		
B64-0065	293	35		35			
B64-0100	1,083	100		99	1		
B65-0066	3,260	87			87		
B67-0069	18	8		8			
B68-0070	636	25			25		
B69-0071	213	17		17			
B70-0072	23	3		3			
B71-0073	8	1		1			
B72-0074	305	26		26			
B72-0075	820	50		50			
B74-0076	892	34		34			
B75-0077	17	3		3			
B76-0078		4				4	see chap. 2
B77-0080	127	12		12			
B78-0082	10	4		4			
B79-0083	340	30		30			
B81-0084	769	72		72			
B85-0085	18	1			1		
B86-0086	865	136		136			
B87-0087	8	8		8			
B88-0088	165	17		17			
B91-0089	605	8			8		
B92-0091	179	25		25			
B94-0093						1	
B95-0094	205	11			11		
B96-0095	12	3		3			
B97-0022	545	43		43			
B98-0029	236	11		11			
B98-0096	1,242	71		71			
B99-0079	865	57		15	35	7	
B100-0097	1,232	46		46			
B101-0099	3	2		2			
B102-0450	245	14	1?	1	12		
B103-0451	89	8			8		

BARINAS SITES 1–103

B1

SITE NAME: Cerro Mijaguas.

OTHER SITE DESIGNATION: El Cerrito, Cerro Conchero, Montículo site 8 (Centro Arqueológico “Kuayú”, 1981: foldout map), C10 (Gassón, 1998: table 2.2).

SITE LOCATION: B1 is located on a *banco* at the western edge of the Montaña de Concha that extends west of the Ticoporo River to the Sabana La Unión (fig. 3.1). Gassón recorded the site's coordinates with GPS instrumentation during his 1995–1996 survey of the greater Cedral region and lists them in table 2.2 of his

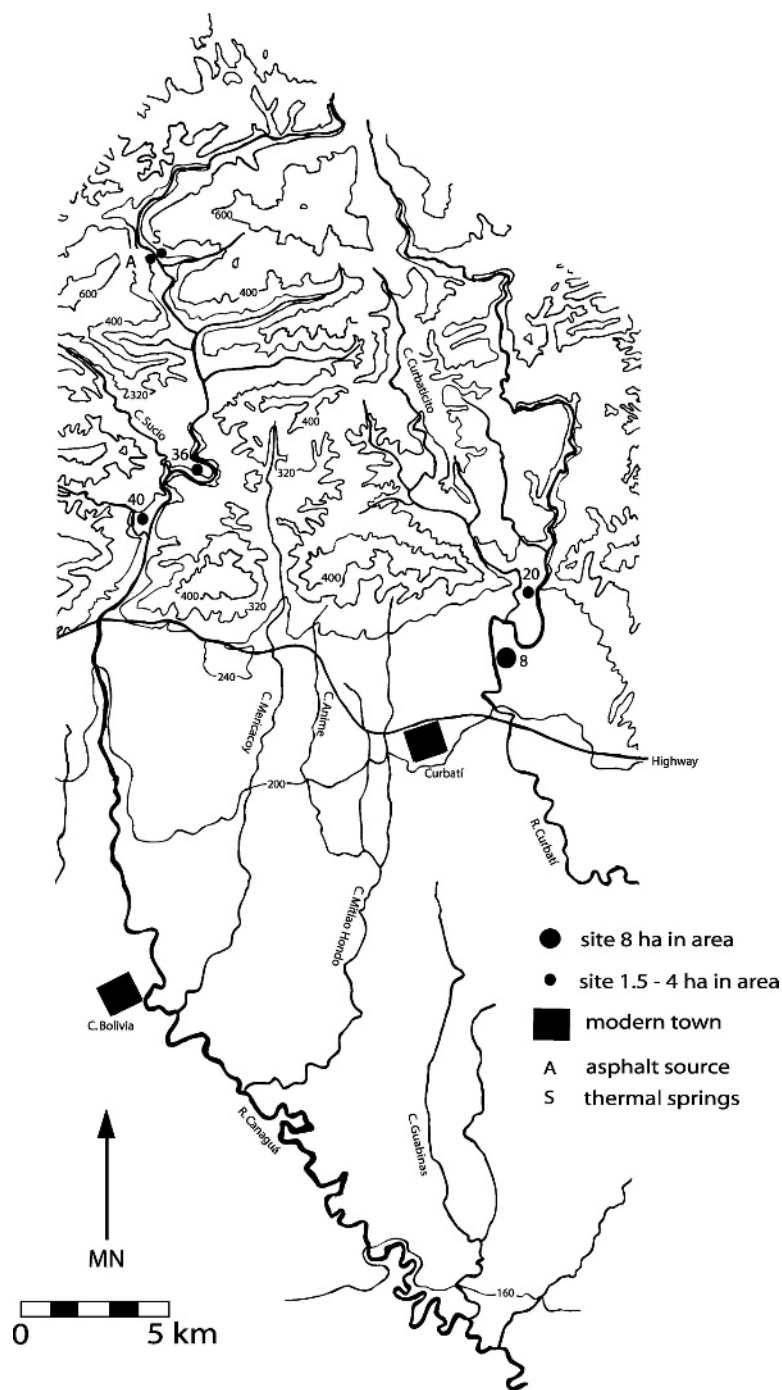


Fig. 4.1. Settlements of the Curbati complex.

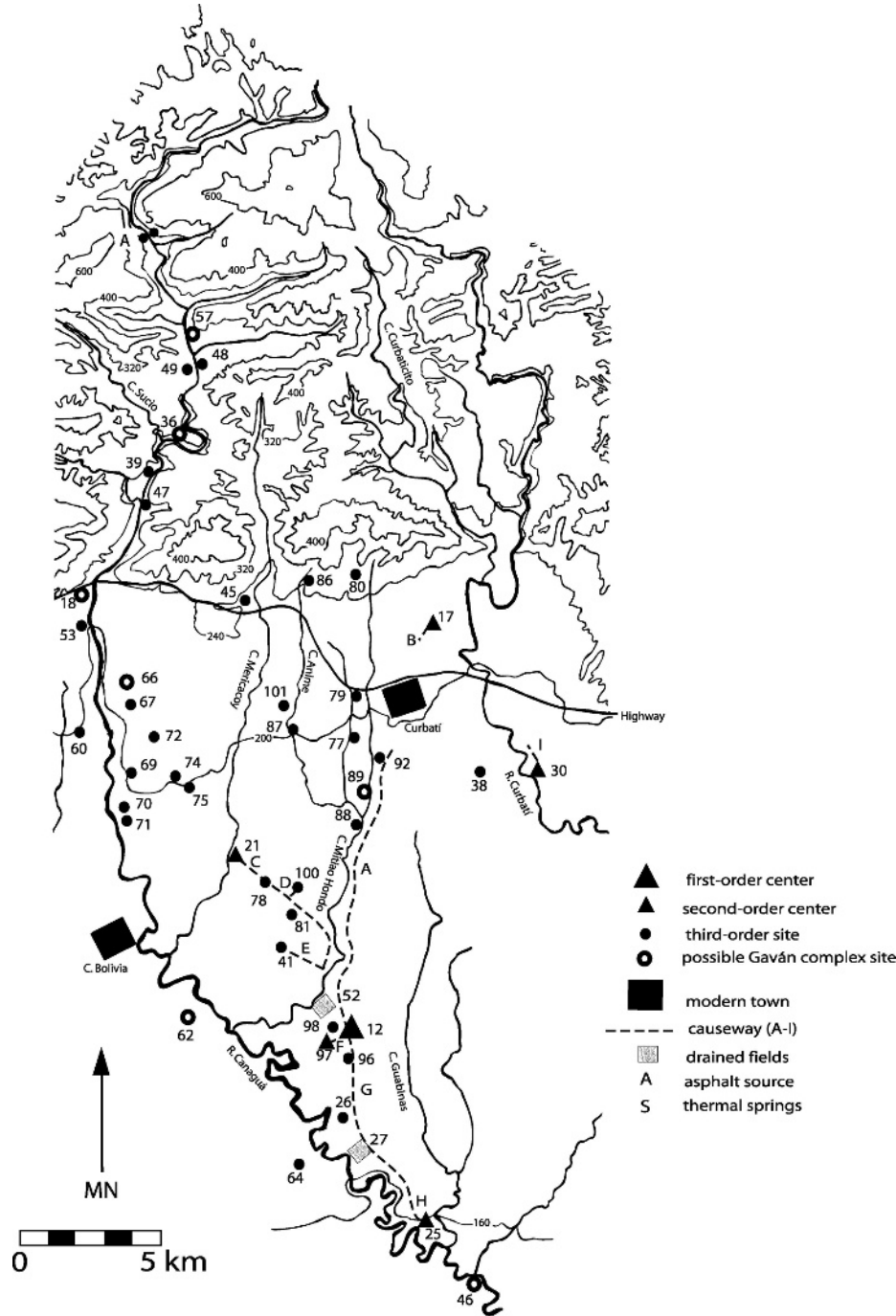


Fig. 4.2. Settlements of the Gaván complex.

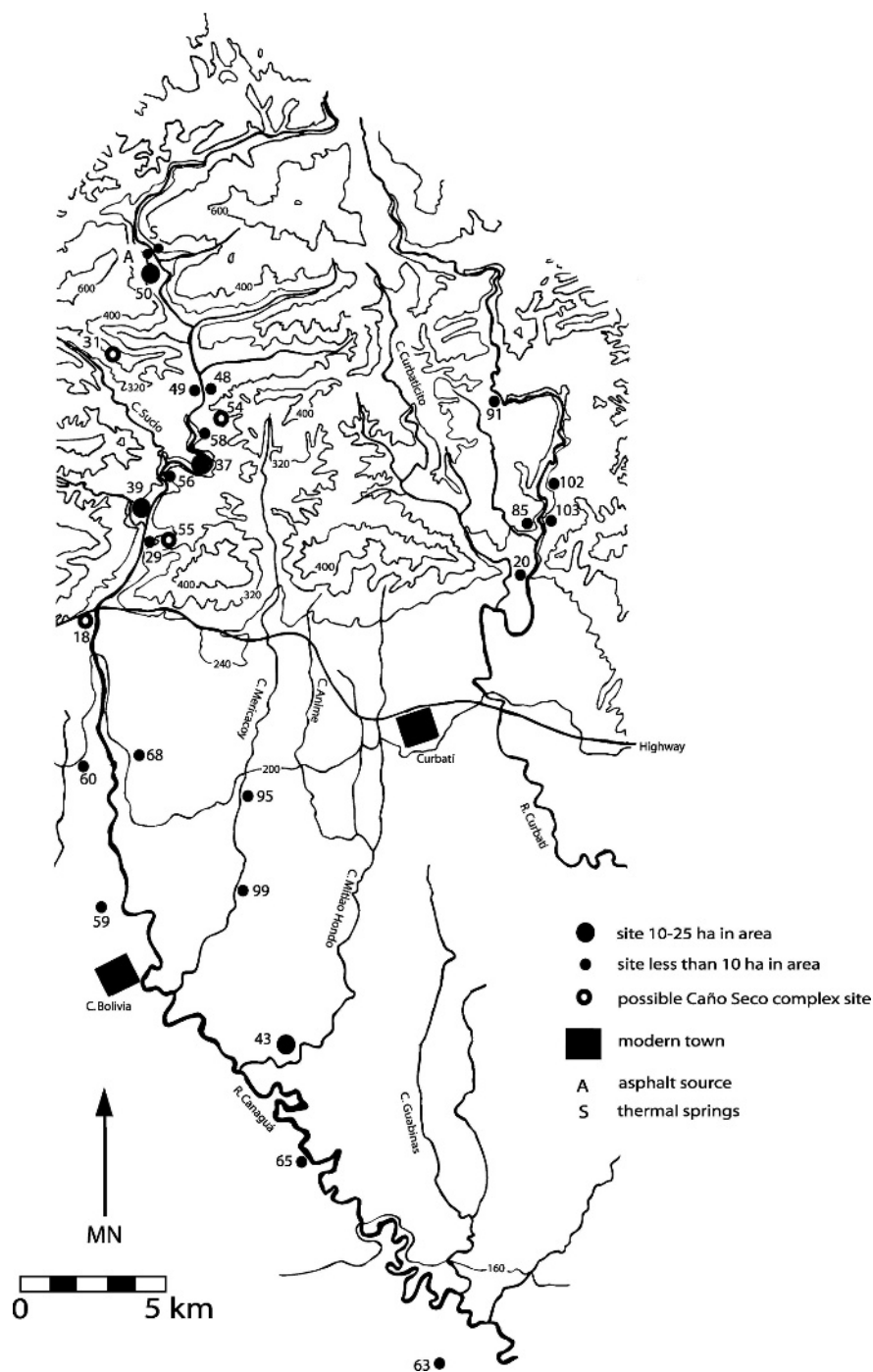


Fig. 4.3. Settlements of the Caño Seco complex.

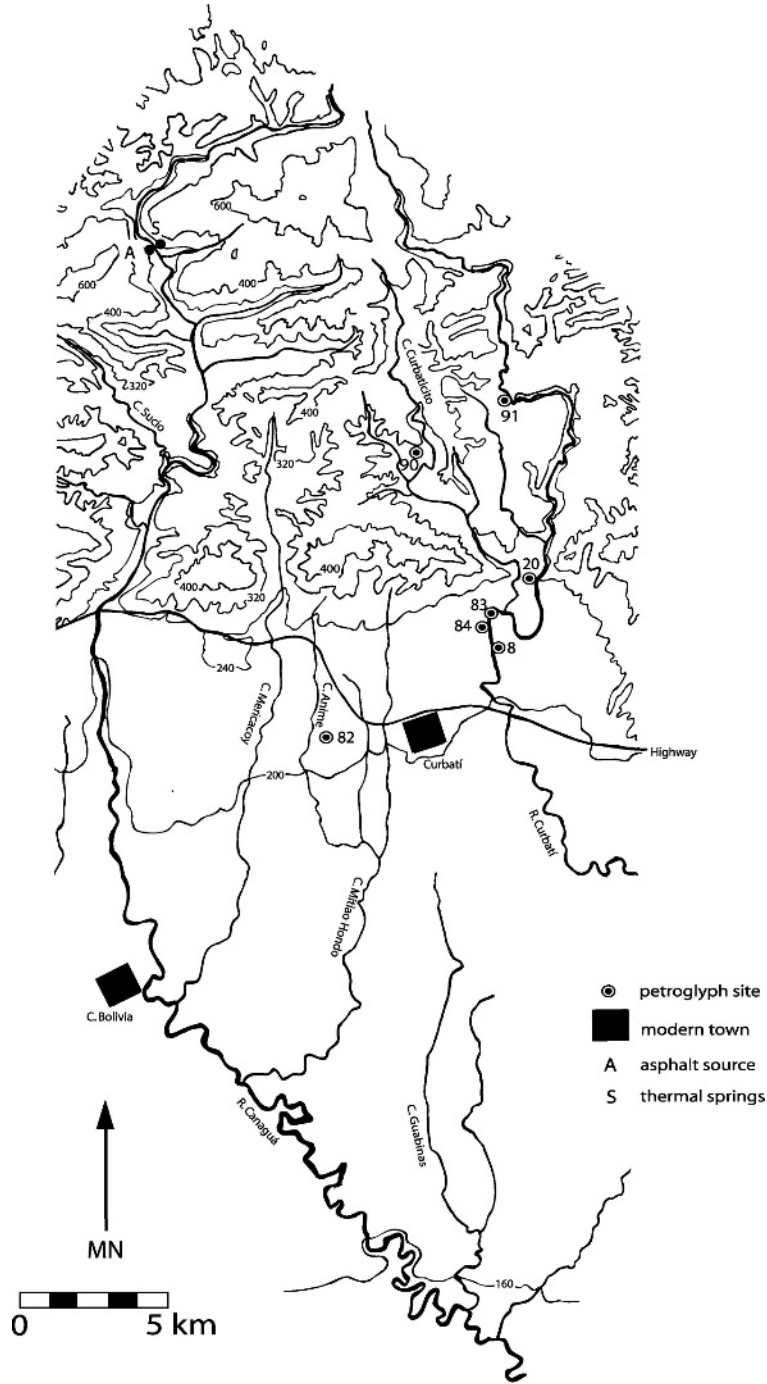


Fig. 4.4. Locations of petroglyph sites.

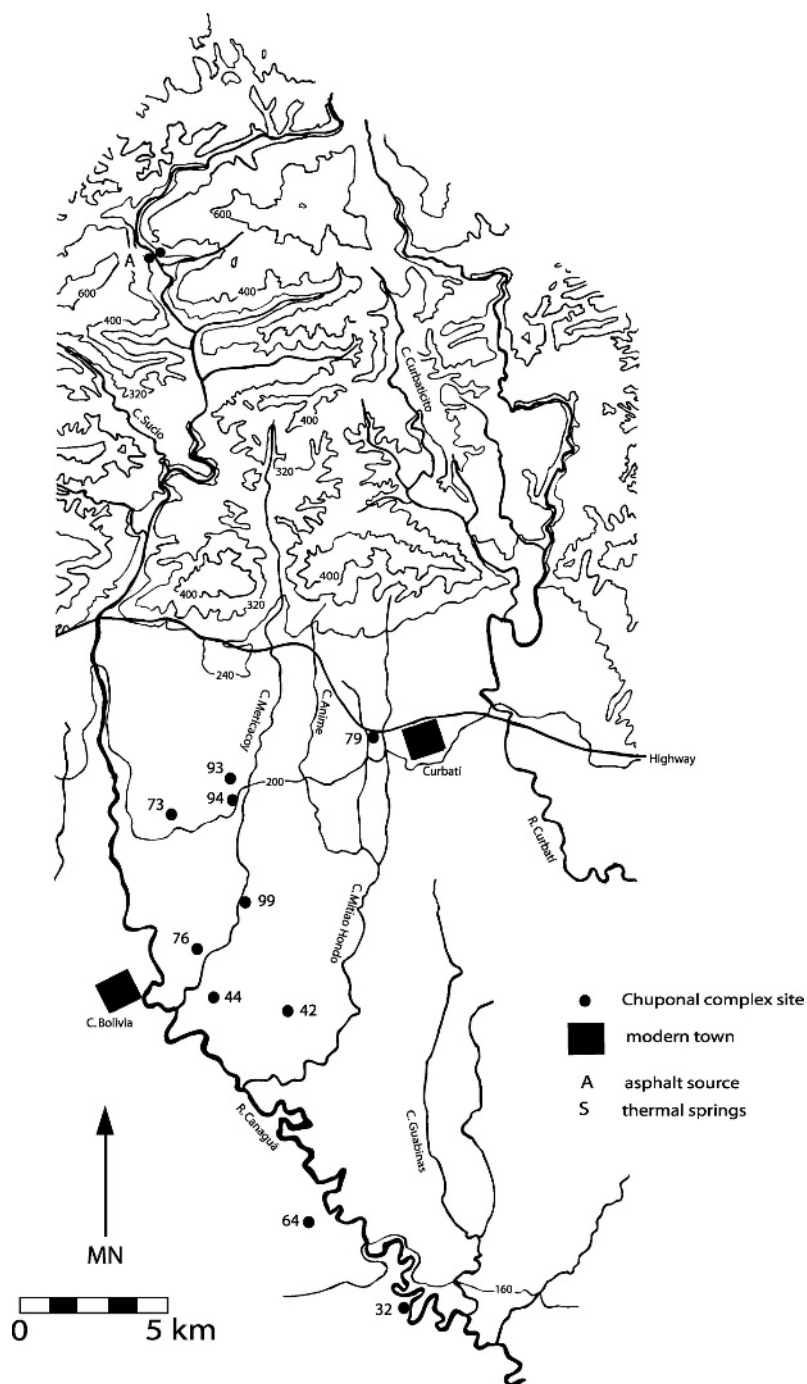




Fig. 4.6. View from Mound B south to Mound C at Cerro Mijaguas (B1).

doctoral dissertation as $8^{\circ}12'57''\text{N}$ and $70^{\circ}31'50''\text{W}$ (Gassón, 1998: 83). The Caño Colorado borders the site's northern and eastern edges. The *banco* is drained on its western flank by the Caño Rodeo, which traverses the Sabana La Unión and empties into the Acequia River. The site lies principally on the Finca El Cerrito, owned by Domingo and Vicente Molina. After driving south and east from Ciudad Bolivia for approximately 14 km on the gravel road that passes through Mijaguas toward Boca de Anaro, take the first left fork onto the Montaña de Concha gravel road or *vía*. The entrance to Finca El Cerrito is marked by a red iron gate about 700 m along the *vía* Montaña de Concha after taking the left turn. The Molinas's farmhouse (*finca*) is across the road a short way to the southeast on the *vía* Montaña de Concha. We determined that the site extends south and west of the *vía* for at least 150 m across the Sabana La Unión. The site extends northward onto the

adjacent Fundo El Desvelo as far as the Caño Colorado.

VEGETATION: Much of the site lies on grassland pastures maintained by the Finca El Cerrito (fig. 4.6). Mound B's entire surface is covered with palm trees. A denser stand of palms and other trees extends from the base of Mound A to the north and east in the direction of the Caño Colorado, in what can be considered the western edge of the forested Montaña de Concha. The pastures on the Fundo El Desvelo lay ungrazed and overgrown at 1.5 m or more in height in early January 1982.

ARCHAEOLOGICAL REMAINS: Mound C lies alongside the *vía* Montaña de Concha and is one of three large earthen mounds visible on the surface of Finca El Cerrito (fig. 4.7). Three major mounds define the northern, northwestern, and eastern sides of a 75 m-wide plaza that is oriented approximately $\text{N } 45^{\circ}\text{W}$ (fig. 4.7). Mound C had been partially bulldozed in the process of

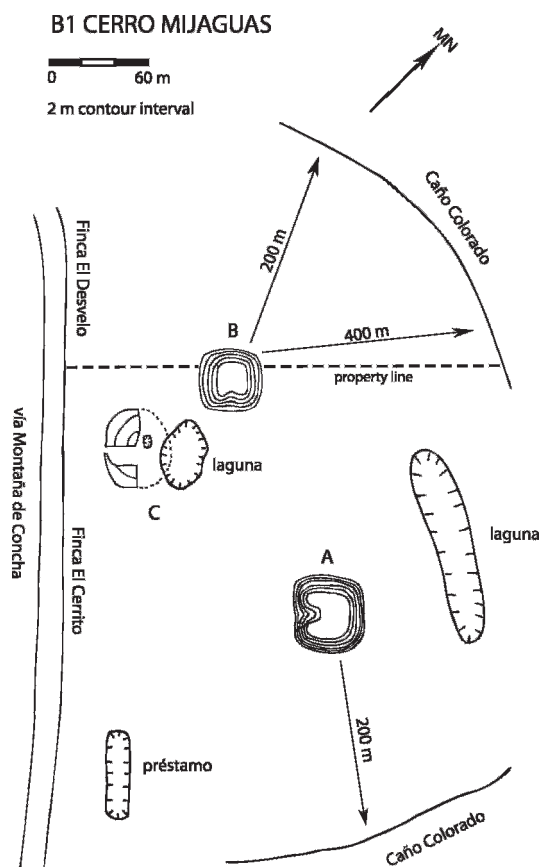


Fig. 4.7. Sketch map of Cerro Mijaguas (B1), showing location of main mounds.

enlarging a man-made *laguna* for cattle on its northern side and as a *préstamo* during the building of the gravel road (fig. 4.8). It is reported that the bulldozer exposed many reconstructible ceramic vessels in Mound C's fill and other artifacts, including a polychrome painted female figurine that lacks a head and reportedly measures 28 cm in height (Centro Arqueológico "Kuayú", 1981: 34). The details of her dress and body painting were rendered in red-brown paint on a yellowish-white slipped surface (Centro Arqueológico "Kuayú", 1981: fig. 41). Although approximately half of the north-eastern side of the mound has been bulldozed, we were able to reconstruct Mound C's overall basal dimensions as having been 48 m by 40 m. Mound C is about 4 m high, and we estimate that its top surface measured approximately 15–18 m by 10 m wide.

In March 1979, a team led by the late local historian José Esteban Ruiz Guevara and the writer José Vicente Abreu carried out the excavation of a 1.5 m-wide trench across the center of what remained of Mound C. A group from the Audio-Visual Department of the Universidad Central de Venezuela filmed a documentary about the excavation. It was reported to us that the excavated trench exposed human burials that lay beneath lenses of charcoal and ash. The funerary accompaniments included polished-stone beads and pendants, Osoid polychrome painted ceramic vessels—notably, biconvex bottles and pedestalled cups—and six polychrome painted female figurines showing details of dress and body painting on a white-slipped surface (Centro Arqueológico "Kuayú", 1981: 34–44). These findings suggest that Mound C may have served as a burial mound, or that burials were interred under the floor of the residential structure that might originally have stood on Mound C (Curet and Oliver, 1998).

Mound B lies about 25 m north of Mound C and occupies the northern end of B1's plaza (fig. 4.9). The barbed-wire fence that marks the property line between Finca El Cerrito and Fundo El Desvelo climbs right over the northern side of Mound B. Mound B measures 38 m by 38 m at its base and 18 m by 18 m on top, and is approximately 10–12 m tall (fig. 4.7). The evident indentation along Mound B's eastern slope probably marks the eroded remains of a stairway or ramp that would have provided access from the site's plaza to the top of this mound situated at the plaza's northwestern end.

The site's principal Mound A lies approximately 75 m east across the plaza from Mound C. Mound A measures 48 m by 42 m at its base and rises 12–14 m in height, and its top surface measures 28 m by 25 m (fig. 4.10). The indented, eroded remains of a 3 m-wide stairway or ramp can be seen on Mound A's southwestern side, which faced the plaza (fig. 4.11).

Although the dense grassland cover thwarted the discovery of additional mounds and house mounds, we expect ad-



Fig. 4.8. Close-up of Mound C, facing west.



Fig. 4.9. View of front of Mound B from plaza, facing northwest.



Fig. 4.10. View of front of Mound A from plaza, facing northeast.



Fig. 4.11. View of side of Mound A from base of Mound B, facing east. The mound's eroded stairway or ramp is visible on its southwestern side facing the plaza.

ditional mounds to be reported at this site when it is revisited and mapped intensively by archaeologists. Indeed, when Gassón's team resurveyed the site, they noted the locations of four house mounds (Rey, 2003: 43, mapa 7). We determined that the site extends some 200 m north and 400 m east of Mound B to the Caño Colorado, an oxbow formation that circumvents the site and marks the southern edge some 200 m southeast of Mound A. The site extends south and west of the *vía* Montaña de Concha to the south and west across the Sabana La Unión for at least 150 m. Gassón and Rey's estimate of the site's size is 25 ha (Rey, 2003: 45). As Gassón also noted during his survey of the greater Cedral region in 1995 (Gassón, 1998: table 2.2), the site of Cerro Mijaguas provided sparse archaeological remains on the surface, which means that this site-size estimate should be considered a rough estimate.

Significantly, Gassón discovered that the site of Cerro Mijaguas was linked by causeway to the regional center of El Cedral (B33), 9.76 km to the southeast (Gassón, 1998: 64; Rey, 2003: 43, 51). On the basis of the site's size, mounded architecture, and causeway linkage to the El Cedral center, Gassón and Rey consider Cerro Mijaguas a secondary center of a regional polity centered at El Cedral (Gassón, 1998: table 2.2; Rey, 2003: 45). In their 2002 field season, Gassón and Rey mapped the site and excavated a 2 m by 1 m test pit approximately 100 m southeast of Mound C (Rey, 2003: mapa 7).

SITE MAP: Our sketch map appears in fig. 4.7. See also Rey (2003: mapa 7).

DISTURBANCE: The site of Cerro Mijaguas has suffered the effects of bulldozing and road building. Roughly half of Mound C has been bulldozed to enlarge a man-made *laguna* for cattle on its northern side and as a *préstamo* or source of dirt during the building of the gravel road, the *vía* Montaña de Concha (fig. 4.8). Another *préstamo* was created alongside the road some 150 m southeast of Mound C. The trench excavated in 1979 was not backfilled and is eroding more of what remains of Mound C (see also Rey, 2003: 43, mapa 7, foto 9).

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: In 1982, we estimated that B1 extended over at least 20 ha; an area measuring 15.62 ha was drawn on the aerial photograph, which should constitute a minimum estimate of the site's areal extent. Gassón and Rey currently estimate that the site extended over 25 ha (Rey, 2003: 45). Based on the site's size, mounded architecture, and causeway linkage to the regional center of El Cedral (B33), the site of Cerro Mijaguas is considered by Gassón and Rey to have been a second-order center of the El Cedral polity (Rey, 2003: 45).

DATE RECORDED: January 1982.

B2

SITE NAME: Los Morritos.

OTHER SITE DESIGNATION: Las Monjas, Palma Sola (Ruiz-Guevara, 1978).

SITE LOCATION: The site of Los Morritos occupies a *banco* directly adjacent to the Caño Ticoporo and probably extends east as far as the Caño El Burro (fig. 3.1). The dirt road from El Tesoro to Ciudad Bolivia passes through the site only 50–70 m northeast of the principal earthen mounds. From Ciudad Bolivia, the mounds lie approximately 1 km northwest from the fork off the old dirt road leading from Ciudad Bolivia to the ford across the Acequia River toward Palma Sola. The area of mounds is situated on Fundo Los Morritos, owned by Albino Moreno and his family, whose residential compound lies directly northeast of Mound B, along the southern edge of the *vía*. We determined that B2 extends northeast across the dirt road to El Tesoro onto the property of Fundo Las Monjas, owned by Silvino Toro, as far northeast as the Caño El Burro.

VEGETATION: The site's principal mounds lie on well-maintained cattle pastures of Fundo Los Morritos studded with palm trees and a few deciduous trees. Even the *vega* east of the forest-lined Caño Ticoporo is pastureland (fig. 4.12). Fundo Las Monjas, across the dirt road to the northeast, has also been largely cleared for cattle grazing. A forested *mata* stands some 200 m



Fig. 4.12. View of mound site B2 on 3 m-tall *banco* from *vega* east of Caño Ticoporo, facing north. Segment of possible *calzada* can be seen in the foreground.

northeast of the blue *fundo* house, and the gallery forest lining the Caño El Burro was being cleared and plowed for the cultivation of manioc, plantains, maize, and yams.

ARCHAEOLOGICAL REMAINS: Three earthen mounds dominate the main plaza of B2, which is oriented N 45°W (fig. 4.13). At the plaza's northwestern end stands the largest mound, Mound A, some 28 m east of the Caño Ticoporo (fig. 4.14). Mound A measures approximately 40 m by 38 m at its base; it is 4.5 m tall, and its top surface measures 15 m by 14 m. An indentation on its southern slope may mark the remains of a stairway or ramp that would have been used for access to the top surface of Mound A from the plaza. Mounds B and C lie 100–110 m southeast of Mound A, only 14 m apart and flanking the plaza's axis line (fig. 4.15). Mound B measures 28 m by 28 m at its base; it is 6 m tall, and its top surface measures 10 m by 11 m (fig. 4.16). Surface collection B2-

0068 consists largely of a sample of sherds from the Moreno family's compound directly northeast of Mound B. Directly across the plaza's 14 m-wide axis and a barbed-wire fence from Mound B lies Mound C, which is oval in shape, with maximal basal measurements of 24 m by 18 m (fig. 4.17). Mound C is 3.5 to 4 m tall, and its conical top measures 4 m by 5 m (fig. 4.18). Some 30 m southeasterly of Mound C lies a possible 1 m-tall mound that is aligned with respect to the site's N 45°W axis. We designated it Mound D. Although this possible mound has been heavily damaged by a bulldozer and by cattle, who aggregate on the mound's surface to drink from a watering trough erected on it, we estimate that it measures 24 m by 24 m at its base.

Finally, a possible *calzada*, approximately 12–14 m wide and 3 m tall, may have run along the western edge of the *banco* (figs. 4.12, 4.13). We traced the possible *cal-*

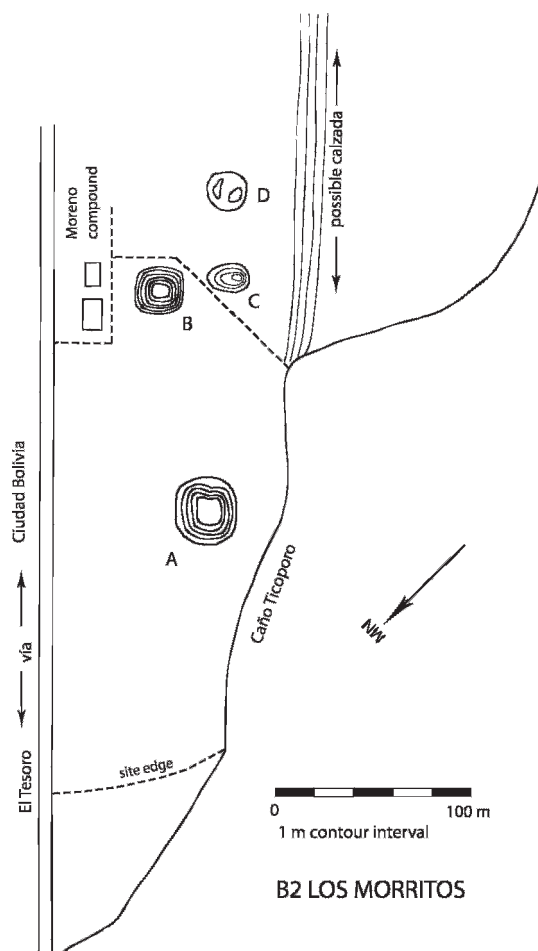


Fig. 4.13. Sketch map of Los Morritos (B2), showing location of main mounds.

zada from a bend in the Caño Ticoporo for a distance of 200 m at a bearing of approximately S 45°E. When site B2 is mapped intensively by archaeologists, this possible causeway should be investigated further.

During the course of four visits to Fundo Los Morritos, Fundo Las Monjas, and the adjacent *fundos*, we were able to extend the site's boundaries northwest and southwest to the Caño Ticoporo; we estimate that the site extended north of Mound A along the banks of the Caño Ticoporo for some 140 m. Some Osoid ceramics probably related to the Gaván-complex and chipped stone were recovered in the road cut that traverses the area of mounds in the direction of the *caño* and toward El Tesoro and

were added to surface collection B2-0068. This area circumscribing the plaza extends over 8.75 ha. Additional ceramics were recovered in the compound of Silvino Toro's blue house east of the dirt road on his Fundo Las Monjas, as well as in a *mata* and along the trail across the pasture some 200 m to the northeast of the blue *fundo* house. Most of the material recovered from this area of B2 came along the levee of Caño El Burro in a manioc and plantain field and in an adjacent field that had been plowed recently. Surface collection B2-0067 contains the material from the trail across the pasture and from the *caño* levee; it contains Osoid Gaván-complex ceramics (including some with red-painted surfaces), a figurine fragment, chipped stone, and ground stone. There are two possible interpretations for the distribution of Osoid Gaván-complex ceramics at B2: (1) that the material recovered from Fundo Las Monjas, the *mata*, pasture, and the Caño El Burro levee is a separate site, situated less than half a kilometer from B2 proper (the 8.75 ha circumscribing the plaza area), that extends over a minimum area of 2.5 ha; or (2) that B2 extends from Caño Ticoporo east across the entire *banco* to Caño El Burro, making for a site of some 40–45 ha in area. Since the son of the owner of the adjacent property north of Fundo Las Monjas, directly across the road from Fundo Los Morritos, reported seeing material in the Caño El Burro, our estimate of B2's areal extent is probably a minimal one.

SITE MAP: Figure 4.13.

DISTURBANCE: Mounds A and B have been the subject of some pot hunting, and Mound B is suffering from the encroachment of the residential compound directly east of it. Mound C has been more severely pot hunted and perhaps partially modified by heavy machinery on its eastern end. Mound D has been bulldozed and trampled by cattle that aggregate at the watering trough installed on its surface.

SURFACE-COLLECTION DATA: B2-0067 pertains to the portion of the site east of the dirt road on Fundo Las Monjas that may be a separate 2.5 ha site. B2-0068 is a sample of material from Mound B and



Fig. 4.14. View of front of Mound A at Los Morritos from plaza, facing N 45°W.



Fig. 4.15. View of main plaza of Los Morritos from the southeast, showing Mound B in grove of trees on the right, denuded Mound C on the left, and Mound A in the distant center, facing N 45°W.



Fig. 4.16. View of Mound B from Mound C, facing east.



Fig. 4.17. View of Mound B on left and Mound C on right, facing south.



Fig. 4.18. View of Mound C, facing south.

from the road cut along the area of mounds on Fundo Los Morritos.

SITE SIZE AND CLASSIFICATION: B2 has been drawn on the aerial photographs as two areas: (1) the area of mounds (8.75 ha); (2) the area to the east along the Caño El Burro (2.5 ha). In view of the reports of additional material, we have good reason to think that the site may extend over an area of 40–45 ha from the Caño El Ticoporo east to the Caño El Burro. B2 is classified as a secondary center. Similar red-painted Osoid ceramics were recovered at site B64 (Fundo de los Méndez), which may have been a satellite village of the same polity.

DATES RECORDED: January 1982; July 1983; and July 16–19, 1985.

B3

SITE NAME: Santa Rosa.

OTHER SITE DESIGNATION: Montículo site 10 (Centro Arqueológico “Kuayú”, 1981: foldout map).

SITE LOCATION: The site of Santa Rosa is well outside the study region, east of the city of Barinas and the Santo Domingo River in the Distrito Rojas (fig. 3.1). We visited the site briefly one afternoon with Pablo Novoa Alvarez of the Centro Arqueológico “Kuayú” during our initial visit to Barinas in January 1982 and recorded little information about the site. It is situated along the paved road that leads southward from the Panamerican highway at La Veguita to Puerto Nutrias, east of the Masparro River and west of the Chorroco River. The *fundo* on which the site is located extends along the east side of the paved road, south of Mijagual in Santa Rosa. It may have the name Fundo Santa Rosa since Santa Rosa is the name we designated the site, but this is not certain given the *municipio* (municipality) of Santa Rosa in which it is located.

VEGETATION: Savanna grassland characteristic of the middle llanos, dotted with trees and small *conucos*. A large part of the *fundo* had been cleared with heavy

machinery for agricultural use. The area features the large-scale cultivation of maize and cotton today.

ARCHAEOLOGICAL REMAINS: Osoid ceramics litter the recently plowed fields. We recall seeing the bulldozed remains of one earthen mound. A causeway was noted here, as well, by members of the Centro Arqueológico “Kuayú” (María Andueza, personal commun. 2001). Some diagnostic artifacts from these fields and the mound destroyed by heavy machinery appeared in photographs published in the “Kuayú” center’s 1981 report. They included ceramic composite-silhouette vessels, many with three conical supports, as well as anthropomorphic and zoomorphic ceramic figurines, cylinder seals, beads, and spindle whorls, some of which feature fine-lined incised decoration and punctations. One such spindle whorl or bead that has a convex base and fine-line curvilinear designs closely resembles the spindle whorl recovered by Adam Garson on the surface at site LC-120 in his Hato La Calzada study region (Garson, 1980: 255, fig. 59a), as well as a bead recovered by Alberta Zucchi in her excavations at the site of Caño Caroní (Zucchi, 1975: 36, fig. XVI-11). Other material from the site includes ground-stone pestles and polished-stone maces, axes, celts, and beads (Centro Arqueológico “Kuayú”, 1981: figs. 1–3, 5–6, 11–15, 19–22, 28–29).

SITE MAP: None.

DISTURBANCE: The site has been heavily disturbed by the use of heavy machinery to clear the land and at least one earthen mound for agriculture.

SURFACE-COLLECTION DATA: We made no collections. We refer the interested reader to the material recovered by the Centro Arqueológico “Kuayú”, some of which appears in photographs in its 1981 publication.

SITE SIZE AND CLASSIFICATION: We estimate that the mound site of Santa Rosa was a second-order mound site, but we do not have the necessary information with which to estimate the size of its occupation.

DATE RECORDED: January 1982.

B4

SITE NAME: Hato de La Calzada.

OTHER SITE DESIGNATION: El Cerrito de Páez.

SITE LOCATION: The site is located on the bank of Caño del Oso, less than 1 km west of the *hato* house of the former large cattle ranch by the name of Hato La Calzada, some 9 km west of San Rafael de Canaguá in the Distrito Pedraza, and approximately 6 km east of the Ticoporo River (fig. 3.1). Although the site’s location on the bank of a *caño* is an exception to the tendency for mounded Osoid settlements to be situated on *bancos*, Garson (1980: 311) noted that flooding along this portion of the Caño del Oso is infrequent. Zucchi’s cross-section of Mound I revealed that the mound was constructed on a natural elevation with respect to the surrounding savanna.

VEGETATION: Wet savanna grassland dotted with trees and a semideciduous gallery forest along the Caño del Oso. When Alberta Zucchi excavated the site’s Mound I in the late 1960s, the mound served as a *comuco* for plantains (Zucchi, 1973: fig. 3). Since 1976, when this 12,214 ha ranch was subdivided into agricultural plots (*parcelas*) by the La Calzada de Páez company, cattle-ranching activities ceased, and maize, rice, cotton, and sesame are being cultivated with heavy machinery and the use of fertilizers and pesticides (Garson, 1980: 89–91).

ARCHAEOLOGICAL REMAINS: This mound site has been known to archaeologists since 1949, when José M. Cruxent carried out a small test excavation here (Cruxent, 1955) and examined the earthen causeway or *calzada*, 13–25 m wide and 1–2 m tall, that traversed the site from east of the Caño del Oso in a southwesterly direction to the Ticoporo River (Cruxent, 1952, 1966). The site’s mounds were mapped during Zucchi’s excavation of a trench across the main Mound I in the late 1960s (Zucchi, 1972a: fig. 3) (fig. 4.19), which produced charcoal samples from the mound’s base and top dating to A.D. 550 $\pm$ 60 and A.D. 540 $\pm$ 70, respectively (Zucchi, 1973: 186–187). Mound I has

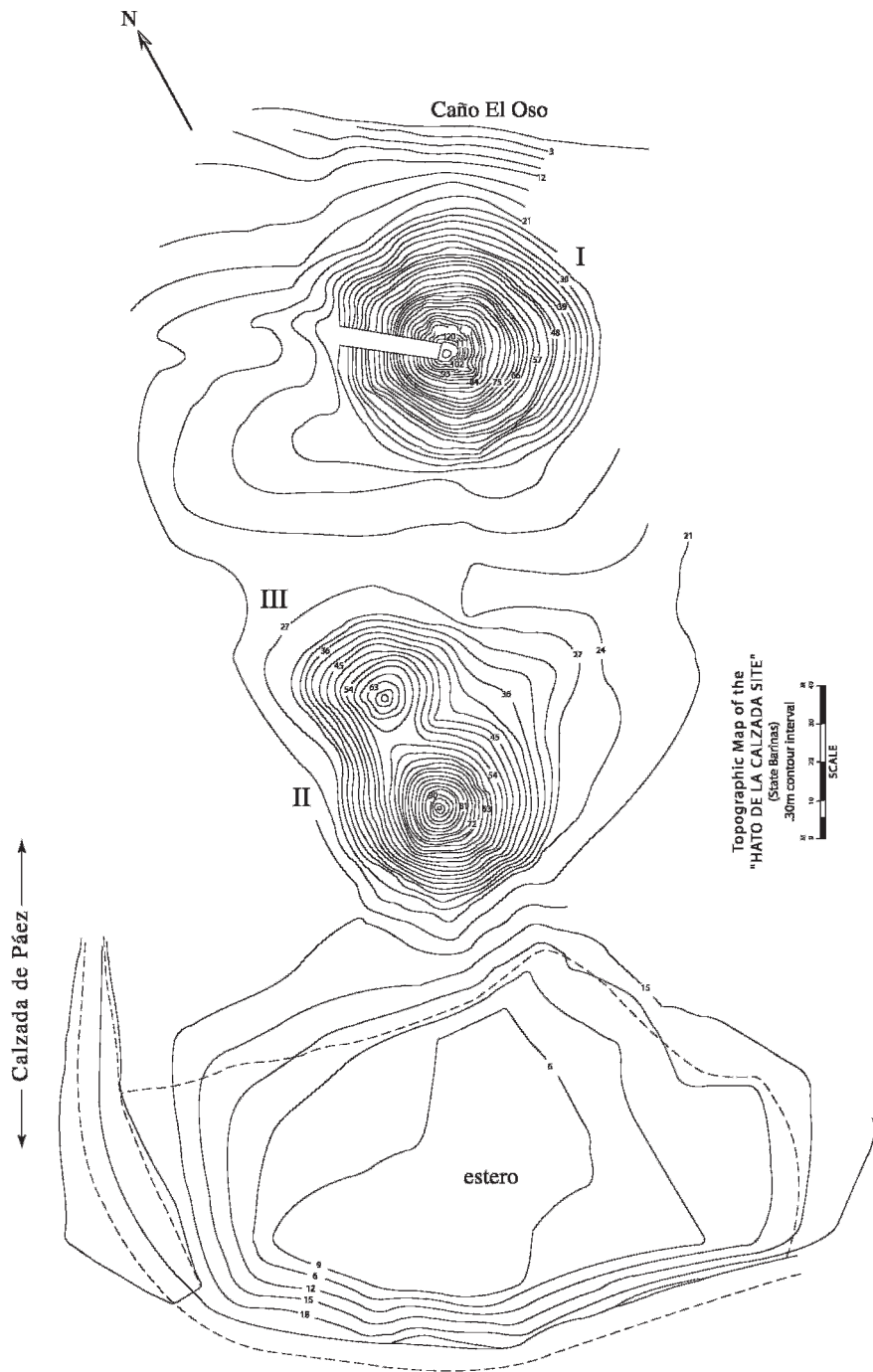


Fig. 4.19. Map of Hato de La Calzada (B4) site (from Zucchi, 1972a: fig. 3).

a conical shape, measures 60–80 m in diameter at its base, and reaches a top elevation of 12.9 m; its steep sides and small summit, having a diameter of roughly 7.5 m, probably reflect the possibility that Mound I served a ceremonial function rather than as a residential locus (Garson, 1980: 321; Zucchi, 1973: 185). Some 35 m to the southwest lie Mounds II and III, which range in height between 4m and 10 m (Garson, 1980: 295) and occupy a common basal platform (fig. 4.19). The Calzada de Páez skirts the mounds on their northern sides and heads southwest toward the Ticoporo River and northeast across the Caño del Oso, respectively. Zucchi excavated a 12.1 m-long trench across a segment of this *calzada* and reported very few sherds from the yellow clay fill (Zucchi, 1972a: 96, 98).

As a result of Adam Garson's systematic regional survey of the Hato La Calzada in 1976, it became evident that the Hato de La Calzada site constituted the first level of a settlement hierarchy defined on the basis of site size, mound size, and causeway interconnections with neighboring settlements to the west, north, and east beyond the Caño del Oso (Garson, 1980: 303–305). Although Garson was not able to expand on Zucchi's map of the central 4 ha area of mounds, he did report ceramics eroding along the banks of the Caño del Oso and a cruciform configuration of causeway segments within the site's extension northeast of the *caño* (Garson, 1980: 124, 305). He classified the site as being "larger than 15 ha" (Garson, 1980: table 7) and proposed that it may have been the largest in the study region during the Caño del Oso C phase (A.D. 150–650) (Garson, 1980: 105, 298; Zucchi, 1975: 73).

SITE MAP: Zucchi's map (Zucchi, 1972a: fig. 3) of the central area of mounds is reproduced here (fig. 4.19).

DISTURBANCE: With the transformation of this cattle ranch into 127 subdivisions in 1976, many sources of disturbance have been introduced to the site. The network of deep drainage ditches that bound each subdivision and the concomitant roads built to provide access to each subdivision

have led to the introduction of mechanized cultivation with earth-moving equipment.

SURFACE-COLLECTION DATA: None. See Zucchi (1972b) for descriptions of Caño del Oso ceramics.

SITE SIZE AND CLASSIFICATION: Larger than 15 ha (Garson, 1980); regional center.

DATE RECORDED: July 1983.

B5

SITE NAME: Las Lajitas.

OTHER SITE DESIGNATION: Fundo Hermanos Lobos, Petroglifos site 3 (Centro Arqueológico "Kuayú", 1981: foldout map); see also Fundo Juan Gregorio Rojas (B34).

SITE LOCATION: The petroglyphs of Las Lajitas are distributed over two piedmont spurs that are skirted by the Panamerican highway southwest of the Acequia River and drained by the Caño Merepure on the north, the Caño Las Lajitas, and the Caño Minanón on the south and west (figs. 3.1, 4.20, 4.21). The petroglyphs are found on the adjacent *fundos*—Fundo Las Lajitas and Fundo Hermanos Lobos—that in 1983 were owned and inhabited by three generations of the extended Lobos family. We spoke to Pedro, Marciano, and Zenón Lobos, sons of the elderly patriarch who had come from the Andes and established this cattle farm around 1948. An inlaw by the name of Sr. Alvizú (married to Pedro Lobos's aunt) owned the adjacent *fundo* to the northeast. The related *fundos* extend on the northern and southern sides of the Panamerican highway. The turnoff from the highway is on the north side of the highway, a little over 4 km after crossing the Acequia River from Barinas city in a southwesterly direction; members of the Centro Arqueológico "Kuayú" had placed a roadside sign here designating Las Lajitas an archaeological zone. The Fundo Las Lajitas house is on the *vega* of Caño Las Lajitas, directly northeast of the southern piedmont spur that features the majority of the boulders carved with petroglyphs, between the Caño Las Lajitas and the Caño Minanón on the southern and western sides of this piedmont spur. The petroglyphs of Fundo Juan Gregorio



Fig. 4.20. View of Las Lajitas (B5), from *vega* toward southern piedmont spur, facing northwest toward Andes, with snow-capped Pico Bolívar visible in the distant center right of photo.



Fig. 4.21. View of Fundo Las Lajitas from top of southern piedmont spur directly uphill of Piedra 1, facing northeast toward *fundo* house and corral, where the founder recalled encountering ceramics and ground-stone artifacts (*metates*) in the postholes.

Rojas on the northern piedmont spur that is directly north of the Caño Merepure and extends immediately west of the Panamerican highway (and south of the Caño Barro Amarillo) have been assigned a separate site number (B34).

VEGETATION: The owners and laborers of the adjacent *fundos* have been clearing and maintaining pastures assiduously with axes, machetes, fire, and herbicides. Hence, pastureland grasses dominate the vegetation on both piedmont spurs, dotted by the occasional palm or hardwood tree. Zenón Lobos informed us that the family used to cultivate maize on the *vega* along the Caño Las Lajitas and manioc on top of the southern piedmont spur. According to Zenón Lobos, the piedmont spur was suitable for growing manioc but not suitable for the cultivation of maize. Thin strips of gallery forest line the *caños*.

ARCHAEOLOGICAL REMAINS: We first visited the petroglyphs of Las Lajitas during our original reconnaissance of the area in January 1982 in the company of members of the Centro Arqueológico “Kuayú”, who had explored the archaeological zone and recorded many of the petroglyphs with photographs and rubbings (Centro Arqueológico “Kuayú”, 1981: 61–65; Valencia and Sujo Volsky, 1987: 233–235). They also recovered a ground-stone metate on the western edge of the southern piedmont ridge, by the Caño Minanón. On this initial visit we were taken to see the five best-known boulders with petroglyphs on the southern piedmont spur on Fundo Las Lajitas and one on the northern piedmont spur, as well.

We returned to Las Lajitas in July 1983 to continue exploring the archaeological zone and to search for possible habitation sites associated with the boulders bearing petroglyphs. The elderly founder of Fundo Las Lajitas told us that he remembered finding ceramics at about 1 m depth when they dug the postholes for the cattle corral, located at a right angle from the *fundo* house on the *vega* at the base and northeast of the southern piedmont spur (figs. 4.21, 4.22, 4.23). His son Zenón Lobos recalled finding ceramics and a ground-stone mor-

tar on top of the southern piedmont spur when they were deforesting it some 25 years ago. Zenón Lobos sent his son to guide us to the highest reaches of pastureland on top of the southern piedmont spur (uphill and northwest of Piedras 5, 6, 7, and 8) to inspect the fence posts where they had encountered ceramics and a small ground-stone mortar at a depth of 40 cm. The Lobos brothers also reported finding a ground-stone *metate* fragment at the eastern edge of the southern piedmont spur. These reports of ceramics and ground-stone artifacts were corroborated by one of the laborers on the *fundo*, Julio León Valero, who told us that when the forest vegetation was cleared to create the *fundo*'s pastures 30 years ago, ceramics were encountered from time to time among the roots of the felled trees.

Since neither our inspection of fence posts nor our surface survey of the piedmont spurs and *vega* turned up artifactual remains, we decided to carry out a test-pit program here at the same time that we mapped the southern piedmont spur and recorded the boulders bearing petroglyphs. We excavated four test pits: three on the *vega* in pastures east and northwest of the Fundo Las Lajitas house and corral; one on top of the southern piedmont spur. The locations of Test Pit 1, Test Pit 2, and Test Pit 4 are shown on the topographic map of B5 (fig. 4.23). All four test pits were devoid of ceramic and lithic artifacts and of signs of habitation but did reveal anthropogenic deposits.

B5-TEST PIT 1

B5-Test Pit 1 was a 2 m by 1 m test pit situated on the *vega* approximately 22 m northeast of the northeastern corner of the corral at Fundo Las Lajitas at 101.00 elevation with respect to the plane-table position at Datum A (100.00 elevation), some 70 m to the southeast (fig. 4.23). It was excavated in nine 20 cm-thick levels. The first level (0–20 cm) involved removing the grass cover and the first 10 cm of dark loam soil and root zone, wherein some burned daub fragments turned up in the screen, as well as small flecks and a small fragment of charcoal (fig. 4.24). The second level (20–



Fig. 4.22. View of Fundo Las Lajitas from southern piedmont spur with Piedra 2 in the foreground, facing east toward corral and *fundo* house.

40 cm) entered a light brownish-red-colored deposit that consisted of fine-grained clay containing some small charcoal fragments. We stopped screening the excavated deposit after three-fourths of this level had been removed. The third level (40–60 cm) produced some larger, 2–4 cm-long charcoal fragments and carbonized *corozo* palm-nut shells at ca. 54 cm depth in the northeast quadrant of the test pit. In the fourth level (60–80 cm), more charcoal fragments occurred, especially in the northern half of the test pit. Charcoal flecks occurred throughout the fine clayey deposit. In the fifth level (80–100 cm), more 2–4 cm-long charcoal fragments and carbonized palm-nut remains occurred in the light brown-red clay deposit, along with a few angular fist-sized or smaller stones. In the sixth (100–120 cm) and seventh (120–140 cm) levels, more charcoal fragments and carbonized *corozo* palm remains were encountered throughout the test pit in the fine clay deposit. The eighth level (140–

160 cm) entered a gravelly deposit characterized by small pebbles, but the charcoal fragments continued. The final, ninth level (160–170 cm) featured an alluvial deposit of small pebbles throughout, with occasional charcoal fragments and some smoothed rocks, as well. We stopped the excavation at 170 cm below the ground surface.

B5–TEST PIT 2

B5–Test Pit 2 was a 2 m by 1 m test pit situated on the *vega* some 65 m east of the corral of Fundo Las Lajitas at an elevation of 101.05 with respect to Datum A to the southeast (fig. 4.23). The test pit was excavated in seven 20 cm-thick levels. Level 1 (0–20 cm) involved removing the top grass cover and excavating a dark loamy root zone. The deposit was not screened. Level 2 (20–40 cm) entered a fine brownish-red-colored clay deposit. Some charcoal flecks appeared. In the succeeding Level 3 (40–60 cm), carbonized *corozo* palm nuts ap-

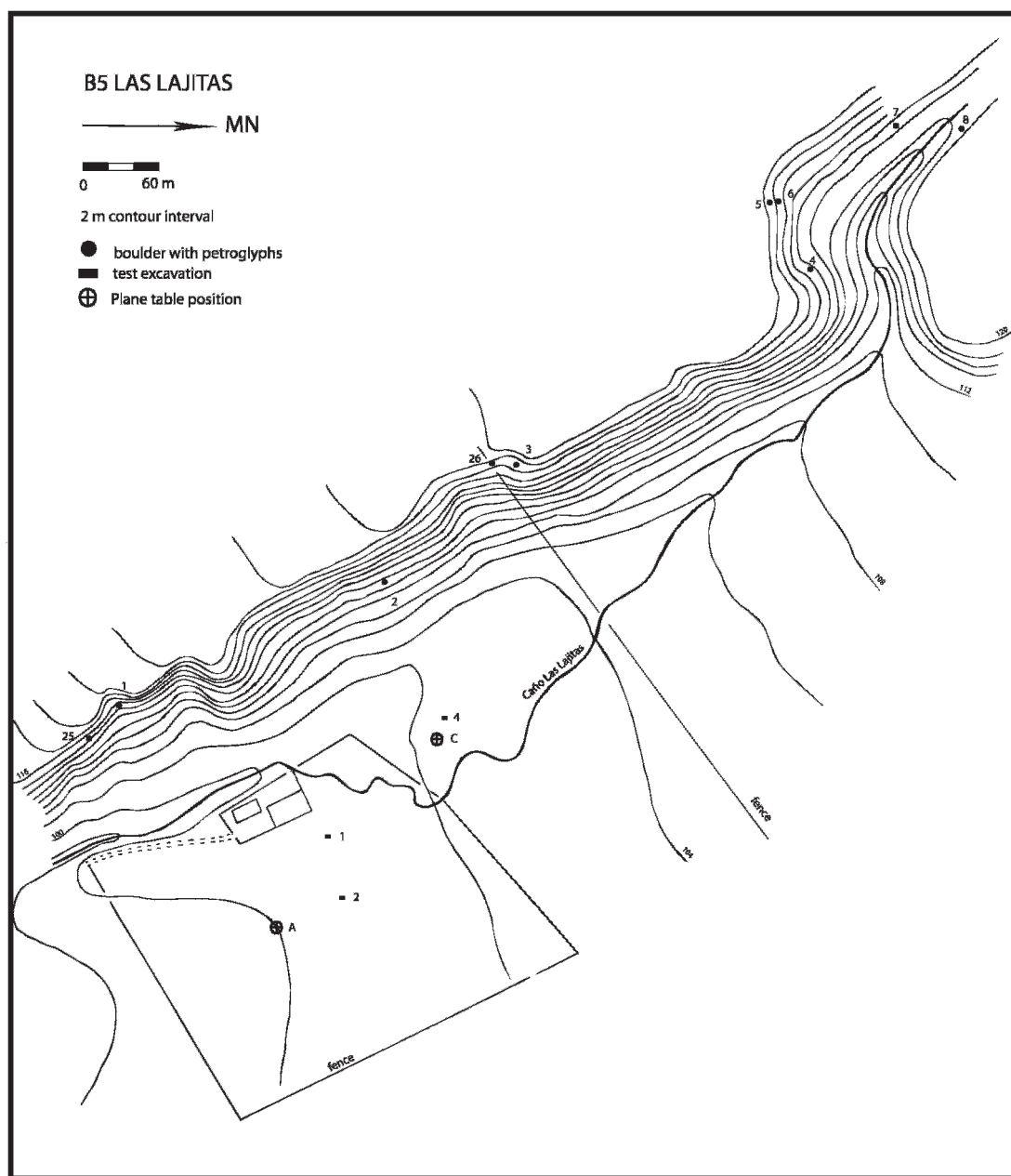


Fig. 4.23. Topographic map of Las Lajitas (B5) at 1:2,000 scale, showing the locations of Piedras 1–8, 25, and 26, and test pits 1, 2, and 4.

peared in the brownish-red clay deposit. Level 4 (60–80 cm) was much the same as Level 3, only with the addition of some small stones. Level 5 (80–100 cm) contained no charcoal flecks or fragments at

all. In Level 6 (100–120 cm) we entered an alluvial deposit consisting of pebbles and 40 cm-long rocks throughout the test pit. A few charcoal fragments were recovered. Pebbles and rocks continued throughout

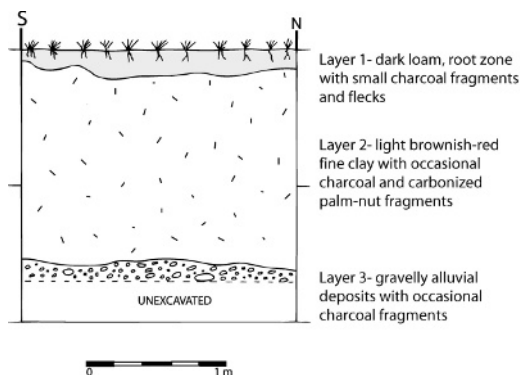


Fig. 4.24. Profile drawing (scale 1:20 cm) of west wall of test pit 1 at Las Lajitas (B5).

the floor of the test pit in the final Level 7 (120–130 cm). We stopped the excavation at 130 cm below the ground surface. We did not draw a stratigraphic profile of this test pit since the stratigraphy resembled that of B5–Test Pit 1 (fig. 4.24), and it was devoid of archaeological remains.

B5–TEST PIT 3

B5–Test Pit 3 was a 2 m by 1 m test excavation located on top of the southern piedmont spur, upslope from Piedra 1. We excavated Test Pit 3 in four 20 cm-thick levels. Level 1 (0–20 cm) involved removing the top grass cover and excavating through the dark loamy root zone. We did not screen the excavated deposits. We recorded some small charcoal fragments at the northern end of the test pit. The deposit in Level 2 (20–40 cm) consisted of a fine light-brown sandy deposit. It had a granular texture with tiny rock chips. Some small charcoal fragments were present. Succeeding Level 3 (40–60 cm) was the same sandy brown granular deposit. Although charcoal fragments occurred throughout the test pit, there was one especially thick concentration of large chunks of charcoal in the center of the test pit. Some human-skull-size rocks appeared. In the final Level 4 (60–80 cm), large rocks appeared throughout the test pit. The fill amid the large rocks was the same sandy brown granular deposit. We

stopped the excavation on completion of this excavation level at 80 cm below the ground surface and did not draw a stratigraphic profile of this culturally sterile test pit.

B5–TEST PIT 4

B5–Test Pit 4 was located on the *vega* some 28 m southwest of Caño Las Lajitas and 112 m northwest of the corral, at an elevation of 102.85, and near plane-table position Datum C (figs. 4.23, 4.25). The 2 m by 1 m test pit was excavated in six 20 cm-thick levels. The top Level 1 (0–20 cm) involved removing the grass cover and entering the dark loamy root zone. Level 2 (20–40 cm) came down on a brownish-red clayey deposit with occasional small rocks and some charcoal flecks. The succeeding Level 3 (40–60 cm) consisted of this same clay deposit. The same obtained in Level 4 (60–80 cm), only with the occasional occurrence of small charcoal fragments. In Level 5 (80–100 cm), a harder, red clay deposit appeared, as did some rocks at the bottom of this excavation unit. The hard red clay deposit continued in the final Level 6 (100–120 cm), with few inclusions other than two or three cobble-size rocks. Some probing with a trowel on completion of this level revealed that it overlay the same alluvial deposit of small pebbles as seen in the other two test pits located on the *vega* (B5–Test Pits 1, 2). Therefore, we stopped the excavation at 120 cm below the ground surface and did not draw a stratigraphic profile.

PETROGLYPHS

We located, recorded, and photographed the boulders bearing petroglyphs on the southern piedmont spur after which Fundo Las Lajitas is named, demarcated by the Caño Las Lajitas and the Caño Minanón, and on the piedmont spur north of the Caño Merepure. We recorded 18 boulders or *piedras* with petroglyphs by photographing them and, when possible, locating them on the aerial photograph and the site map (fig. 4.23).



Fig. 4.25. Mapping Las Lajitas (B5) from plane-table position Datum C and test pit 4 in progress, facing toward southern piedmont spur to west-northwest.

Piedra 1: This is the largest boulder covered with petroglyphs. It is located directly upslope and southwest of the *fundo* house of Fundo Las Lajitas (figs. 4.23, 4.26) on the northeastern slope of the southern piedmont spur. It has also been designated Piedra del General and Las Lajitas 2 by other researchers (Centro Arqueológico “Kuayú”, 1981: 61–63; Valencia and Sujo Volsky, 1987: 203, 234). Its top and its southeastern, northeastern, and northwestern sides bear carvings that are geometric, free form, zoomorphic, and anthropomorphic in design (figs. 4.26, 4.28–4.31). The geometric motifs include a circle with a center point, concentric circles, a circle with external radii, and a rectangular frame containing four rectangles (see fig. 4.27).

Piedra 1’s zoomorphic motifs feature a quadruped with erect ears and an extremely long tail at the bottom of its northeastern face (figs. 4.28, 4.29) and a coiled and striped snake with two protuberances emerging from its oval head on Piedra 1’s

top (figs. 4.30, 4.31). Depictions of birds or bats in flight appear singly or in groups, in one example alongside a slender, unadorned bipedal figure with a long torso that might be anthropomorphic (figs. 4.29, 4.31). An unadorned anthropomorphic figure with arms raised occurs on the northeastern face (fig. 4.29). Some free-form designs that are best described as wandering lines (Schaafsma, 1980: 160) join some of the zoomorphic motifs (figs. 4.28, 4.31).

Piedra 2: This boulder is located along a trail that climbs the northeastern slope of the southern piedmont spur up from the *fundo* house on the *vega* of Caño Las Lajitas (figs. 4.22, 4.23). Piedra 2 is located lower on the slope some 208 m to the northwest of Piedra 1. Piedra 2 bears petroglyphs on its top surface and its southeastern, eastern, and northeastern faces. The petroglyphs on its southeastern face feature a quadruped with antlers and tail—probably a deer—that is joined by the tail with a circular spiral, which in turn is joined



Fig. 4.26. Las Lajitas Piedra 1 showing location on northeastern slope of piedmont spur directly upslope from *fundo* house on the *vega* below, and petroglyphs on south-southeast face, facing northeast.

to additional protuberances (fig. 4.32). Piedra 2's northeastern face (fig. 4.33) has two abstract petroglyphs above depictions of a quadruped in profile with a short tail and a possible saurian or spread-eagled male anthropomorphic figure to the left.

Piedra 3: Piedra 3 is a small boulder, about 1 m tall and 2 m long, located in an eroding portion of the northeastern slope near the top of the southern piedmont spur and only 12 m north of Piedra 26. Piedra 3 has petroglyphs carved on its top, eastern, and southern surfaces (figs. 4.23, 4.34, 4.35). Two circles with center points appear on its top surface, and a cluster of three contiguous circles, one of which has an internal appendage (see fig. 4.27). Two coupled points and a spread-eagled bird are directly adjacent to the cluster of circles (fig. 4.34). Along the southern face (fig. 4.35), from left to right, are two small anthropomorphic figures with raised arms to the left of and below a rake or comb-like motif, a small zoomorphic figure with

round head and tail below, and a knotted or tasseled sack-like element containing a circle with a center point (see fig. 4.27). To the right of the sack are two bipedal figures. One may be a male with arms raised, joined by the head to a free-form design above the sack containing the circle with the center point. Linked by the shoulder is another bipedal figure with long, downturned arms and a long torso (fig. 4.35).

Piedra 4: Piedra 4 is situated on the northeastern slope of the southern piedmont spur, overlooking a bend in the upper Caño Las Lajitas, some 35 m northeast and downslope of Piedras 5 and 6 (fig. 4.23). Piedra 4 bears petroglyphs on its top surface and its northeastern face (figs. 4.36, 4.37). The petroglyphs carved on the smooth but undulating top surface are a cluster of free-form designs (fig. 4.36). On its northeastern face is another cluster of free-form designs, a long wandering diagonal line or trail that is bifurcated at its

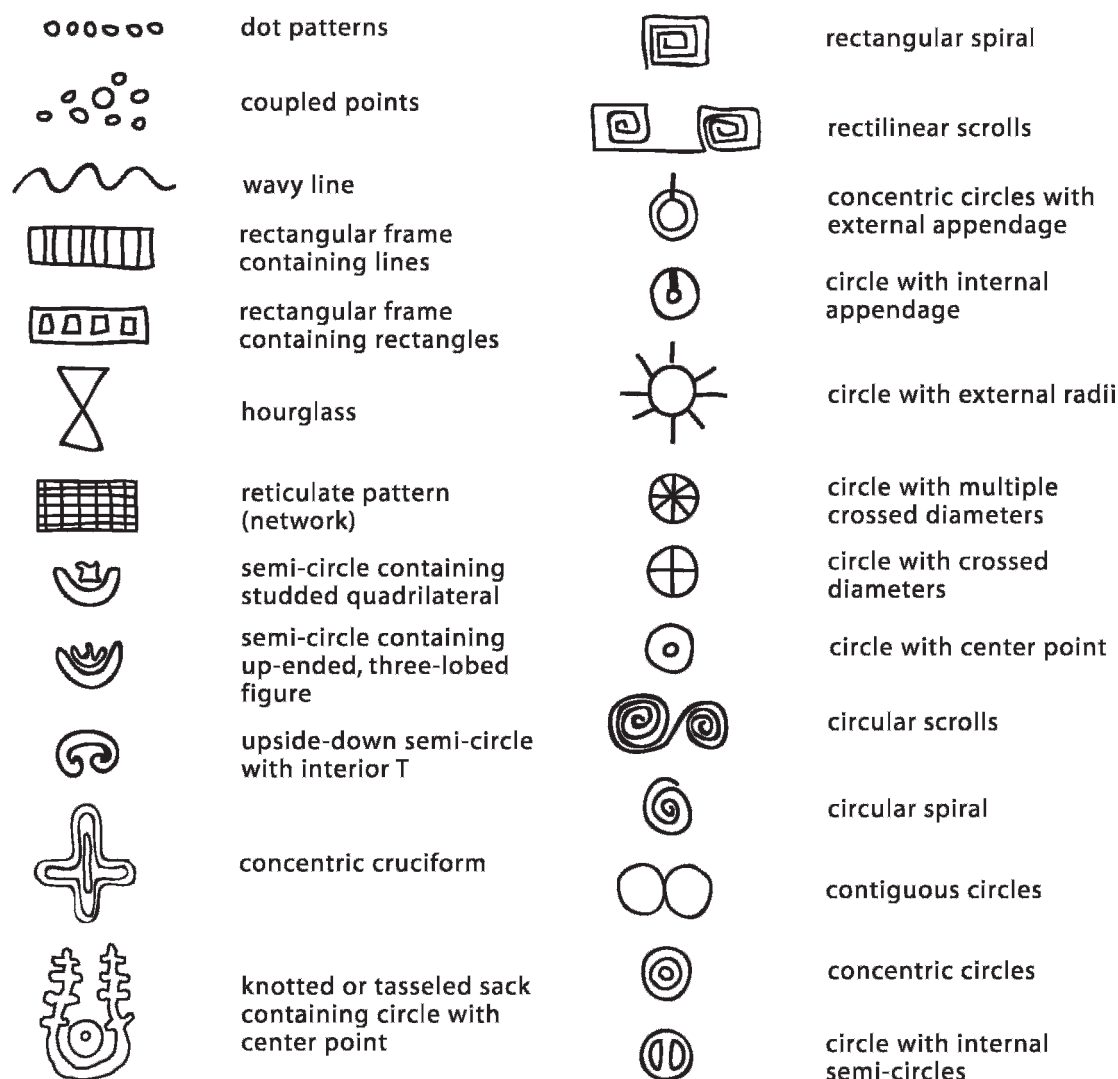


Fig. 4.27. Schematic drawing of petroglyph motifs.

ends and a vertically positioned, elongated snake or aquatic creature with bifurcated extremities (fig. 4.37).

Piedra 5: Piedra 5 is located on the north-western slope of the southern piedmont spur, directly contiguous to and upslope from Piedra 6 (fig. 4.23). Piedra 5 has petroglyphs on its top surface, on its southern and eastern sides, and along its sloping northeastern face (figs. 4.38, 4.39, 4.40). Piedra 5 corresponds to Las Lajitas 7 (Centro Arqueológico "Kuayú", 1981: 61). On the broad, sloping northeastern face are

two similarly rendered quadrupedal figures with long legs and raised tails, one directly above the other, and above them a bird or bat in flight. To the left is another bird or bat in flight directly below and almost touching a goggle-eyed mask or head (fig. 4.38). Near the top of the northeastern face is a small anthropomorphic figure with raised arms. Alongside two shallow oval-shaped depressions that fill with water during the rainy season on Piedra 5's southernmost and uphill side are three petroglyphs with free-form designs (fig. 4.40). On the

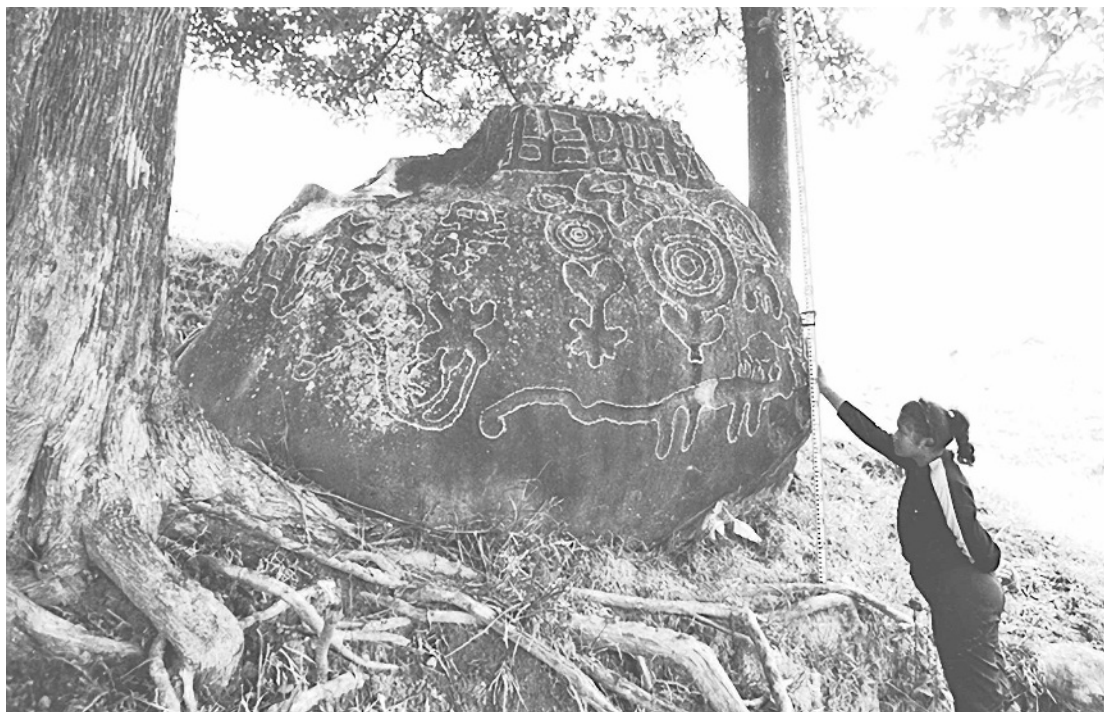


Fig. 4.28. Las Lajitas Piedra 1's southeast face, facing northwest. The quadruped with long tail is evident at the bottom.



Fig. 4.29. Las Lajitas Piedra 1's northeast side, facing west. Anthropomorphic figure with arms raised is visible on the right edge.



Fig. 4.30. Las Lajitas Piedra 1 from above with zoomorphic snake figure surrounding topmost circle with external radii. Two shallow depressions on the rock's top surface are evident as dark stains because they fill with water in the rainy season.



Fig. 4.31. Las Lajitas Piedra 1's top and west face, facing east. Bats or birds in flight, some joined by free-form, wandering lines, are carved above a rectangular frame containing four rectangles.



Fig. 4.32. Las Lajitas Piedra 2's southeast face, with deer-like quadruped joined to spiraling form, facing northwest across northeastern slope of southern piedmont spur.

top surface of Piedra 5's southeastern corner is an 80 cm-tall anthropomorphic figure that stands with arms bent at the elbow and the lower arms pointing away from the body (fig. 4.39). Similar to the anthropomorphic figure carved on the boulder at the site of La Esmeralda (B8) (see fig. 4.73), this figure on Piedra 5 has a lower right arm that ends in three lobes, while the lower left arm lacks those three lobes or digits. The standing figure is wearing an animal headdress resembling the ears and antlers of a deer. To the right of the figure are a bird or bat in flight and a six-flanged motif (fig. 4.39).

Piedra 6: Piedra 6, directly contiguous to Piedra 5 and downslope, has petroglyphs on its northern face (fig. 4.23). The stadia-

rod-tall north face of Piedra 6 (fig. 4.41) features concentric circles and four other free-form petroglyphs.

When we visited the southern piedmont spur of Las Lajitas in January 1982 we photographed a boulder on its northwestern slope, south of the upper Caño Las Lajitas, that had the petroglyph of an anthropomorphic figure (figs. 4.42, 4.43). That boulder is probably one of the contiguous boulders that we designated Piedras 5–6 in July 1983. The anthropomorphic figure is rendered in fine-line, shallow incising and is shown standing with arms bent upward at the elbows but with downturned hands with three digits. Two horns or antlers emerge from the figure's round head, and the waistline has some linear adornment. There are randomly spaced circular pits or coupled points on each side of and below the carved figure, which may have formed part of the artist's representation. This incised anthropomorphic figure at Las Lajitas is reminiscent of the magnificent anthropomorphic figure with headdress at the site of La Esmeralda (B8) (see fig. 4.73), which was clearly associated with coupled points or drops. Inexplicably, we overlooked this anthropomorphic figure when we recorded the petroglyphs in July 1983.

Piedra 7: Piedra 7 is located on the northwestern slope of the southern piedmont spur, on the south side of the upper reaches of the Caño Las Lajitas, roughly 90 m northwest of Piedras 5–6 (figs. 4.23, 4.44). The southeast side of Piedra 7 has five petroglyphs (fig. 4.45), a central one being a four-limbed zoomorph, a rectangular frame, a concentric-circle motif with an external appendage, a circle containing two internal semicircles, and a free-form design with loops at the bottom that is similar to one evident on the north face of Piedra 6 (see fig. 4.41).

Piedra 8: Piedra 8 is a small boulder located 45 m to the north and across the upper reaches of the Caño Las Lajitas from Piedra 7 and uphill on the next piedmont ridge to the north (fig. 4.23). Members of the Centro Arqueológico "Kuayú" had painted a circle with the number "8" on the boulder's northeast side (fig. 4.46).



Fig. 4.33. Las Lajitas Piedra 2's northeast face, showing petroglyphs that include quadruped with a short tail and possible saurian or a male anthropomorphic figure to its left.

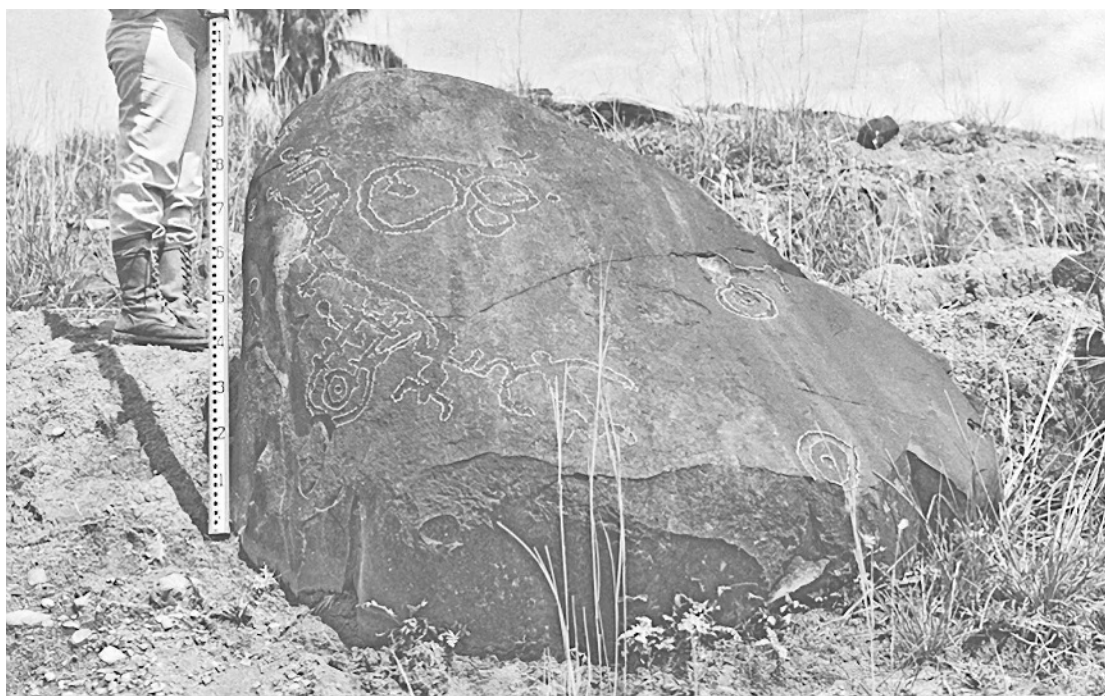


Fig. 4.34. Las Lajitas Piedra 3's top and eastern surface. Circles with center points, contiguous circles, and two anthropomorphic figures joined by their arms are visible.

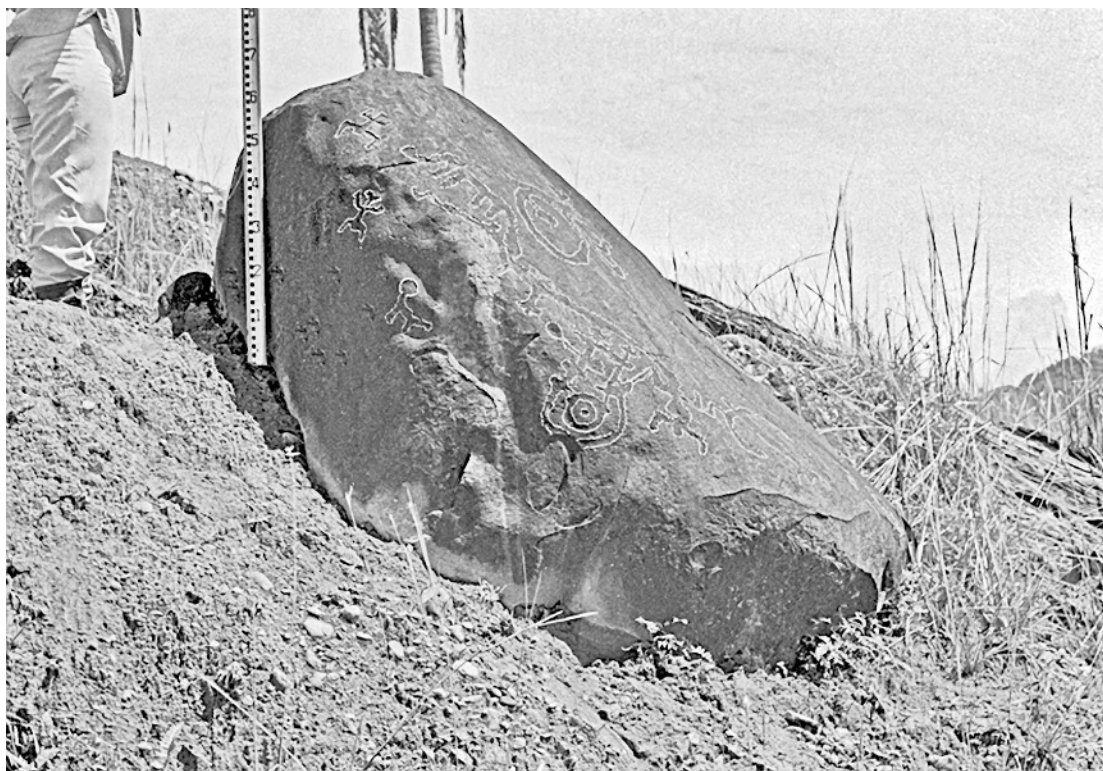


Fig. 4.35. Las Lajitas Piedra 3's southern face, facing north. Petroglyphs feature two small anthropomorphic figures, a small zoomorphic figure below a comb-like free-form design and a knotted or tasseled sack containing a circle with center point.



Fig. 4.36. Las Lajitas Piedra 4's top surface, with its cluster of joined free-form petroglyphs, facing northeast and downslope.



Fig. 4.37. Las Lajitas Piedra 4's northeastern face with bifurcated wandering lines and other free-form petroglyphs.

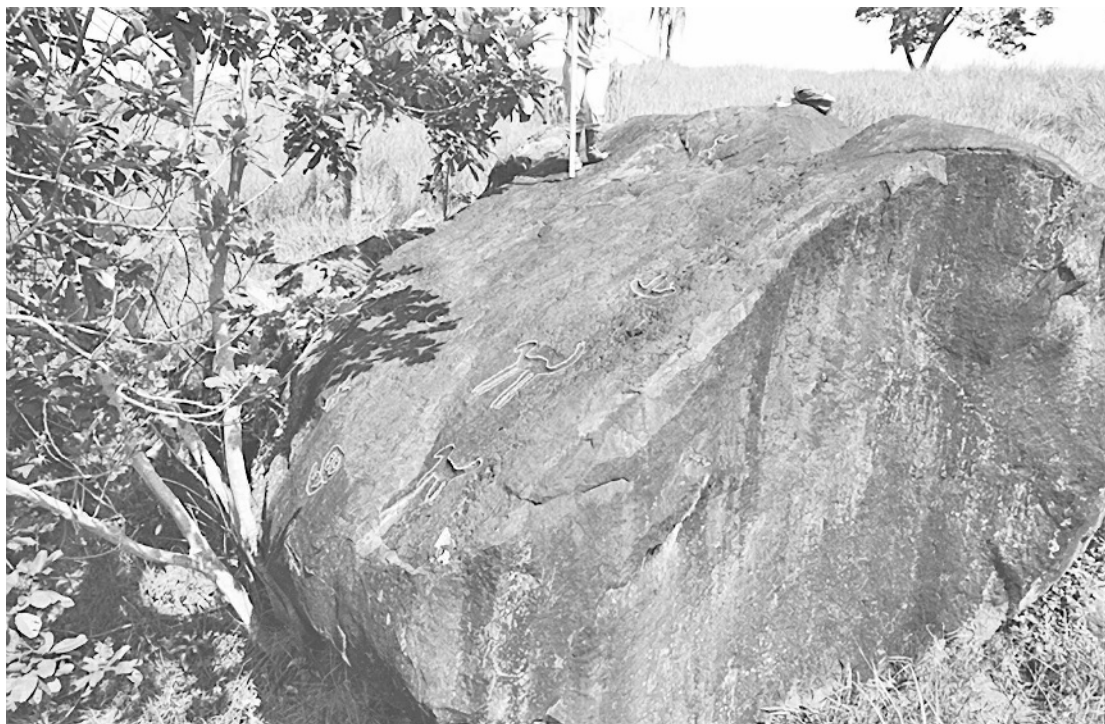


Fig. 4.38. Las Lajitas Piedra 5, facing west. Petroglyphs on boulder's northeastern slope include two quadrupedal zoomorphic figures with raised tails and a bird or bat in flight above them.



Fig. 4.39. Close-up view of anthropomorphic figure carved on Piedra 5's top and southeastern corner, wearing the headdress of a deer. To the right of the stadia rod is a bird or bat in flight and a six-flanged motif.



Fig. 4.40. Southern face of Las Lajitas Piedra 5, where two free-form petroglyphs were carved alongside two shallow depressions or basins.



Fig. 4.41. Northern side of Las Lajitas Piedra 6, where concentric circles and at least four other free-form petroglyphs were carved.



Fig. 4.42. View from northwestern slope of southern piedmont slope south of upper Caño Las Lajitas looking east toward *vega*, with Piedras 5 and 6 in the right foreground.

The petroglyphs on the northeast face are free-form designs that are difficult to interpret. Those on Piedra 8's southeast face (fig. 4.47) include a bird or bat in flight, concentric circles with a center point, concentric circles with a center point and an external appendage, and a circle containing two internal semicircles (like the motif seen on Piedra 7). A circular halo motif evident here with horn-like appendages might represent a mask.

Piedra 9: Piedra 9 is located on the southern slope of the neighboring piedmont ridge north of the Caño Merepure, on Fundo Gregorio Rojas (see B34) (figs. 4.201–4.203).

Piedra 10: Piedra 10 is located on top of the southern piedmont ridge, a little over 100 m north of the Panamerican highway's cut. Its surface is pitted and eroded, but its eastern face (fig. 4.48) displays a large concentric-circle petroglyph, a small concentric-circle motif to its right, many coupled

points, and a pinwheel design of radial lines at the top.

Piedra 11: Piedra 11 is located on the southern slope of the southern piedmont spur, bordering the Caño Minanón. We photographed its northeastern slope, which bears traces of petroglyphs on the north and south sides of depressions in the boulder (fig. 4.49). The boulder's surface is eroded and cracked, making its petroglyphs difficult to interpret. We did not try to outline the petroglyphs with chalk for the purpose of recording them.

Piedra 12: Piedra 12 is located in a tree-lined pasture directly adjacent to the roofed-over corral at Zenón Lobos's *fundo* on the south side of the Panamerican highway, at the southeastern end of the piedmont spur at Las Lajitas. The western face of this big boulder features a petroglyph made up of concentric circles and some coupled points (fig. 4.50). Its eastern face (fig. 4.51) has a slender anthropomorphic



Fig. 4.43. Close-up of anthropomorphic figure carved on boulder on northwestern slope of southern piedmont ridge at Las Lajitas (Piedras 5 and 6).



Fig. 4.44. View of Las Lajitas Piedra 7 (foreground) and Piedra 8 (across *caño* and uphill) facing northwest toward Andes mountains.



Fig. 4.45. Southeast side of Las Lajitas Piedra 7 with petroglyphs, facing northwest.



Fig. 4.46. Northeast side of Las Lajitas Piedra 8, with petroglyphs on either side of painted circle with the number “8”.

figure with raised arms, a circular spiral, a bird or bat in flight, a circle with internal semicircles, and other circular petroglyphs.

Piedra 13: Piedra 13 is located on top of the western end of the southern piedmont spur. The boulder’s surface is eroded and cracked, but some petroglyphs are visible on its northwestern face (fig. 4.52). The principal petroglyph is a large, deeply grooved set of concentric circles with a center point. To the right is a pair of smaller concentric circles. To the left is a semicircle containing a studded quadrilateral (see fig. 4.27); this motif is similar to ones carved on Piedra 1.

Piedra 14: Piedra 14 is located in a pasture east of Zenón Lobos’s *fundo* house, on the south side of the Panamerican highway. A cluster of four petroglyphs is evident on the

boulder’s western face (fig. 4.53). Two are full concentric circles with center points the size of a camera lens cap; the third is composed of concentric semicircles, and there is an accompanying coupled point to the right.

Piedras 18 and 19: Piedras 18 and 19 are located on top of the neighboring piedmont spur north of the Caño Merepure on Fundo Juan Gregorio Rojas (see B34).

Piedra 25: Piedra 25 is located downslope from Piedra 1 on the northeastern slope of the southern piedmont spur at Las Lajitas, about 30 m in distance (fig. 4.23). It features a deep depression on its northeastern face, but we did not record any petroglyphs on this small boulder.

Piedra 26: Piedra 26 is located on the northeastern slope of the southern pied-



Fig. 4.47. Petroglyphs on southeast side of Piedra 8. Various concentric circle motifs and a bird or bat in flight accompany a circular halo with horn-like appendages.

mont spur at Las Lajitas, on a denuded and eroded slope studded with small boulders and rocks (fig. 4.23). We recorded Piedra 26's eastern face, which bears a petroglyph in a free-form design (fig. 4.54).

SITE MAP: A topographic map at 1:2,000 scale was begun of the southern piedmont spur and of the adjacent *vega* where we conducted exploratory test pits (fig. 4.23). Piedras 1–8 and 25–26 are located on the map, as are three of the test pits. We stopped mapping when the test pits failed to recover any signs of habitation.

DISTURBANCE: The boulders with petroglyphs at Las Lajitas are in varying degrees of condition, as noted in the descriptions of the Piedras. Sections of the northeastern slope of the southern piedmont spur are quite denuded of vegetation and suffering from erosion and wash.

SURFACE-COLLECTION DATA: None. We have only reports of ceramics and ground-stone *metates* and mortars from the owners and laborers at Fundo Las Lajitas.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

B6

SITE NAME: Bumbún.

OTHER SITE DESIGNATION: Bum-Bum (Centro Arqueológico “Kuayú”, 1981).

SITE LOCATION: The petroglyphs of the Bumbún River are distributed upstream of the Panamerican highway in the Andean piedmont (figs. 3.1, 4.55). The boulders bearing petroglyphs occur in a variety of specific locations, from the riverbank to the alluvial plain or *vega* 100 m north of the river (figs. 4.58, 4.61), to the flat top of a piedmont spur approximately 700–800 m northeast of the Bumbún River and some 3 km by gravel road from the Panamerican highway to the west (fig. 4.57). The turnoff from the highway onto the gravel road leading up into the higher piedmont lies a little over 1 km east of the Bumbún



Fig. 4.48. Piedra 10 on top of the southern piedmont spur at Las Lajitas (B5) with its concentric circle petroglyph, coupled points, and radial design above.

River and the town of Bumbún, in the Distrito Pedraza.

VEGETATION: The Bumbún River is lined with a gallery forest, but large areas of the forested piedmont here have been cleared for cattle ranching. Local farmers cultivate plots (*conucos*) of manioc, maize, plantains, sugarcane, and papaya on the river's floodplain (*vega*) with the use of animal-drawn ploughs and on a rotating basis (fig. 4.56).

ARCHAEOLOGICAL REMAINS: We visited the petroglyphs of the Bumbún River during our original reconnaissance of the area in January 1982 in the company of members of the Centro Arqueológico "Kuayú", who had explored the area and located 20 boulders with petroglyphs. They had recorded many of the petroglyphs with

photographs and rubbings (Centro Arqueológico "Kuayú", 1981: 67–80; Valencia and Sujo Volsky, 1987: 235–238). We were guided to the largest boulder of those recorded, Piedra 1, which corresponds to Bum-Bum 4 in the "Kuayú" center's numbering system (Centro Arqueológico "Kuayú", 1981: 71), and which has a basal perimeter of 52 m. Piedra 1 dominates a large pasture on a piedmont spur northeast of the Bumbún River and overlooking the *vega* along the river (figs. 4.57, 4.58). The north side of the boulder has a natural overhang and a ramp that would have permitted an easy ascent for the carvers of the many petroglyphs on its top and all its surfaces (fig. 4.59). We did not record the petroglyphs on Piedra 1 systematically but can report the occurrence of many geometric, free-form, and zoomorphic designs (fig. 4.60)—more than 80 in all. In response to our questions about sighting ceramics or other signs of prehistoric occupation in the area of Bumbún, we learned from local inhabitants that ceramics had been encountered near a boulder with petroglyphs some 100 m north of the Bumbún River on the *vega* of the Hacienda Santa Marta. Also, ceramics had turned up when a concrete-lined swimming pool was excavated west of the town of Bumbún, where the Bumbún River valley widens and meets the high llanos.

We pursued these reports when we returned in July 1983. On our first day of fieldwork (July 15, 1983) we surveyed the Hacienda Santa Marta and located Piedra 2 in a pasture on the north side of the river (fig. 4.61), about 1 km northwest of the town of Bumbún. Piedra 2's northeastern face is covered with petroglyphs, including a spread-eagled zoomorph with a tail that curls, a beaked bird in profile, quadrupeds in profile, and faces or masks (fig. 4.62). No ceramics were visible anywhere on the surface of the pasture. We did see a third boulder with petroglyphs at the northern edge of the Bumbún River (Piedra 3) but did not photograph it.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.



Fig. 4.49. Las Lajitas Piedra 11's northeastern surface, with traces of petroglyphs to the north and south of natural depressions in the boulder.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATES RECORDED: January 1982; July 15, 1983.

B7

SITE NAME: El Cementerio de Capitanejo.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site underlies the current cemetery of the town of Capitanejo, in the Distrito Ezequiel Zamora, which is located on the north side of the Panamerican highway, about 1 km east of the town and the Río Capitanejo (fig. 3.1). The cemetery sits on a piedmont spur at the base of a lower, flat-topped branch or mesa of the Fila Las Cuchillas, southwest of the Quiú River (fig. 4.64). A *caño* passes behind the cemetery to the north and northwest. On the eastern rock face of the mesa some

500 m to the northeast are carved the well-known petroglyphs of Capitanejo (see B14). The mesa is separated from the Fila de Carmelero behind it to the northwest by the valley of the Capitanejo River, which empties into the high llanos directly west of the mesa at the town of Capitanejo. This mesa marks the junction of the Andes with the high llanos (fig. 4.106).

VEGETATION: The cemetery is overgrown with weeds and dotted with palm trees and other trees. Directly upslope and to the northeast of the cemetery are *conucos* of manioc and maize, as well as fallow plots and cleared pastures with knee-high growth or *monte* (fig. 4.66).

ARCHAEOLOGICAL REMAINS: When we visited the petroglyph site of Capitanejo (B14) with Pablo Novoa A. and Pascual Caputti F. of the Centro Arqueológico "Kuayú" in January 1982, the trail to and from the rock

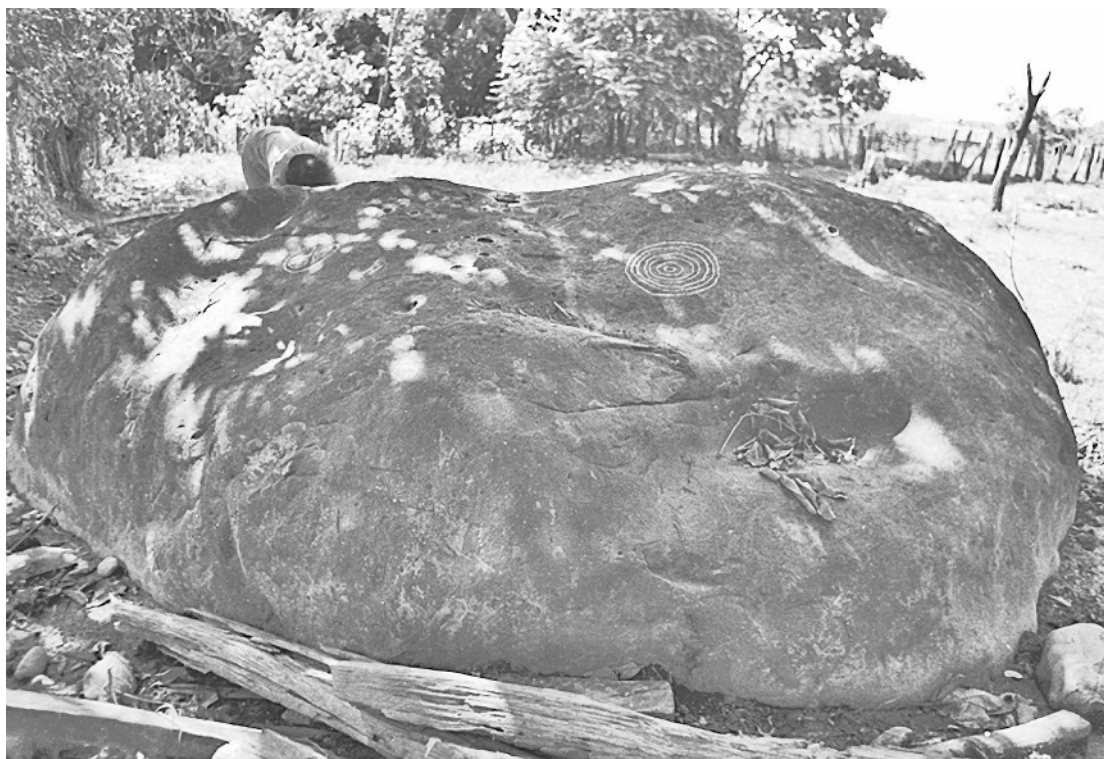


Fig. 4.50. Las Lajitas Piedra 12 has a concentric-circle petroglyph on its western face, along with coupled points and other motifs.

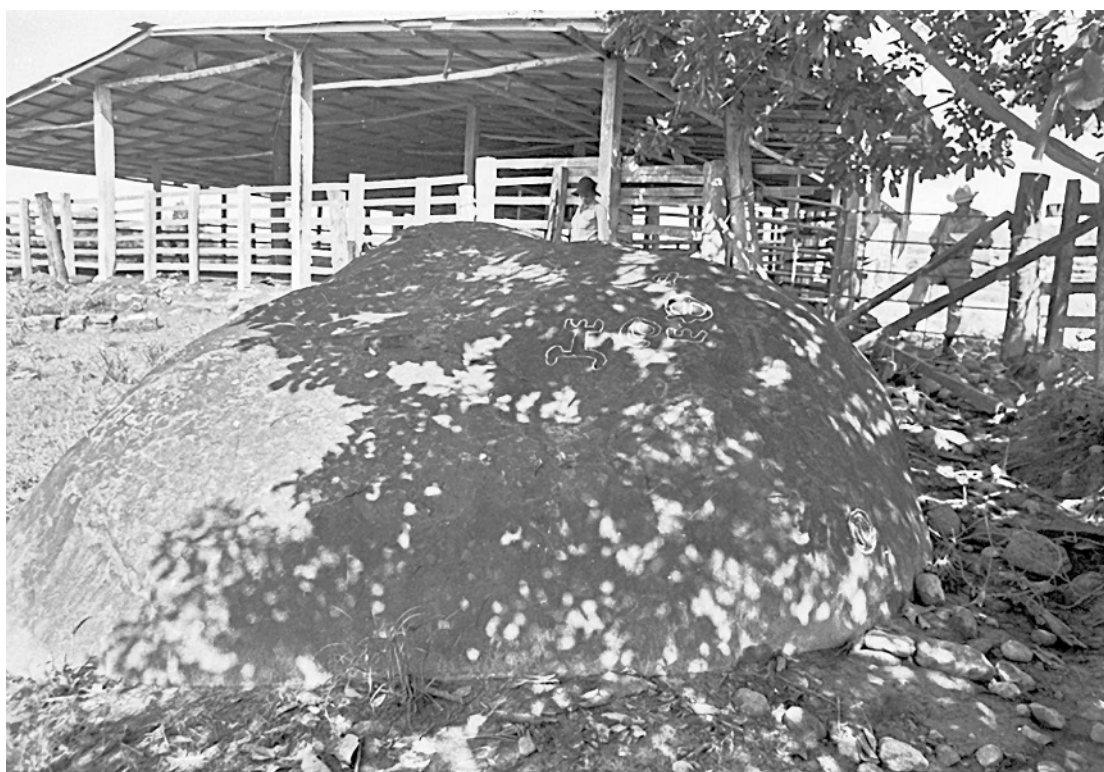


Fig. 4.51. Piedra 12 has a slender anthropomorphic figure with raised arms, a bird or bat in flight, and other accompanying circular petroglyphs carved on its eastern face.



Fig. 4.52. Las Lajitas Piedra 13's northwestern face has concentric circles and a semicircle containing a studded quadrilateral still evident on its eroded, cracked surface.



Fig. 4.53. Las Lajitas Piedra 14's western face with cluster of concentric circles and semicircles.



Fig. 4.54. Las Lajitas Piedra 26's eastern face has a single petroglyph in a free-form design.



Fig. 4.55. View of Bumbún River upstream from bridge at Panamerican highway, with Peña Viva peak and cliff face evident in distance above river, to northwest.



Fig. 4.56. *Conuco* with manioc, maize, and plantains on north bank and *vega* of the Bumbún River.



Fig. 4.57. General view of the largest boulder at Bumbún (B6) in a pasture on a piedmont spur northeast of the Bumbún River, facing northwest. The Peña Viva peak and cliff face in the distant right of the photograph is a natural landmark.



Fig. 4.58. View west from edge of piedmont spur where B6 Piedra 1 is located toward *vega* and the Bumbún River.



Fig. 4.59. Examining petroglyphs on southeastern face of Piedra 1 at B6, with Peña Viva behind in the distance.



Fig. 4.60. Close-up view of petroglyphs at base of southeastern face of Piedra 1. Spirals, birds or bats in flight, and wavy lines are among the petroglyphs present.



Fig. 4.61. Bumbún (B6) Piedra 2 on north *vega* of Bumbún River, looking toward Andes.



Fig. 4.62. Bumbún (B6) Piedra 2's northeastern face with petroglyphs of spread-eagled zoomorph with tail, beaked bird, quadrupeds, and faces or masks.



Fig. 4.63. View from Cementerio de Capitanejo (B7) toward rock face with petroglyphs (B14) to the north, visible in the distance under the lower left frond of the palm tree at the back edge of the cemetery.



Fig. 4.64. View of habitation site (B7), facing west toward southwest end of mesa and the Capitanejo River.

face bearing the petroglyphs led us by way of the cemetery of Capitanejo (fig. 4.63). On our return from the petroglyph site, we stopped to survey the small cemetery and search for sherds in the backdirt of recently excavated graves and other cleared and disturbed areas (fig. 4.65). The backdirt of the most recent grave, that of María de Jesús Mora de Vargas, which had the indicated death date of November 19, 1981, contained sherds, both thick-walled and coarse-tempered utilitarian wares and *olla* rims, and also more finely tempered sherds with incised decoration of the Curbatí ceramic complex. Excited by the prospect of locating a possible habitation site associated with a petroglyph site, we collected and saved the sherds we recovered in the cemetery (as surface collection B7-0001).

When we returned in July 1983, we spent more time reconnoitering the cemetery and the adjacent *conucos*. We recovered additional sherds from the backdirt of graves

in the cemetery and along the concrete walls of the cemetery, as well as from two looters' pits some 30 m northwest of the cemetery, where artifacts appeared in strata roughly 1 m below the ground surface. At the northeastern edge of the cemetery we sifted through the backdirt of an excavation that laid the concrete-block foundations for a tomb (as yet unfilled) that reached a depth of 1.05 m. Numerous rim sherds and decorated body sherds were collected and saved during this second visit to the cemetery and its environs. We designated this second surface collection from the cemetery B7-0002. We did not recover ceramics or other archaeological remains in the adjacent *conucos* (figs. 4.66, 4.108). Although it is clear that the El Cementerio de Capitanejo (B7) site extends beyond the current cemetery, the evident depth of the archaeological deposits below the modern-day ground surface makes the detection of archaeological remains dependent on subterranean penetration. On leaving the cemetery, we spoke



Fig. 4.65. Pascual Caputti F. examines backdirt from grave of María de Jesús Mora de Vargas at B7, with 19-11-81 date of death; the backdirt contained Curbati-complex ceramics.



Fig. 4.66. Piedmont spur under the cultivation of maize and manioc directly below rock face bearing petroglyphs (B14) and northeast of the cemetery at Capitanejo (B7).

to a mason who prepares tombs for the families of those buried in the cemetery. The mason, Gonzalo González, whose address is Calle Principal de Capitanejo No. 20, told us that in the process of building the foundations for numerous tombs in the cemetery he has observed ceramics at depths of 0.40–1.00 m.

SITE MAP: None.

DISTURBANCE: There are looters' pits in the immediate vicinity of the cemetery.

SURFACE-COLLECTION DATA: B7-0001 and B7-0002 (see table 4.1).

SITE SIZE AND CLASSIFICATION: 2 ha; Curbatí-complex habitation site.

DATES RECORDED: January 1981; July 18, 1983.

B8

SITE NAME: Fundo La Esmeralda.

OTHER SITE DESIGNATION: Curbatí 1, Petroglifos site 1 (Centro Arqueológico "Kuayú", 1981: 51, foldout map).

SITE LOCATION: The site of La Esmeralda (B8) is named for Fundo La Esmeralda on which it is located. The site occupies the western edge of a high alluvial terrace that rises 5 m above the low alluvium (*vega*) flanking the Curbatí River on its eastern side (figs. 4.1, 4.67, 4.68). To reach the *fundo*, take the second entrance on the north side of the Panamerican highway before crossing the Curbatí River en route west to the town of Curbatí. The entrance to Fundo La Esmeralda is on the west side of the dirt road and marked with a sign erected by the Centro "Kuayú". The high alluvial terrace on which the site extends is approximately 200 m east of the Curbatí River. Another Centro "Kuayú" sign stands northwest of the boulder (Piedra 1) that has petroglyphs carved on its surfaces.

VEGETATION: The site extends across two grassland pastures, with a thin strip of forest and secondary growth lining the western edge of the high alluvial terrace and the drop-off to the *vega*.

ARCHAEOLOGICAL REMAINS: The site of La Esmeralda was known to the members of the Centro Arqueológico "Kuayú"

because of the large boulder with petroglyphs at the western edge of the high alluvial terrace on which the site extends (fig. 4.67). The Centro "Kuayú" had designated the boulder Curbatí 1 and had recorded the petroglyphs on its top surface and its south and southeast sides (Centro Arqueológico "Kuayú", 1981: 54–55). A metal sign erected by the Centro "Kuayú" northwest of the boulder designated the boulder an archaeological area.

On July 15, 1983, our first day of fieldwork in the summer 1983 season, we visited the boulder, Piedra 1. It sat at the western edge of a bulldozed crater left by treasure seekers (fig. 4.69). In the fine dark loam exposed by the bulldozer we recovered ceramics (B8-0006) that we eventually would designate the Curbatí complex for their discovery here alongside Curbatí Piedra 1. The discovery of ceramics alongside Piedra 1 was a milestone in our search for habitation sites in the piedmont and in our chronological assessment of petroglyphs in the study region. The well-maintained grassland pasture cover made the search for ceramics on the ground surface difficult.

We returned to B8 on August 10, 1983, to carry out three test pits. Test Pits 1 and 2 were placed directly northeast and north of Piedra 1; Test Pit 3 was located 87 m northeast of Piedra 1 (see figs. 4.67, 4.70, 4.71). All three test excavations yielded Curbatí-complex ceramics and lithics beginning at 20–40 cm below the ground surface. Since the three test pits would form just the first phase of test excavations at B8, a full description will appear in the report of the program of systematic test excavations carried out here during the 1986 field season (Redmond and Spencer, n.d.).

At the same time that the preliminary test pits were carried out on August 10–11, 1983, we began mapping the site of La Esmeralda with an alidade and plane table at the scale of 1:1,000 (fig. 4.70). The program of mapping and test excavations at B8 resumed in the 1986 field season. The occurrence of archaeological remains in the test excavations, together with the sparse ceramics spotted eroding from the western scarp of the alluvial terrace in a couple of



Fig. 4.67. La Esmeralda (B8) site with test pit 1 under excavation in center, roughly 12 m northeast of Piedra 1.



Fig. 4.68. View of the low alluvium (*vega*) and forest lining the Curbatí River from the terrace on which the site of La Esmeralda (B8) lies, facing northwest. This photograph was taken in the dry season of 1986, when the *vega* and the terrace above had been cleared.



Fig. 4.69. Boulder with petroglyphs at B8, facing west. The area around the boulder had been bulldozed by treasure seekers.

places, allowed us to estimate the size of the site's Curbatí-phase occupation.

In August 1983, we systematically recorded and photographed Piedra 1. The boulder measures 7.5 m long, 5 m wide, and 3.5 m high (fig. 4.72). On its flat, sloping southern face, facing away from the Curbatí-phase community and toward the river, is a magnificent carving of an anthropomorphic figure. The carving shows a standing male human figure with certain zoomorphic characteristics—specifically, the cloven hooves and frontal horns or antlers characteristic of male deer. This carved figure measures over 1 m in height and is the largest representational petroglyph in our study region (fig. 4.73). It may represent a human wearing a mask, headdress, and other attributes of male deer. It may depict a supernatural deer-man analogous to the “Master of Animals” revered and portrayed on rock faces by Tukanoan Indians of the Vaupés territory of Northwest Amazonia (Reichel-Dolmatoff,

1967: 109–111). The anthropomorphic figure on Piedra 1 at B8 shares some similarities with the anthropomorphic figures carved on a boulder in the Curbatí River upstream at B83 (fig. 4.296) and with the anthropomorphic figures portrayed on Piedras 5 and 6 at Las Lajitas (B5) (figs. 4.39, 4.43).

On the left side of the figure on Piedra 1 are carved a stream of five coupled points. Above are two birds in flight, and to the left is a carving of a bat in flight, with its wing-like membranes and large ears (figs. 4.74, 4.75). Another depiction of a bat in flight is carved to its left on the southwestern face of the boulder (fig. 4.75). To the right of the figure, on the southeast side of the boulder, are carved three streams of 4–5 coupled points. Farther from the anthropomorphic figure on the southeast face of the boulder is a carving of a bat in flight, beneath a circle with a center point and alongside a cluster of smaller coupled points (fig. 4.76). On the top surface of Piedra 1 are many coupled

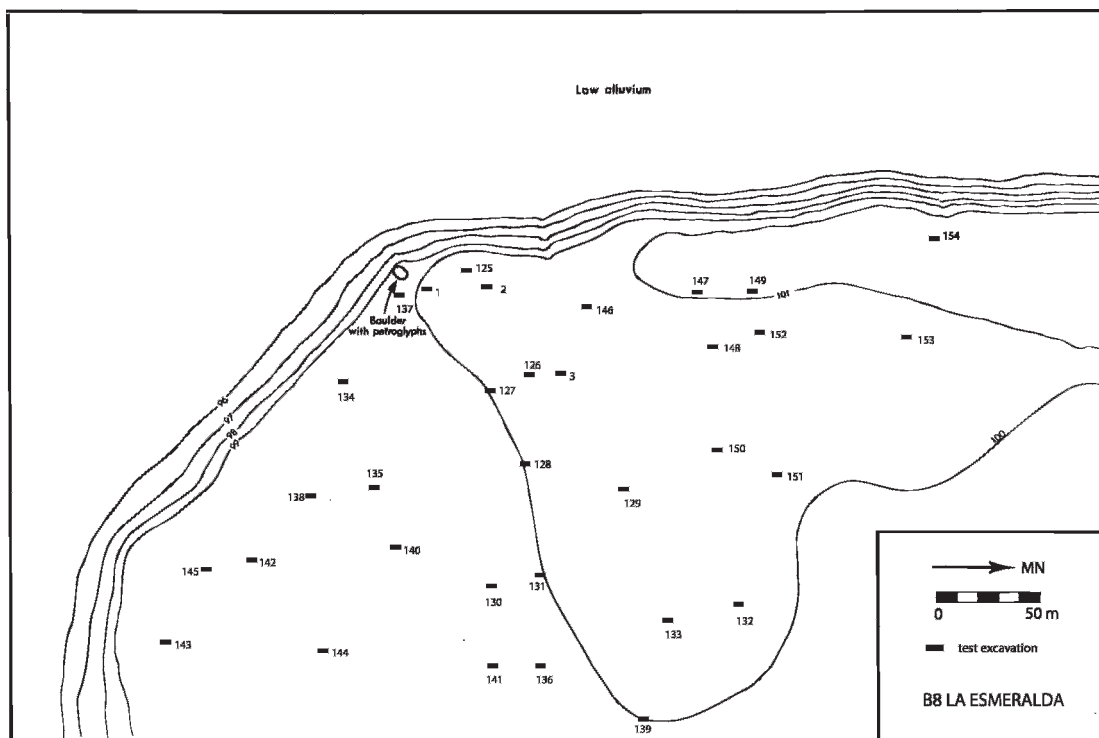


Fig. 4.70. Topographic map of La Esmeralda (B8) at 1:1,000 scale, showing the locations of Piedra 1 and the test pits excavated there in 1983 and 1986.



Fig. 4.71. Test pit 1 in progress facing toward Piedra 1 to the southwest.



Fig. 4.72. View of southern side of Piedra 1 at La Esmeralda (B8), facing northeast across high alluvial terrace where the Curbatí-phase community lay.

points, circles with center points, a circle with an internal appendage and coupled points, a rectilinear frame containing three rectangles, and other free-form designs (figs. 4.77, 4.78) (Centro Arqueológico “Kuayú”, 1981: 55).

SITE MAP: Figure 4.70. Topographic map is at 1:1,000 scale, showing the locations of Piedra 1 and the test pits excavated there in 1983 and 1986.

DISTURBANCE: The bulldozed crater surrounding Piedra 1 on its northern and eastern sides is feeding a *desagüe* that courses down the scarp of the alluvial terrace directly west of Piedra 1 during the rainy season.

SURFACE-COLLECTION DATA: B8-0006 collected from the bulldozed crater around Piedra 1 (see table 4.1).

SITE SIZE AND CLASSIFICATION: The site area drawn in on the aerial photograph was 8.12 ha; the area we mapped and test

pitted extended over 8.02 ha (fig. 4.70); Curbatí-complex habitation and petrogllyph site.

DATES RECORDED: July 15, 1983; August 10–11, 1983; 1986.

B9

SITE NAME: Batatuy.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site of Batatuy is located on the high llanos, at about 240 meters above sea level (masl), to the northeast of the Caño Batatuy and south-east of the hamlet of Batatuy, which is situated along the Panamerican highway before Santa Barbara in the *municipio* Socopó of the Distrito Pedraza (fig. 3.1). The site can be reached by driving along the dirt road leading southeast from Batatuy for a distance of 4.5 km. The Centro Arqueológico “Kuayú” report places the site at 3 km

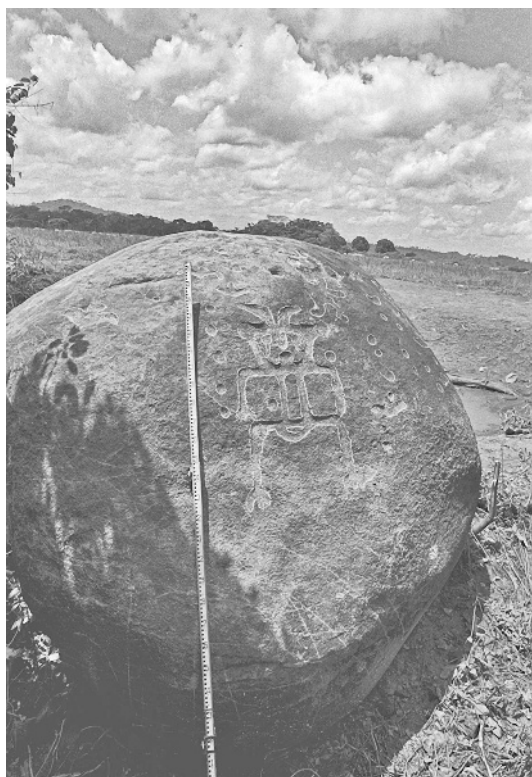


Fig. 4.73. Close-up view of anthropomorphic figure carved on southern face of Piedra 1 with stadia rod for scale.

from Batatuy (Centro Arqueológico “Kua-yú”, 1981: 34). The site is located along the dirt road, just 50 m north of the entrance to Fundo Santa Rosa. Another *caño* flows approximately 250 m north of the site’s mounds.

VEGETATION: Prior to the opening of the highway from Barinas to San Cristóbal in 1968, the area was part of the forested Selva de Ticoporo. Since then, farmers from the Andes have been moving into the Ticoporo area and establishing farmsteads and cattle ranches, thereby initiating the process of deforestation of the Selva de Ticoporo (Armand, 1975: 43–45). Subsequent logging by lumber companies has been the principal cause of shrinkage of the Selva de Ticoporo and the transformation of Batatuy’s landscape into an open-savanna grassland environment with gallery forests lining the rivers and *caños*, crisscrossed by

the barbed-wire fences of cattle ranches and farmsteads.

ARCHAEOLOGICAL REMAINS: Jorge Armand of the Universidad de los Andes carried out archaeological excavations at Batatuy from early September to mid-December 1973. Prior to Armand’s investigations, the site’s earthen mounds had been reported by members of the Universidad de los Andes’s Escuela de Geografía during a survey of the area in 1970. Subsequently, Rodolfo Márquez of the Universidad de los Andes’s Departamento de Antropología y Sociología and Museo Arqueológico visited the site and made a surface collection. Due to Armand’s interest in the Paleoindian period, the occurrence of lithic artifacts in Márquez’s collection from B9 piqued Armand’s curiosity in the site of Batatuy.

After carrying out a geological survey of a 4.5 km area around the site with the aim of defining the region’s geomorphology and stratigraphy, Armand and his assistants mapped the central area of B9 and its two earthen mounds (fig. 4.79). Four test pits measuring 1.5 m on a side were excavated in 15 cm levels within the mapped area of the site. The largest mound, Montículo 2, which is conical in shape, measures 82 m long by 80 m wide at its base and is 2.5 m tall (fig. 4.80). Armand (1975: 57) noted that the summit of this conical mound, which measures approximately 3 m by 1.5 m wide, would have been too small to have supported a residential structure. The third of Armand’s four test pits, Pozo de Prueba 3, was placed at the top and center of this mound; unfortunately, Armand’s published report (1975) does not include a description or profile drawing of the mound’s stratigraphy as observed in this test pit. It is likely that little in the way of artifactual material was recovered from the fill of this mound in view of the fact that none of the ceramics labeled by their provenience in table 5, for example, originated from this test pit. The second of Armand’s test pits, Pozo de Prueba 2, was placed at the southwestern base of Montículo 2. This test pit’s profile (Armand, 1975: 58) indicates that abundant archaeological re-

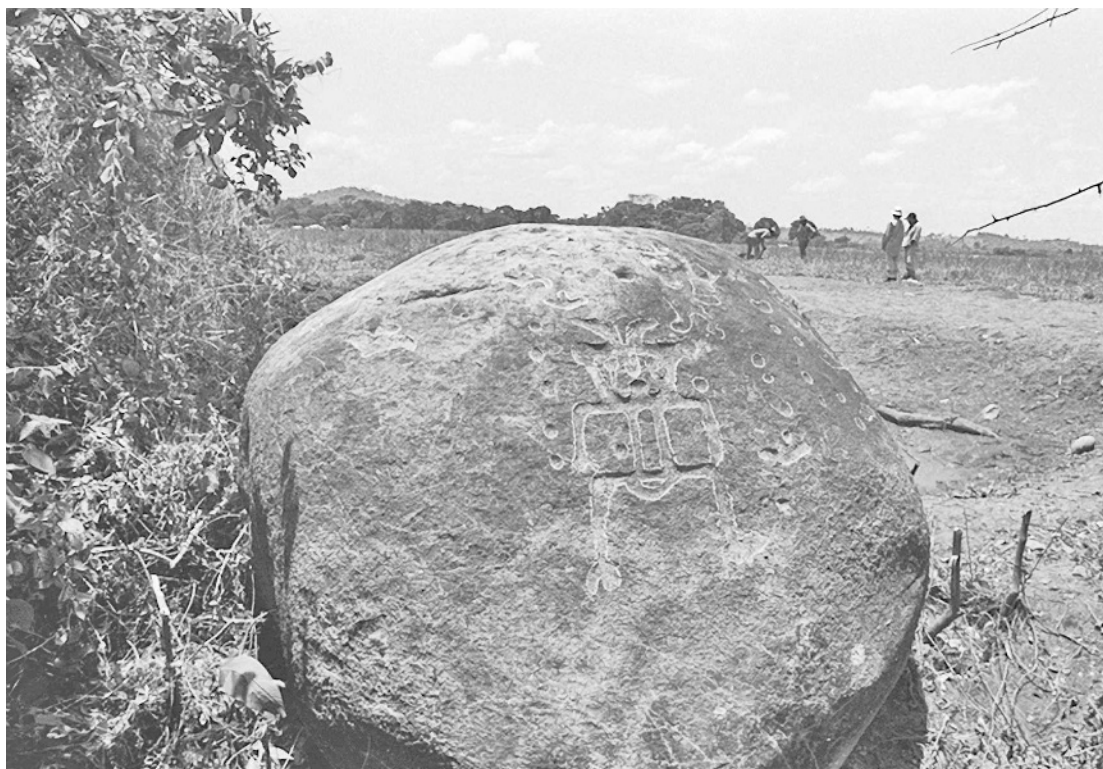


Fig. 4.74. Southern face of Piedra 1 at La Esmeralda (B8) with test pit 1 under excavation in the background to the northeast.



Fig. 4.75. Closer view of south and southwest sides of Piedra 1 at La Esmeralda, showing one carving of a bat in flight in roughly the center of the photograph and another possible bat in flight carved to the left.

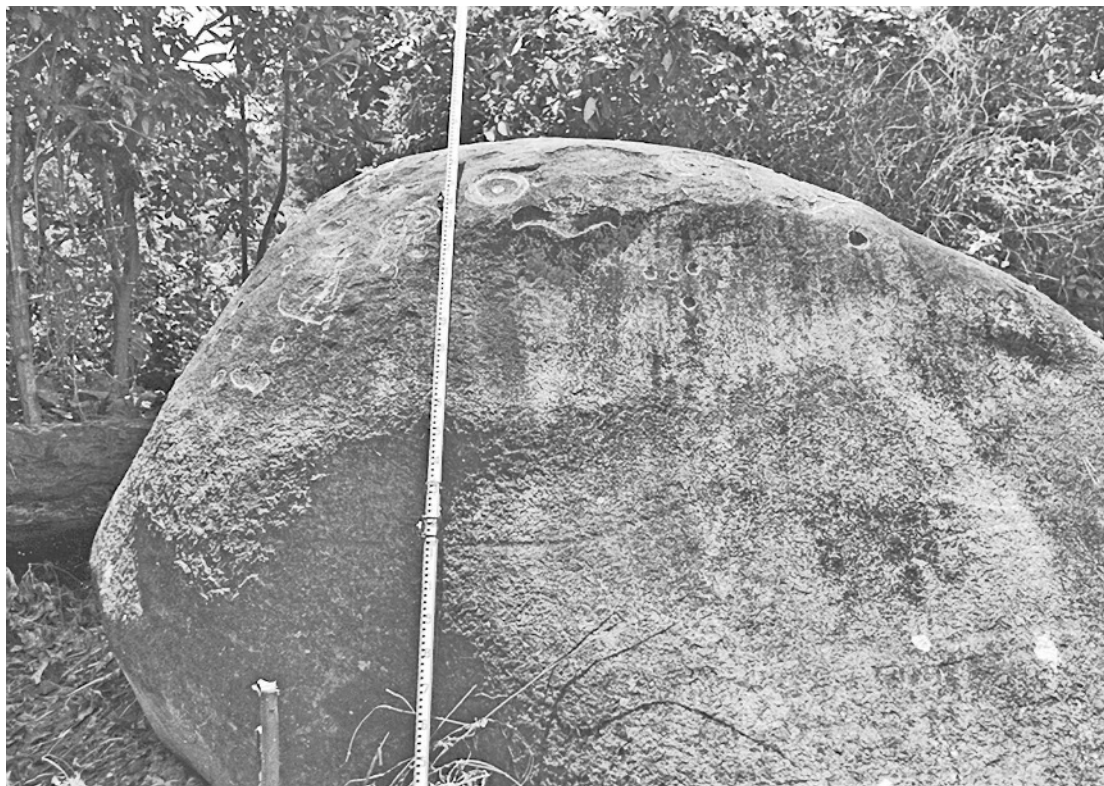


Fig. 4.76. Southeast side of Piedra 1 at La Esmeralda (B8). A bat in flight appears in the center of the photograph.



Fig. 4.77. Top surface of Piedra 1 at La Esmeralda on its the eastern side.



Fig. 4.78. Top surface of Piedra 1 at La Esmeralda on its northern side.

mains—ceramics and lithics—appeared in a gray-brown clay deposit at 15–60 cm below the ground surface. Decreasing numbers of ceramic and chipped-stone and ground-stone artifacts (including *metates*) occurred in the succeeding yellow and tan-colored clay deposits down to 1.35 m below the ground surface. Noteworthy in these yellow-tan clay deposits resting above sterile were the carbonized remains of four trunk-sized posts (Armand, 1975: figs. 5, 6), which Armand suggested may have represented the carbonized remains of wooden posts from a palisade.

Directly west of the main mound lies Montículo 1 (figs. 4.79, 4.81). This oval-shaped mound had been partially damaged by earth-moving equipment prior to 1973, but Armand estimated that it measured 60 m in length and 35 m in width, and stood 1.75 m tall. Armand described the top surface of the mound as being flat and spacious enough to have accommodated

one or two residential structures (Armand, 1975: 57). Consequently, Armand carried out a horizontal excavation extending across 24 m of the southern half of the mound that exposed an occupation surface at 13 cm below the top surface (Armand, 1975: 76–77). Among the many sherds and chipped-stone artifacts recovered on the occupation surface of Montículo 1 were a chipped-stone core surrounded by four flakes that had been struck from it and a cluster of nodules of ocher that were probably used as a pigment (Armand, 1975: 81, 120).

The artifactual remains evident on the surface in the central area of mounds was reported to be high due to the earth-moving equipment that was introduced to the site during the construction of the road from Batatuy, but also due to the activities of looters. Armand made a surface collection from this area (Armand, 1975: 85). The fourth test pit, Pozo de Prueba 4, which

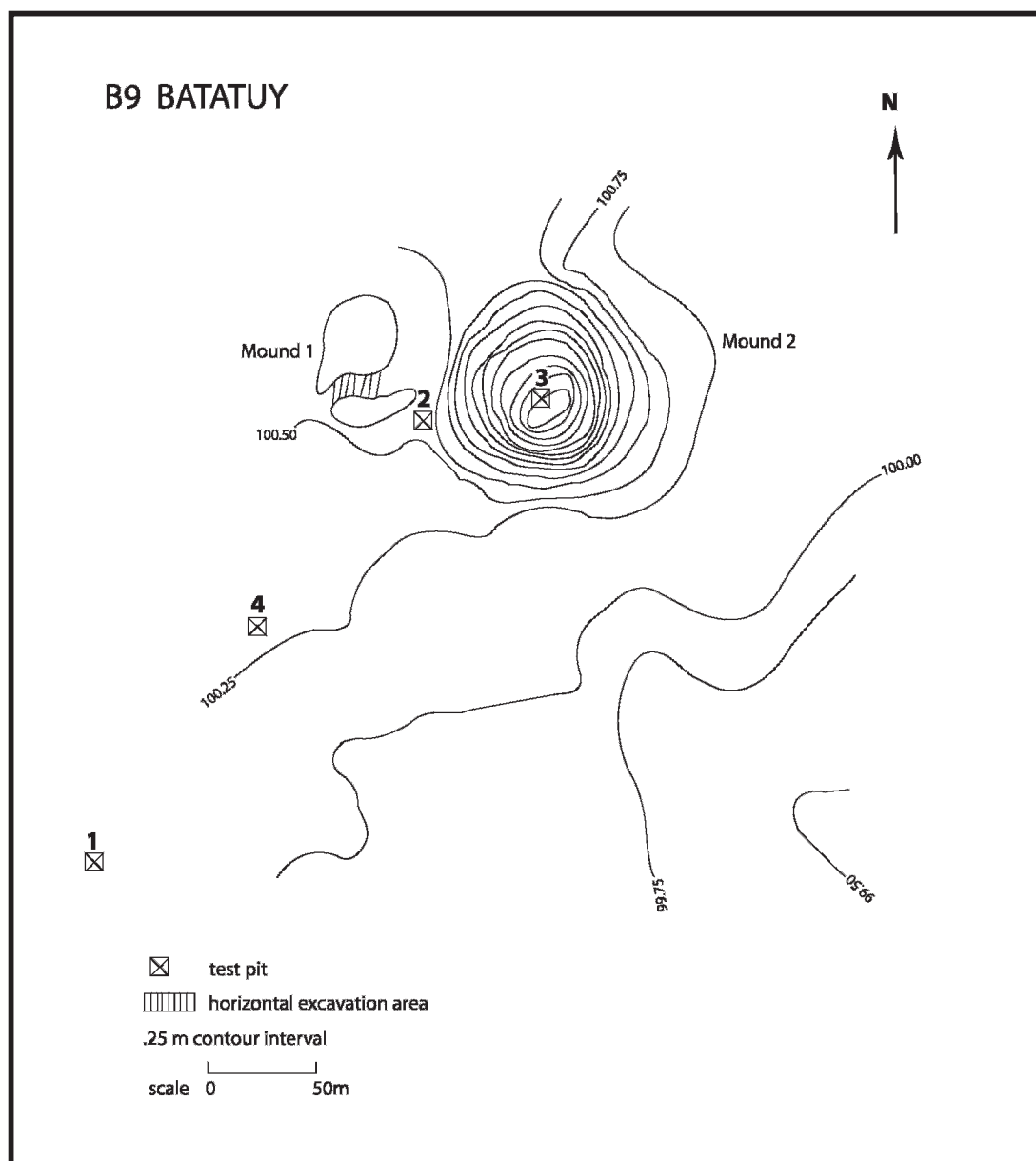


Fig. 4.79. Map of Batatuy (B9) site showing its two mounds and the locations of the excavations (from Armand, 1975: mapa 2).

was placed some 100 m southwest of the two mounds, exposed the same gray-brown clay deposit between 30 cm and 70 cm below the ground surface that contained abundant lithic and ceramic artifacts, including a female figurine similar to the female figurine recovered from the excava-

tions at Cerro Mijaguas (see B1) (Armand, 1975: 59–60, 100–103). The more than 200 chipped-stone artifacts stemmed from river pebbles fashioned into core tools and flake tools. Among the 12 ground-stone tools recovered in the excavations were *metates* and *manos*. The polished-



Fig. 4.80. Main mound, Montículo 2, at the site of Batatuy (B9), facing north.

stone artifacts included a fragment of a mace and two stone beads. According to Armand, the Osoid ceramics bore stylistic similarities to La Betania phase ceramics that Zucchi (1965) established and dated to A.D. 650–1200; however, two charcoal samples associated with these ceramics from the first and second test pits (Pozos de Prueba 1–2) produced radiocarbon dates having midpoints of A.D. 220 and A.D. 510 and were hence contemporaneous with the latter part of the Caño del Oso phase (230 B.C.–A.D. 650).

SITE MAP: Figure 4.79 presents Armand's map of the central area of mounds, showing the locations of the four test pits and the horizontal excavation area atop Montículo 1.

DISTURBANCE: Armand noted that artifactual remains were so abundant on the surface in the central area of mounds due



Fig. 4.81. Montículo 1 at Batatuy, on which Armand exposed an occupation surface in his horizontal excavation, facing north.

to the earth-moving equipment that had been introduced to the site during the construction of the road from Batatuy, but also due to the subsequent activities of looters.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: The area of mounds mapped by Armand (fig. 4.79) extends over 10 ha; Batatuy was probably a second-order center for an as yet unknown regional center.

DATE RECORDED: July 18, 1983.

B10

SITE NAME: Caño Grande.

OTHER SITE DESIGNATIONS: Petroglifos de la Acequia, Petroglifos site 2 (Centro Arqueológico “Kuayú”, 1981: 57–59, foldout map).

SITE LOCATION: The two boulders with petroglyphs carved on their surfaces are located on the southern bank of the Sinigüis River, a tributary of the Acequia River, between Loma Pancha and Loma La Copula, and approximately 10 km upstream from where a bridge of the Panamerican highway traverses the Acequia River (13 km according to the Centro Arqueológico “Kuayú” report) (fig. 3.1). The boulders are in rock-strewn, sloping piedmont terrain at an elevation of 530 m that drops steeply to the Sinigüis River in the upper Acequia drainage. To reach the boulders, turn off the highway at the dirt road on the southern bank of the Acequia River and drive 10–13 km upstream, past the community of El Tigre but well before one reaches the community of Caño Grande. The graded dirt road peters out just west of El Tigre. Continue some 2.5 km uphill on the major trail from El Tigre to La Florida that follows the bends of the Sinigüis River. This is a major pedestrian route for travel from the llanos to the high Andes. The boulders lie some 30 m north of the trail (fig. 4.82). We were guided to the petroglyphs by Hubo Moreno, who lives along the trail past El Tigre in the third-from-last *finca* house, which is built of concrete, has a front porch, and is painted light yellow and red. Hubo Moreno



Fig. 4.82. General view from trail to Caño Grande, looking west and uphill toward boulders with petroglyphs (B10).

is originally from San Juan Bautista, in the upper Sinigüis River.

VEGETATION: The sloping piedmont terrain along the south bank of the Sinigüis River has been cleared of its forest vegetation, but the pasture where the boulders lie is overgrown with shoulder-high *monte* (fig. 4.83).

ARCHAEOLOGICAL REMAINS: The two boulders with petroglyphs carved on their surfaces are located just a few meters apart. Piedra 1 is the lower and easternmost of the two boulders (fig. 4.84). All of Piedra 1's surfaces are covered with geometric petroglyphs, especially its flat, northern surface, which has many concentric circles with a center point, some contiguous circles with a center point, circles with crossed diameters (some forming quadrants and others forming octants), circular spirals, rectangular spirals, rectangular frames containing multiple parallel lines, and semicircles containing up-ended three-lobed figures (birds in flight?), which also appear in-

verted as open cartouches with an interior "T". One deeply carved cartouche with an interior "T" on the west face of Piedra 1 is enclosed by a surrounding flange of external radii (see figs. 4.27, 4.84). The top surface of Piedra 1 has some small basins, ca. 35–40 cm in diameter, connected by grooves.

Several meters upslope and to the west is the larger Piedra 2 (fig. 4.85). Piedra 2's eroded surfaces are covered with petroglyphs, as well, but they are harder to discern. They include the geometric motifs seen on Piedra 1, such as concentric circles with a center point, circular spirals, rectangular spirals, and two concentric cruciforms or outlined crosses (Centro Arqueológico "Kuayú", 1981: 57; Valencia and Sujo Volsky, 1987: 233).

No ceramics were evident on the surface at B10, and our guide from El Tigre did not know of any localities with ceramics in the vicinity.

SITE MAP: None.

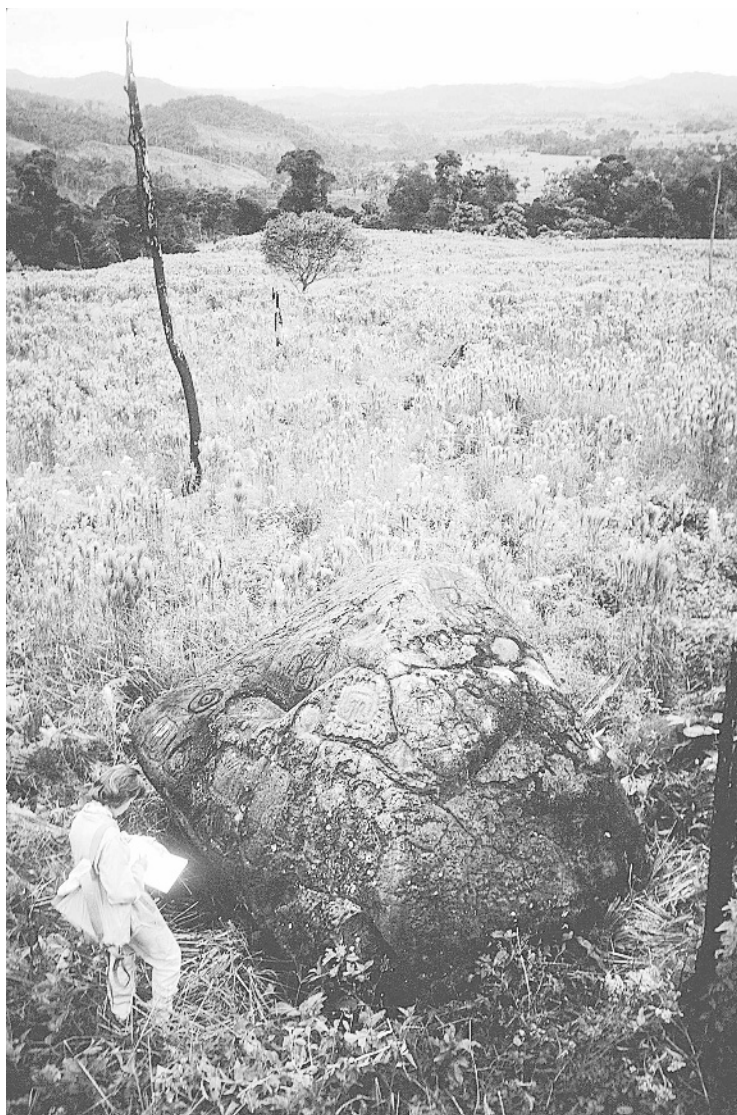


Fig. 4.83. View of Caño Grande (B10)'s Piedra 1, facing east and downslope toward Sinigüís River.

DISTURBANCE: Members of the Centro Arqueológico "Kuayú" had only recently recorded the petroglyphs at B10 prior to their published report, in which they raised concern that the forces of greater exposure and erosion due to the area's deforestation endangered the petroglyphs carved on the boulders.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATE RECORDED: July 19, 1983.

B11

SITE NAME: Torunos.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The mound site by the name of Torunos is located along the Caño El Tigre, near the village of La Montañita, southeast of Torunos in the Distrito Barinas (fig. 3.1). Torunos is a *parroquia* (parish) of the *municipio* of Barinas. The site is on the west side of the dirt road leading southeast from Torunos and El



Fig. 4.84. Piedra 1 at Caño Grande (B10), facing east. Deeply carved cartouche with T element and external flange of external radii is evident on western face.



Fig. 4.85. Piedra 2 at Caño Grande (B10), facing west.

Guamo to La Candelaria, some 4 km southwest of the turnoff at El Guamo from the road leading from El Guamo east across the Santo Domingo River to La Ceibita.

VEGETATION: A high llanos environment of mixed forest and savanna that was originally part of a forest or *montaña* that extended from the Caño Guabina north to the Río Santo Domingo. The village's name of La Montañita probably refers to its environmental setting.

ARCHAEOLOGICAL REMAINS: The site of Torunos is an Osoid mound site within the urban sprawl of Barinas. It had been brought to the attention of the Centro Arqueológico "Kuayú". We visited the site briefly and observed Osoid ceramics on the surface. We did not record information about the site's mounds because of the modern-day settlement that has encroached on the site.

SITE MAP: None.

DISTURBANCE: The site is now within the urban sprawl of Barinas and suffering the consequences of modern-day settlement in the immediate environs.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site-size estimate; probably a second-order center.

DATE RECORDED: July 16, 1983.

B12

SITE NAME: El Gaván.

OTHER SITE DESIGNATION: Los Cerritos del Gaván; El Gabán.

SITE LOCATION: The mound site of El Gaván is situated on a *banco* on the Sabanas El Cerrito, approximately 0.6 km northeast of Caño Mitiao Hondo and a little over 1.85 km northeast of the Canaguá River (fig. 4.2). The site is located on the flat grassland plains of the high llanos, above 160 masl. So close is the site to Caño Mitiao Hondo that a former oxbow (*madrevieja*) of the stream has penetrated and destroyed the site's northwestern corner (fig. 4.86). The Caño Guabinas lies a little less than 2 km northeast of the site and demarcates the northeastern edge of

the Sabanas El Cerrito. The site (B12) can be reached from Curbatí on the Panamerican highway by proceeding on the dirt road to the southeast through El Toro. At a distance of about 11 km from the highway, at a fork in the road southeast of El Toro, take a right turn and continue in a southwesterly direction, crossing a small stream (*cañizo*) on a metal bridge and reaching a metal gate that is painted orange and bears the name *Gabán* at the entrance to the *fundo* house of Fundo El Gaván, approximately 15 km from the highway. *Gabán* is the name of the wood ibis (*Mycteria americana*) that aggregates in pools and lagoons on the llanos. The dirt road then veers to the southeast and runs along the northeastern side of, and roughly parallel to, Caño Guabinas, then crosses it on a wooden-slab bridge and heads west toward the Canaguá River and the *fundo* house of Ramón Gutiérrez's Fundo El Cerrito in a small grove of trees. From this small *fundo* house, which sits along an ancient causeway, the dirt road heads northward atop the causeway for approximately 2.5 km, past two *ranchos*, a small *fundo*, and another *ranchito*, and through five barbed-wire gates (*falsos*) or metal gates to reach the southeastern end of the site.

VEGETATION: The site is located on flat savanna grasslands on the eastern edge of the forested Montaña El Chuponal that lines the Caño Mitiao Hondo and extends south and west to the Canaguá River (fig. 4.86). The Montaña El Chuponal is shrinking steadily as the forest is cleared for cattle ranching and agriculture. The site is crosscut by barbed-wire fences that delimit pastures; the pastures are cleared of their overgrowth, which includes stands of *estoraque*. The site's major mounds are covered with overgrowth (*monte*) and trees.

ARCHAEOLOGICAL REMAINS: We visited the site of El Gaván for the first time on July 20, 1983, and returned to reconnoiter what we had tentatively identified as a likely regional center on July 24, 1983. After receiving the permission of the owner of Fundo El Gaván, Lucio Laviano O., who lived in Maracay, we returned later during



Fig. 4.86. Aerial view of El Gaván (B12), facing northwest. The oval *calzada*-like earthwork that encircles the center is visible, especially the eastern half of the oval that is used as a roadway today, as well as the site's largest mound at its southeastern end, and *calzadas* that approach the site from the southeast, the west, and the northwest.

the 1983 season to begin mapping this regional center with an alidade and plane table at a scale of 1:1,000 (figs. 4.87, 4.88). Also, we placed a 2 m by 1 m test excavation (T.1) northeast of a low mound flanking the site's plaza to collect information about the site's stratigraphy and to obtain stratigraphically controlled samples of ceramics and other artifacts from what we tentatively identified as a house mound at this center (figs. 4.88, 4.89).

On the basis of these initial findings, the site of El Gaván (B12) became a focus of our archaeological investigations on the high llanos. During the 1986 season, we continued mapping the site and carried out a program of systematic test excavations in the form of 54 additional 2 m by 1 m test pits across the entire site, the results of which will be described at length in a separate report (Spencer and Redmond,

n.d.). In our final, 1988 field season, we carried out horizontal excavations at B12, the results of which will also be described in detail in the final excavation report (Spencer and Redmond, n.d.).

B12 was the largest site in our study region and assumed the top tier of the regional settlement hierarchy obtained on the high llanos according to site size and mounded architecture in the Late Gaván phase. This regional center extends over 33 ha and features six large earthen mounds and other earthworks (fig. 4.88). A *calzada*-like earthwork circumscribes the center. Although the earthwork's northwestern side has been partially destroyed by an oxbow of the Caño Mitiao Hondo, the encircling *calzada* originally formed a large oval that measures 950 m long and 470 m wide (figs. 4.86, 4.88). The *calzada* rises more than 1 m above the present-day ground surface and



Fig. 4.87. Spencer mapping B12 with the help of a walkie-talkie radio from plane-table position on top of Mound B, facing southwest across the site's plaza toward Mound C.

measures 6–8 m wide on top and 20–25 m wide at the base (figs. 4.90, 4.96). One of the areas of excavation (Area B) at B12 took the form of trenches on top and across a segment of this earthwork that encircles the center (fig. 4.91). Area B exposed an alignment of carbonized postmolds and related deposits of ash and burned earth that probably represent the remains of a palisade that originally stood on top of the earthwork and was destroyed by fire (see Spencer

and Redmond, 1992: fig. 5). We mapped segments of four *calzadas* leading from the peripheral *calzada* in to the site's plaza (fig. 4.88).

The 40 m- to 45 m-wide plaza extends for 500 m of the site's major axis, along a compass bearing of N 53°W, with tall conical mounds at either end (fig. 4.94). The tallest mound (Mound A) rises at the southeastern end of the plaza; it has a maximum basal diameter of 90 m and is 12 m

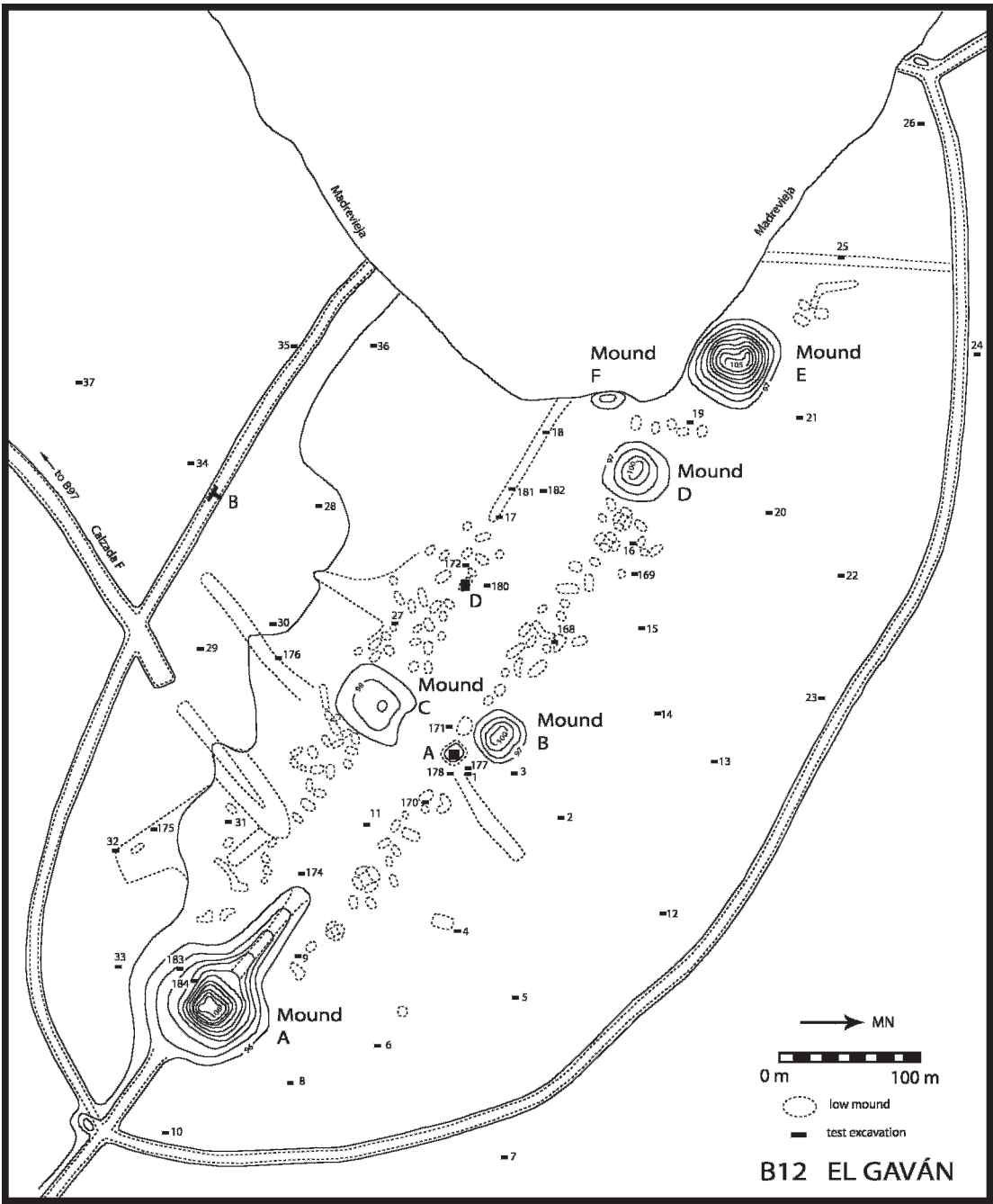


Fig. 4.88. Topographic map of El Gaván (B12) at 1:1,000 scale, showing the site's major mounds, earthworks, and house mounds, the numbered test pits, and the lettered areas of horizontal excavation.



Fig. 4.89. Test pit 1 placed southeast of Mound B at El Gaván during the 1983 field season, facing northwest. Plane table is visible on top of nearby Mound B.

tall (figs. 4.92, 4.93). The 80 m-long ramp that projects from Mound A's northwestern face into the plaza was probably used to ascend to its summit (figs. 4.88, 4.92). The summit of Mound A measures approximately 14 m by 11 m. Mound A's southern and southwestern faces have been disturbed by a bulldozer and by the subsequent erosion of the surfaces exposed (fig. 4.99). At the northwestern end of the plaza stands the second-largest mound (Mound E) at B12 (figs. 4.88, 4.94, 4.96). Mound E has a maximum basal diameter of 65 m and is 10 m tall (fig. 4.95). We estimate that Mound E's top surface, which is suffering from erosion on its northwestern side, measures approximately 15 m by 11 m. Some 55 m to the southeast stands a 4 m-tall conical mound (Mound D) with a maximum basal diameter of 45 m (figs. 4.88, 4.96). The top surface of Mound D measures 13.5 m by 7 m, with the longer side parallel to the plaza and, hence, probably facing the plaza's

northern side. Some 30 m west of Mound D is another earthen mound (Mound F) largely destroyed by the oxbow. What remains of Mound F rises at least 2 m in height and extends 25 m in width at its eastern base (fig. 4.88). A polished-stone ax was recovered from the surface of this mound during the January 1984 field season (see surface collection B12-0027).

A little to the southeast of the plaza's midpoint, two mounds face each other across the plaza. On the plaza's north side stands Mound B, a 4 m-tall mound with a maximum basal diameter of 37.5 m and a top surface measuring 13.5 m by 7.5 m, on which we established a central datum point and alidade station when we mapped the site (figs. 4.87, 4.89). The adjacent 1 m-tall house mound was the locus of horizontal excavation (Area A) during the 1988 season (fig. 4.97). South across the plaza stands Mound C, a 3 m-tall mound that measures 48–50 m by 46 m at its base.



Fig. 4.90. María Andueza G. walks on *calzada* that forms eastern edge of El Gaván, facing southeast to Mound A.

Two segments of intrasite *calzadas* originate at this point and head in the direction of the center's encircling *calzada* (fig. 4.88).

Flanking the plaza are many of the 134 lower mounds 1 m or less in height with dimensions on the order of 10 m by 6 m



Fig. 4.91. Excavation area (Area B) on top and across *calzada* that forms western edge of El Gaván, facing northwest.

that we mapped and designated house mounds. During the 1988 field season, we exposed the top surfaces of two of these possible house mounds (Areas A, D) and exposed the hard-packed earthen floors of rectangular houses that faced the plaza (figs. 4.97, 4.98) (Spencer and Redmond, 1992: figs. 8, 9).

Finally, three causeways lead from El Gavan's encircling *calzada* to the southeast (Calzada G), to the west (Calzada F), and to the northwest (Calzada A) (figs. 4.86, 4.88, 4.99). We traced these causeways as part of our regional survey and determined that they link the regional center to subsidiary settlements in the region (fig. 4.2) (Spencer and Redmond, 1998).

SITE MAP: Figure 4.88. Topographic map at 1:1,000 scale that shows B12's mounds, causeways, earthworks, and the locations of our test excavations and excavation areas.



Fig. 4.92. Western side of Mound A at B12, with a person on top of ramp and a person below for scale, facing east.



Fig. 4.93. Southwestern side of Mound A at B12, with a person on the mound's summit and a person at the mound's base for scale, facing northeast.



Fig. 4.94. View of plaza at B12 from the northwestern end of Mound A's ramp facing N 45°W toward Mound E, which is visible in the distance to the right of the tall trees. Mounds B and C are harder to detect to the right and left, respectively, of the photograph's center.



Fig. 4.95. View of Mound E's southeastern face, facing northwest.



Fig. 4.96. View from *calzada* at eastern edge of B12 west toward Mounds D and E at the northwestern end of the plaza. Mound E is the tall mound that rises to the right of tallest tree lining the oxbow stream, and Mound D is the low mound to the left and directly in front of dead tree trunk.

DISTURBANCE: The site's northwestern corner has been destroyed by the meandering oxbow of the Caño Mitiao Hondo, including the removal of most of an earthen mound (Mound F) directly southeast of Mound E and a segment of an intrasite *calzada* that we traced from the eastern side of the encircling *calzada* in a southerly direction as far as the oxbow, and that may continue southeast of the oxbow in the form of the earthwork that flanks the northwestern end of the plaza. The summit of Mound E is severely eroded on its northwestern side.

Mound A has been bulldozed on its southern and southwestern sides by treasure seekers (figs. 4.93, 4.99). These exposed surfaces of the mound have subsequently suffered from erosion. Birds and bats nest in the crevices of the damaged surfaces. During the 1988 season, we used the surfaces exposed by the bulldozer to



Fig. 4.97. Excavation of 1 m-tall house mound (Area A) on north side of B 12's plaza, facing northwest. The adjacent Mound B is visible, as is the northwest corner of Mound C across the plaza to the left of the figure standing on the house mound.



Fig. 4.98. Excavation of a house mound, less than 1 m in height (Area D), that flanked south side of plaza at B12, facing northwest. The plaza is on the right, and Mound E is partially visible in the distance in the upper right of the photograph.



Fig. 4.99. Intersite causeway (Calzada G) that approaches B12 from the southeast and joins oval causeway where figure is standing southeast of Mound A.

clear and draw a cross-section of the mound's southern face.

SURFACE-COLLECTION DATA: Surface collection B12-0005 was made during the 1983 season, principally from Mound A. Surface collection B12-0023 was made along the southeastern eroded edge of the oxbow of the Caño Mitiao Hondo at the center's northwestern edge. Surface collection B12-0027 consisted of the polished-stone ax recovered on the surface of the fragment of Mound F located immediately to the southeast of Mound E along the site's northwestern edge. Surface collection B12-0029 was made along an east–west stretch of the causeway (Calzada A), in the vicinity of Fundo La Fijanza, owned by Renato Gudiño, that approaches B12 from the northwest (see table 4.1).

SITE SIZE AND CLASSIFICATION: 33 ha; regional center.

DATES RECORDED: July 20, 1983, was the date of our first visit to El Gaván. We returned later in the 1983 season and in the January 1984 season to carry out further reconnaissance. We began mapping the regional center at the end of the 1983 season. We returned to El Gaván in 1986 to complete mapping the center and to carry out a program of systematic test excavations. The final, 1988 field season (January–May) was devoted largely to horizontal excavations at El Gaván. A final excavation report is in preparation (Spencer and Redmond, n.d.).

B13

SITE NAME: Las Lomitas Florideñas.

OTHER SITE DESIGNATION: Site C11 (Gassón, 1998: table 2.2).

SITE LOCATION: The mound site Las Lomitas Florideñas is located on the Sabana de Merecure, east of the forested Montaña de Concha and southwest of the meandering caños, oxbows, and lagoons that belong to the Ticoporo River drainage, between 130–140 masl (fig. 3.1). Gassón recorded the site's coordinates with GPS instrumentation during his survey of the greater Cedral region in 1995–1996 and lists them in table 2.2 of his doctoral dissertation as

8°06'26''N and 70°22'32''W (Gassón, 1998: 83). The site extends over Fundo Las Lomitas, owned by Ramón Florida, who lives in Ciudad Bolivia. The manager, or *encargado*, of Fundo Las Lomitas, Victor Crespo, informed us that B13 lies approximately 1.5 km from the Caño Madre Vieja.

We were advised by informants in Ciudad Bolivia that the best way to reach the site during the rainy season was to drive south and east from Ciudad Bolivia for approximately 14 km on the gravel road that passes through Mijaguas toward Boca de Anaro and to take the first left fork onto the *vía* Montaña de Concha gravel road for a distance of approximately 27 km, entering a tubular gate on the southwest side of the *vía* (located 3 km northwest of a fork in the *vía*), and driving 4 km more to Fundo Las Lomitas, past Fundo La Tigra on the right and southwest, whose main house and corral lie on a causeway that heads in the direction of B13 at a distance of 2.6 km from the *vía* Montaña de Concha. The house, associated structures, and corral of Fundo las Lomitas lie directly south of and adjacent to the site's main mounds on a *banco*. A metal sign has been posted on one of the lower mounds in the site's central mounded precinct that reads “Area Arqueológica” (fig. 4.100).

VEGETATION: The Sabana de Merecure is characterized by savanna grasslands, gallery forests lining the seasonal streams or *caños*, and isolated forest groves (*matas*). The *banco* on which the main mounds, *fundo* house, and corral lie is outlined by trees. When we visited the site in July 1983, the main mound and the mound with the metal sign were under the cultivation of maize. In their 1999 field season, Gassón's team observed manioc being cultivated on one of smaller mounds here (Gassón, personal commun., 2002).

ARCHAEOLOGICAL REMAINS: The *encargado* of Fundo Las Lomitas, Victor Crespo, accompanied us to the tallest mound, which we estimated to be 15 m tall—Gassón's team has assigned it a height of 17 m (Rey, 2003: 40). At its base, this main mound measures roughly 70 m on



Fig. 4.100. Eastern side of tallest, 17 m-tall mound at Las Lomitas Florideñas (B13), facing west. A metal sign is posted on lower 3–4 m-tall mound to the right.

its southern and eastern sides; a small platform projects southward from its southern corner. The summit of this tall mound measures approximately 6 m by 6 m. From the summit of this conical mound we drew a sketch map of the configuration of the most visible mounds and causeways at the site; our sketch map is superseded by Rafael Gassón's map of Lomitas Florideñas (C11), which we have been given permission to reproduce here (fig. 4.101).

The center's mounded precinct features an alignment of three major earthen mounds and intervening flat ground that extend over 500 m of a *banco* at an orientation of roughly N 45°E. The 17 m-tall mound is the southernmost of the three mounds. On the flat ground to the southeast of the mound lie the *fundo*'s structures, whose courtyards are littered with Osoid ceramics (figs. 4.102, 4.103). Sr. Crespo informed us that when a trench was excavated at a depth of 1.5 m to lay foundations for

a structure, a burial with a painted ceramic-bead necklace had been exposed. A low rise covered by a stand of trees some 50 m or more to the southwest of the tall mound

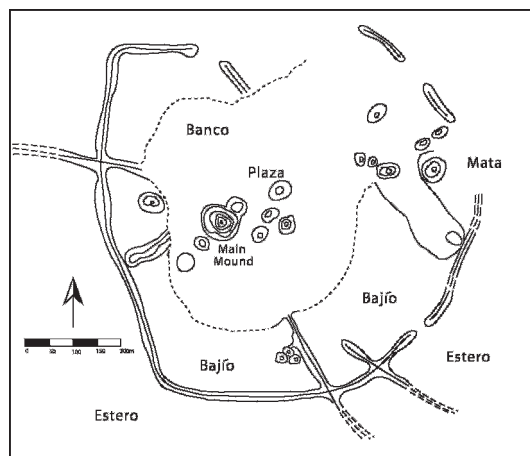


Fig. 4.101. Rafael Gassón's map of Las Lomitas Florideñas mound site (B13).



Fig. 4.102. Southern face of the main mound at B13, facing northwest from the patio of the *fundo* house.

and *fundo* is probably another mound or *calzada* fragment (figs. 4.103, 4.104). We sketched two smaller mounds that rise to the southeast and northwest of the low rise (fig. 4.101). Directly northeast of the 17 m-tall mound stands the second-tallest mound at B13, which measures approximately 50 m by 30 m at its base and is roughly 8 m tall. Another 50 m to the northeast rises the third-tallest mound, which is about 6 m tall (fig. 4.101). A 3–4 m-tall mound rises to the east, which is designated Montículo 1 on the sign that members of the Centro Arqueológico “Kuayú” erected on it (fig. 4.100). We collected ceramics and a polished-stone bead (see B13-0003) from the southern and northern faces of this mound that have been trampled by cattle.

From the top of the main mound, Sr. Crespo pointed out the site’s boundaries and causeways. He reported finding ceramics over an area 1 km to the northeast; 400 m east to a causeway that runs in a southerly-southeasterly direction; 200–

250 m southwest to a *calzada* that runs south-of-east and north-of-west; and 500 m to the west (fig. 4.104). A causeway bounds the site on its western side and heads northward toward Fundo La Tigra (fig. 4.105). According to Sr. Crespo, the easternmost causeway that heads in a southerly to southeasterly direction links B13 with another mounded site on Fundo La Fortuna (owned by a Sr. Contrera), which is located about 10 km away to the south of the Caño Madre Vieja, the Montaña de Concha, and Mata de León (by way of Fundo Santa Ana). The causeway that heads in a northerly direction and that traverses Fundo La Tigra intersects with the aforementioned causeway.

Rafael Gassón has directed archaeological investigations at Lomitas Florideñas since 1995 (Gassón, 1998: 59–61). His team, which includes Ana María Gómez, Juan Carlos Rey, Johán Rodríguez, and Rona Villalba, has carried out an intensive survey and mapping project of the site. With aerial



Fig. 4.103. View from the top of the main mound at B13, facing S 25°E, of the modern-day structures of Fundo Las Lomitas, where Osoid ceramics litter the ground surface, and a clump of trees on top of a low rise farther south, beyond which a causeway traverses the savanna at a south-of-east or north-of-west heading.



Fig. 4.104. View from the top of the main mound at B13, facing W 30°S across Sabana de Merecure and forested Montaña de Concha in the distance. A causeway heads in a northerly direction across the savanna (see arrow).



Fig. 4.105. View of causeway that traverses Fundo La Tigra from the western edge of B13, facing south from road to Fundo Las Lomitas. A corral that lies on the causeway is visible on the right edge of the photo, taken during the rainy season, when much of the Sabana de Merecure is inundated.

photographs and IDRISI GIS they have determined that B13 extends over 47 ha (Gassón, 1998: table 2.2; Rey, 2003: 40). They have mapped the site's 22 mounds and encircling *calzada*, and have generously allowed us to reproduce their map of B13 here (fig. 4.101). Members of Gassón's team have traced the causeways that link B13 to other sites in the greater Cedral region, radiating from the regional center of El Cedral (B33), 9.86 km to the northwest (Rey, 2003: 40). Moreover, Gassón and his team have carried out intensive surface collections on each of the site's mounded structures, and additional intensive surface collections in areas where surface remains have been exposed by modern human activities, as, for example, in the patios of the *fundo* house and associated structures (figs. 4.102, 4.103); they recovered abundant ceramics and few lithic artifacts—namely, axes (Gas-

són, personal commun., 2002). Rona Villalba has carried out a descriptive and multivariate analysis of the ceramics collected from the mounded structures to assess patterns of social differentiation (Villalba, 2004). Finally, Gassón has directed the excavation of four test pits, measuring 2 m by 2 m, south and adjacent to the main mound at Lomitas Florideñas on the central *banco* of the site occupied by the modern-day inhabitants of Fundo Las Lomitas (figs. 4.102, 4.103). One test excavation was carried out in 1996, and the remaining three were carried out in 1999. These test excavations (down to a maximum depth of 1.3 m below the ground surface) have produced abundant ceramics, faunal remains, and few lithic artifacts (Gassón, personal commun., 2002). Ana María Gómez has been analyzing the ceramics from the test excavations and proposes that two ceramic phases

are represented at Lomitas Florideñas: (1) ceramics obtained from stratigraphically deep levels are early and stylistically different from the ceramics at El Cedral (B33); (2) the ceramics obtained from stratigraphically higher levels are later and very similar to the ceramics at El Cedral that are associated with two radiocarbon dates having midpoints of A.D. 680 ± 50 and A.D. 690 ± 50 (see B33) (Gassón, personal commun., 2002). Recently, a carbon sample from Gassón's Operación 1, 1–1.10 m below ground surface was sent to Beta Analytic Inc. for radiocarbon dating, but it has not yet been reported (Gassón, personal commun., 2004). Johán Rodríguez has analyzed the faunal remains obtained in these test excavations.

SITE MAP: Our sketch map of the site has been superseded by Rafael Gassón's map of Lomitas Florideñas (C11), which we have been given permission to reproduce here (fig. 4.101).

DISTURBANCE: In the process of laying foundations for structures and erecting fence posts, the modern-day inhabitants of Fundo Las Lomitas have encountered archaeological deposits, especially in the central mounded precinct of the site. The herding of cattle into and out of the corral here has resulted in the trampled northern and southern faces of the lower mound on the eastern edge of the central mounded precinct on which the Centro Arqueológico "Kuayú" erected the sign. Gassón's team located a partially destroyed mound to the northwest of the central mounded area of the site during their 1999 season (Gassón, personal commun., 2002). We noted that at least the causeway that heads in a southeasterly direction along the site's eastern edge has been damaged in places and consists of segments that run at a heading of S 20° E.

SURFACE-COLLECTION DATA: Surface collection B13-0003 is a sample of ceramics recovered on the surface in the central mounded precinct in areas exposed by the modern-day inhabitants of Fundo Las Lomitas, especially in the outside courtyard of the *fundo* house and corral (see table 4.1). More recent, intensive surface collections

carried out by Gassón have been located systematically on each of the mounds in the central mounded precinct, as well as in the courtyard of the *fundo* house (Gassón, personal commun., 2002).

SITE SIZE AND CLASSIFICATION: 47 ha (Gassón, 1998: table 2.2; Rey, 2003: 40). Based on the findings deriving from Gassón's recent investigations at B13, he is considering the possibility that Lomitas Florideñas served as a regional center in pre-A.D. 630 times. On the basis of its site size, mounded architecture, ceramic associations, and causeway linkage with the regional center of El Cedral (B33), Gassón has proposed that Lomitas Florideñas became a secondary center of the El Cedral polity during a subsequent ceramic phase, contemporaneous with the La Betania and Late Gaván phases on the llanos (Gassón, personal commun., 2002; Rey, 2003: 40, 79).

DATE RECORDED: July 21, 1983.

B14

SITE NAME: La Muralla de Capitanejo.

OTHER SITE DESIGNATION: Construcción Prehispánica 7 (Centro Arqueológico "Kuayú", 1981).

SITE LOCATION: The petroglyphs are located on the northeastern rock face of a flat-topped lower branch or mesa of the Fila de las Cuchillas approximately 1.5 km northeast of the town of Capitanejo and north of the Panamerican highway, in the Distrito Ezequiel Zamora (figs. 3.1, 4.106, 4.107). The sedimentary rock face is noticeably banded and broken in appearance and largely covered with *monte*. The best access way in 1982 was by way of the Capitanejo cemetery, and uphill through several fields of maize and manioc, for about a distance of some 500 m (figs. 4.63, 4.108).

VEGETATION: The top of the mesa is covered with forest, but the northeastern face has been cleared and featured knee-high *monte* in January 1982 and July 1983. Below and to the southwest are several fields of maize and manioc (figs. 4.63, 4.108).

ARCHAEOLOGICAL REMAINS: We were taken to La Muralla de Capitanejo as part of our preliminary reconnaissance of the



Fig. 4.106. Wide-angle-lens view of mesa where La Muralla de Capitanejo petroglyphs (B14) are found, facing a little north of west.



Fig. 4.107. View from La Muralla de Capitanejo petroglyph site (B14) out across Panamerican highway toward high llanos, facing southeast.



Fig. 4.108. View of La Muralla de Capitanejo (B14) from manioc field directly below and southwest of mesa.

Andean piedmont and high llanos in January 1982 by Pablo Novoa A. and Pascual Caputti F. Carved on the banded strata of the rock face estimated to be over 300 m long and 6 m tall is what appears to be a carefully designed layout of deeply grooved concentric circles (fig. 4.109). The principal carving is at the center and on the topmost exposed statum of the rock face; it is a three-ring concentric circle that measures 1.5 m in diameter, with grooves

0.10 m wide and 0.04 m deep (Centro Arqueológico “Kuayú”, 1981: 85). On the same band and directly adjacent and east of this impressive carving is a cluster of four two-ring concentric circles (fig. 4.110). Directly adjacent and west of the central petroglyph is a symmetrical cluster of smaller concentric circles (see Centro Arqueológico “Kuayú”, 1981: 89).

About 3 m directly below the central petroglyph is a deep hole in the exposed stra-

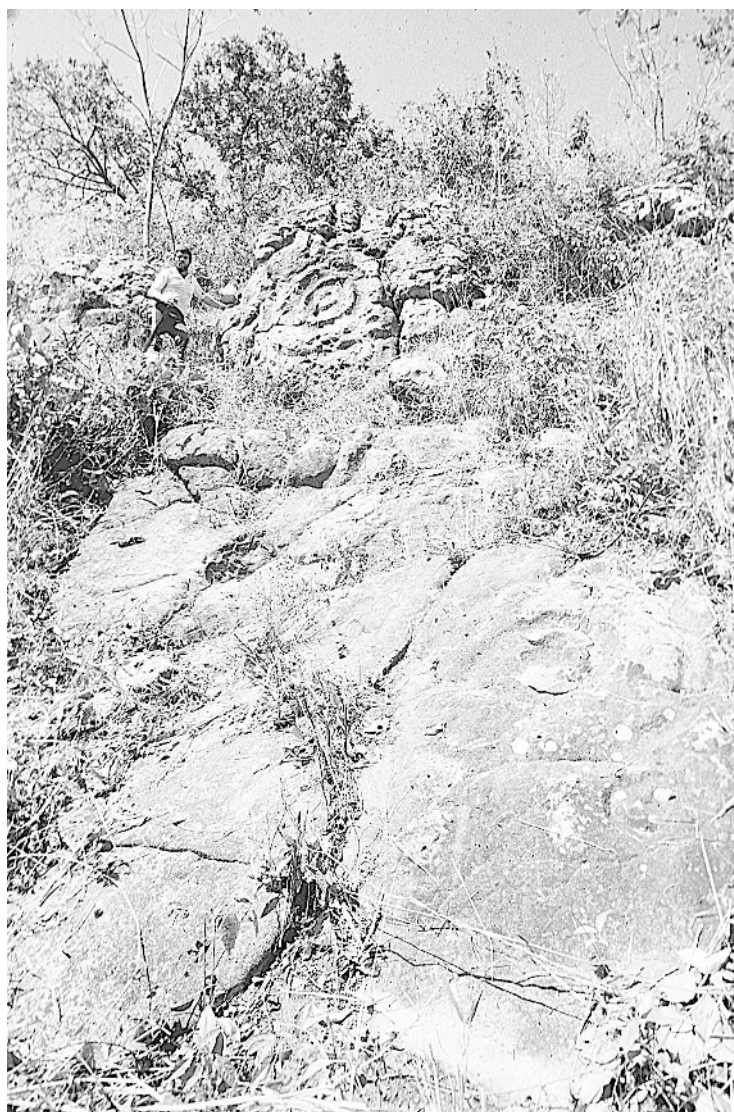


Fig. 4.109. La Muralla de Capitanejo (B14), showing Pascual Caputti F. standing on west side of central petroglyph consisting of concentric circles at top, and rock hearth and another concentric-circles petroglyph on lower stratum in foreground.

tum below that almost certainly served as a rock hearth (fig. 4.111). It measures 0.40–0.50 m in diameter and 0.80 m in depth and has a reddened and blackened interior lining. This rock hearth was lined on its interior by a 0.10 m-thick lining of burned (reddened) rock and soot. A long charcoal stain emanated from the hearth downslope on the rock face (fig. 4.112). On the same band and directly adjacent

to and east of the rock hearth was another circular petroglyph consisting of two concentric circles, perhaps three-fourths the diameter of the central petroglyph on the rock face (fig. 4.109).

This description of La Muralla de Capitanejo can serve only as the most cursory report of the impressive modification of the mesa's rock face by prehistoric inhabitants in the area. In their survey of the petro-



Fig. 4.110. Close-up view of central petroglyph at B14 and cluster of four smaller two-ring concentric circles on the right, with camera lens cap above for scale.

glyphs of Venezuela, Ruby de Valencia and Jeannine Sujo Volsky noted that the petroglyphs here are exceptional for their wide grooves and high visibility (Valencia and Sujo Volsky, 1987: 86, 117). A more complete description will have to await the systematic clearing and recording of the entire rock face and a formal report on the hearth and its contents. Another line of inquiry to be pursued is the possibility that the petroglyphs of Capitanejo formed a designated landmark along a rock-lined trail across the lowest foothills of the Andean piedmont, which members of the Centro Arqueológico “Kuayú” have traced for a distance of 25 km (Centro Arqueológico “Kuayú”, 1981: 90–91). The prospect of associating the carvings and hearth at B14 with the nearby Curbatí-complex habitation site (B7) offers many intriguing avenues of investigation.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None. See B7-0001 and B7-0002 (table 4.1).

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATES RECORDED: January 1982; July 1983.

B15

SITE NAME: Los Bambues.

OTHER SITE DESIGNATION: Fundo Alto Viento, Fundo Santa Ana de Caño Seco, and Fundo Caño Seco.

SITE LOCATION: The site is located on the southern bank of the Acequia River, approximately 1.5 km upstream from the Panamerican highway and bridge over the river (fig. 3.1). The site extends from the southern bank of the Acequia River and across the lowest alluvium (*vega*) onto the first boulder-lined terrace overlooking the *vega*, bounded on its north side by Caño Seco that empties into the river in its southern bank (fig. 4.113). The site extends across Fundo Santa Ana de Caño Seco, Fundo Caño Seco, and Fundo Alto Viento. The site's name comes from the Bodega Los Bambues on Fundo Alto Viento, owned by Amadeo Moreno. Bodega Los Bambues flanks the east side of the dirt road that leads from the highway on the south bank of the Acequia River toward Caño Grande, at a distance of 1.5 km from the highway.

VEGETATION: Grassland pastures cover most of the site, but there was a plantain field on the lowest alluvium at the northern edge of Fundo Alto Viento. The site is named for the several stands of bamboo on the *vega*.

ARCHAEOLOGICAL REMAINS: This is a multiple-component site where we first recovered the thick-walled ceramics of the Caño Seco complex. The Caño Seco occupation extends from the riverbank and *vega* to the southwest and up onto the first boulder-lined terrace overlooking the *vega*. We recovered Caño Seco ceramics in a plantain field at the northern end of Fundo Alto Viento and in eroding, disturbed areas to the southwest across the alluvium and on the slope of the boulder-lined terrace that overlooks the *vega* (see B15-0004). None of the boulders bore petroglyphs. We recorded seeing four oval, basin-shaped *metates*: one *metate* lay in a cattle corral on Julio Gil's Fundo Caño Seco, at the base of the steep slope on the alluvium; one *metate* lay in the plantain field on Sr. Moreno's Fundo Alto Viento; and two *metates* were eroding out of the exposed slope of the first higher terrace overlooking the alluvium. On this terrace we recovered a ceramic bead or a spindle whorl and spotted some large sherds and

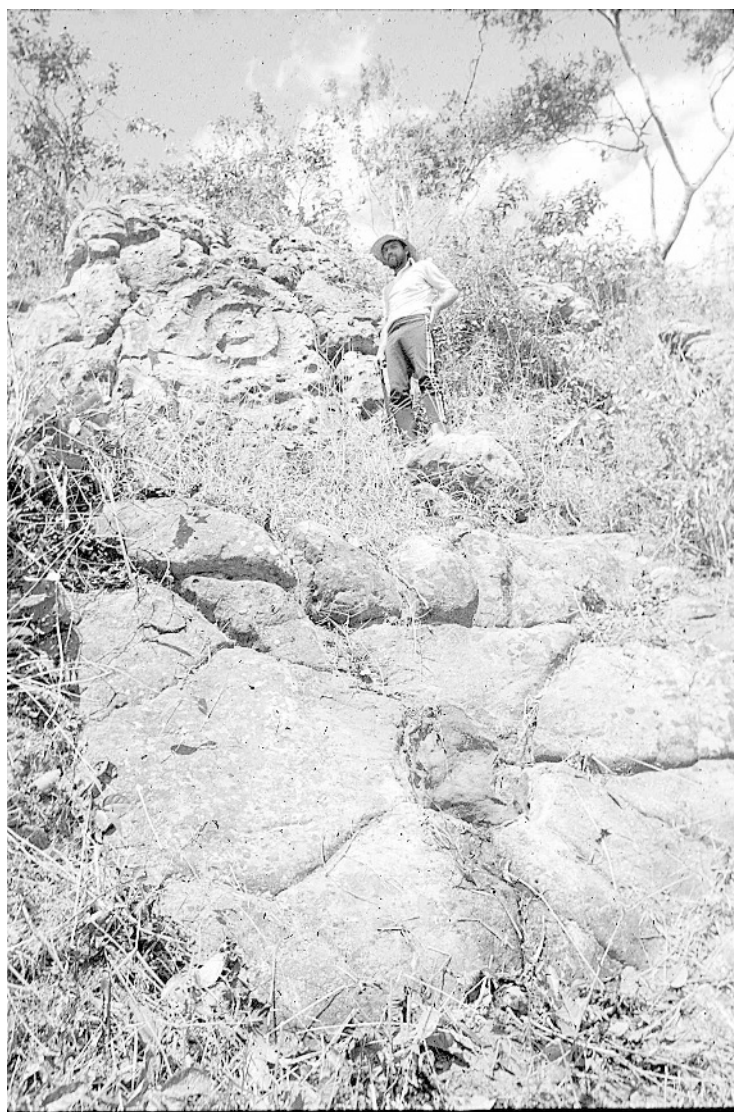


Fig. 4.111. Central petroglyph on top stratum of rock face at B14 and rock hearth 3 m beneath it on lower stratum of rock face in foreground.

other signs of a possible burial, which we left untouched. On another visit to the site in August 1984 we concentrated our efforts on surveying the terrace and terrace slope that extends across both Fundo Alto Viento and the next property to the north (Fundo Caño Seco). Since the sample of sherds recovered included one or two thinner-walled ceramics, we gave this surface collection a separate provenience number (B15-0050) (table 4.1).

When we recorded the ceramics from these two samples, surface collection B15-0004 proved to include eight Gaván-complex sherds (table 4.1). This finding is supported by the predominance of Gaván-complex sherds in the sample of sherds recovered on the riverbank (B15-0031) (table 4.1). This sample of sherds must have been saved for us by Sr. Moreno, who gave it to us when we stopped at the Bodega Los Bambues on July 24, 1984. While we did go



Fig. 4.112. Rock hearth beneath central petroglyph at B14. It measures .40–.50 m in diameter and .80 m deep and has a reddened and blackened interior lining.

up the Acequia River that morning, we did not record any visit to the riverbank at B15; however, we do have a record of the sample's provenience having been assigned that day. The presence of a possible Gaván occupation here in the low piedmont is unexpected and worthy of future investigation (see also B39 and B48).

The possibility that there may have been an earlier Curbatí-complex occupation here was raised by an incised sherd that Sr. Moreno showed us (but that we were not given), which he reported as having come from the riverbank but from a lower stratigraphic layer than the surface and subsurface deposits from which our surface collections derived. Nevertheless, surface collection B15-0031 did include an incised sherd that was attributed to the Gaván complex on the basis of its paste.

That there is also a colonial-period occupation here is clear from the glazed strap-handle jar that Sra. Cruz Sulvarán showed us (fig. 4.114), which came from the riverbank, as well as from the brick-making kiln that Sr. Gil showed us on the southern bank of the Caño Seco, on the southwest side of the dirt road leading from the highway to Caño Grande. Sr. Gil told us that sherds eroded from the *caño's* bank, but we did not recover any.

SITE MAP: None.

DISTURBANCE: Modern human activities on these adjacent *fundos* produce cleared areas in fields and along trails and eroding slopes where subsurface deposits containing ceramics and other artifacts are readily visible.

SURFACE-COLLECTION DATA: B15-0004 (July 23, 1983), B15-0031 (July 24, 1984), B15-0050 (August 16, 1984) (see table 4.1).

SITE SIZE AND CLASSIFICATION: 13.75 ha; Caño Seco- and Gaván-complex habitation site (table 4.1); colonial-period occupation (Chuponal complex?), as well.

DATES RECORDED: July 19, 1983; July 23, 1983; August 16, 1984.

B16

SITE NAME: Caño Hondo.

OTHER SITE DESIGNATION: Fundo Caño Hondo, Potrero Las Playitas on Fundo Los Morritos.

SITE LOCATION: On the southwestern bank of the Acequia River, on the *vega* that extends southwest from the river toward the Caño Ticoporo (fig. 3.1). The site can be reached by driving 13 km along the dirt road on the north bank of the Acequia River toward Calderas, crossing a suspension bridge over the Acequia River (fig. 4.115). The site extends over the fields of two adjacent *fundos*: Fundo Caño Hondo, owned by Pablo Antonio Moreno, and the Potrero Las Playitas on Fundo Los Morritos, owned by Antonio Arismendi. Sherds are evident in the dirt road between them. The site lies some 200 m west of the Acequia River; the Caño Calderas flows between the site and the river. The site's name comes from



Fig. 4.113. View of Los Bambues site (B15) on Fundo Alto Viento on the southern bank and *vega* of the Acequia River, which extends onto the first river terrace that rises gradually on the left side of this photograph, facing north toward the forest-lined river.

Fundo Caño Hondo, whose owners were our first contact here because their son, Alberto Moreno Rangel, is married to a daughter of the Lobos family at Fundo Las Lajitas (B5).

VEGETATION: The site extends across a wide band of alluvium that is being cultivated with maize, beans, manioc, and *ñame* (figs. 4.116, 4.117). We also noted the cultivation of coffee and sugarcane in the piedmont here. The Acequia River and the *caños* are lined with forest.

ARCHAEOLOGICAL REMAINS: On our first visit to the site (July 23, 1983), we established contact with Pablo Antonio Moreno of Fundo Caño Hondo, who confirmed the presence of ceramics and ground-stone *metates* on his fields on the *vega*, as well as on those of his neighbors. Because of the time of day, he did not want to accompany us to the site. When we returned (August 4, 1983), his wife handed

us a bag of ceramics that Sr. Moreno had collected for us that consisted of thin-walled, well-burnished, and some incised sherds of the Curbatí complex. We assigned the provenience B16-0007 to this collection of material from Fundo Caño Hondo (table 4.1). We planned to return that Sunday to survey the locality with Sr. Moreno. It was not until the following summer, July 23, 1984, that we were able to return to the upper Acequia. We walked 650 m south of the *fundo* house to his fields along the southern bank of the Acequia River (fig. 4.116) on which we recovered sherds (fig. 4.117). We also surveyed the neighboring fields called Potrero Las Playitas on Fundo Los Morritos of Sr. Arismendi, which lie across the dirt road and closer to the Acequia River. We determined that the site extended across the dirt road and comprised the fields on both *fundos*. The surface collection from



Fig. 4.114. Sra. Cruz Sulvarán of Fundo Santa Ana de Caño Seco shows us a glazed jar with two strap handles and cross-hatched designs at the neck which her husband recovered from the bank of the Acequia River.

Potrero Las Playitas (B16-0030) yielded Gaván-complex ceramics (table 4.1). We noted the presence of many large boulders, although none of the boulders we examined bore carvings on them. Sr. Moreno told us about a line of boulders farther up in the piedmont, along the road to San Rafael in an area called El Cerrito that should be investigated. The following

day, we returned to cross the Caño Ticoporo and stop at Finca La Soledad but received no reports about archaeological remains in the area.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B16-0007 collected and saved for us by Sr. Moreno of Fundo Caño Hondo (1983); B16-0030



Fig. 4.115. The suspension bridge that traverses the upper Acequia River, facing southwest.



Fig. 4.116. View from the site of Caño Hondo (B16) in the piedmont southeast toward the high llanos. The site extends across the band of cultivated alluvium along the upper Acequia River.



Fig. 4.117. Surface collecting a field of maize and beans at the site of Caño Hondo (B16).

that we collected on the fields of Sr. Moreno and the neighboring Potrero Las Playitas fields of Sr. Arismendi on July 23, 1984 (table 4.1).

SITE SIZE AND CLASSIFICATION: We estimate a maximum site size of ca. 20 ha. A multiple-component habitation site that features a Curbatí-complex occupation and, surprisingly, Gaván-complex ceramics.

DATES RECORDED: July 23, 1983; August 4, 1983; July 23, 1984.

B17

SITE NAME: Hacienda Flor Amarilla.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site of Flor Amarilla is located in the high llanos west of the Curbatí River (fig. 4.2). The site's two mounds straddle the dirt road that leads from the Panamerican highway at Curbatí

toward El Algarrobo, about 1.5 km from the highway (fig. 4.118). The site is located on Hacienda Flor Amarilla, owned by Doña Carmen Acevedo, a *curandera* ("healer") from Barinitas. The *fundo* house is directly northwest of the mounds on the left side of the road toward El Algarrobo.

VEGETATION: The main mound to the west of the dirt road was in fallow pasture and secondary growth or *monte*. A *mata* of trees covers the main mound. The pastures east of the dirt road are being maintained as such and are dotted with palm trees.

ARCHAEOLOGICAL REMAINS: This mound site has two visible mounds (fig. 4.119). Mound A measures 38 m by 28 m at its base. It is 6 m tall. The top surface of Mound A measures 5 m by 5 m (figs. 4.120, 4.121). The mound is oriented N 30°W. The landscape between the mound and the dirt road and extending to the northwest has been modified by bulldozing activities related to the construction of the road to El Algarrobo. Doña Carmen Acevedo told us that she allowed the roadbuilding crew to dig the L-shaped *préstamo*. She also confirmed our hunch that a third mound may once have stood in the area of the *préstamo*, at a bearing of N 30°W from the northeast corner of Mound A, although her remarks about the roadbuilding crew's discovering a vessel with *morocotas* ("gold nuggets") when it excavated the *préstamo* made her a less reliable source. We did recover sherds and chipped-stone artifacts along the banks of the *préstamo*, at approximately 30–35 cm below the ground surface (See B17-0021).

Mound B lies across the dirt road some 240 m to the north of Mound A. Mound B measures approximately 30 m by 30 m at its base. It is 2.5 m tall, and its top surface measures 8 m (east–west) and 6 m (north–south) (fig. 4.122).

In August 1985, when the fields and pastures west of the dirt road had been cleared, we mapped the site with a plane table and alidade (fig. 4.119). We made a second general surface collection (B17-0090) at this time. Most of the material evident on the surface came from the area modified by the bulldozer west of the road and around the *préstamo*.



Fig. 4.118. View of mound site at Hacienda Flor Amarilla (B17), which extends across the dirt road leading from Curbatí to El Algarrobo, facing N 30°W. The main Mound A is covered with trees to the left of the road. Mound B is a 2.5 m-tall mound in the distant pasture to the right of the road.

Finally, in 1985 we detected a segment of a causeway leading from B17, originating in the field southwest of Mound A for a stretch of about 500 m at a compass bearing of S 35°W (see figs. 4.120, 4.121, 4.123). This causeway (designated Calzada B) gives out on the outskirts of the town of Curbatí, but we have proposed that it originally linked B17 with the regional center at El Gaván (B12) (fig. 4.2) (Spencer and Redmond, 1998: 101).

During the 1988 field season, we carried out systematic test excavations at Flor Amarilla. The locations of the test excavations are indicated on the site map (fig. 4.119), and the results of the test excavations will be appearing in a future volume (Spencer and Redmond, n.d.).

SITE MAP: Figure 4.119. Topographic map of B17 at 1:1,000 scale that shows

mounds and locations of test excavations.

DISTURBANCE: When the road from Curbatí to El Algarrobo was built, the roadbuilding crew modified the area of B17 that extends from the road west to the main Mound A. A *préstamo* was excavated with a bulldozer, which may well have leveled a third earthen mound. It is in this area of major landscape modification that we collected the majority of sherds in our two surface collections.

SURFACE-COLLECTION DATA: B17-0021 and B17-0090 (table 4.1).

SITE SIZE AND CLASSIFICATION: 7.5 ha. The mound site of Flor Amarilla was a second-order center linked by causeway to the regional center at El Gaván.

DATES RECORDED: July 25, 1983; July 27, 1983; July 31, 1983; August 12, 1985.

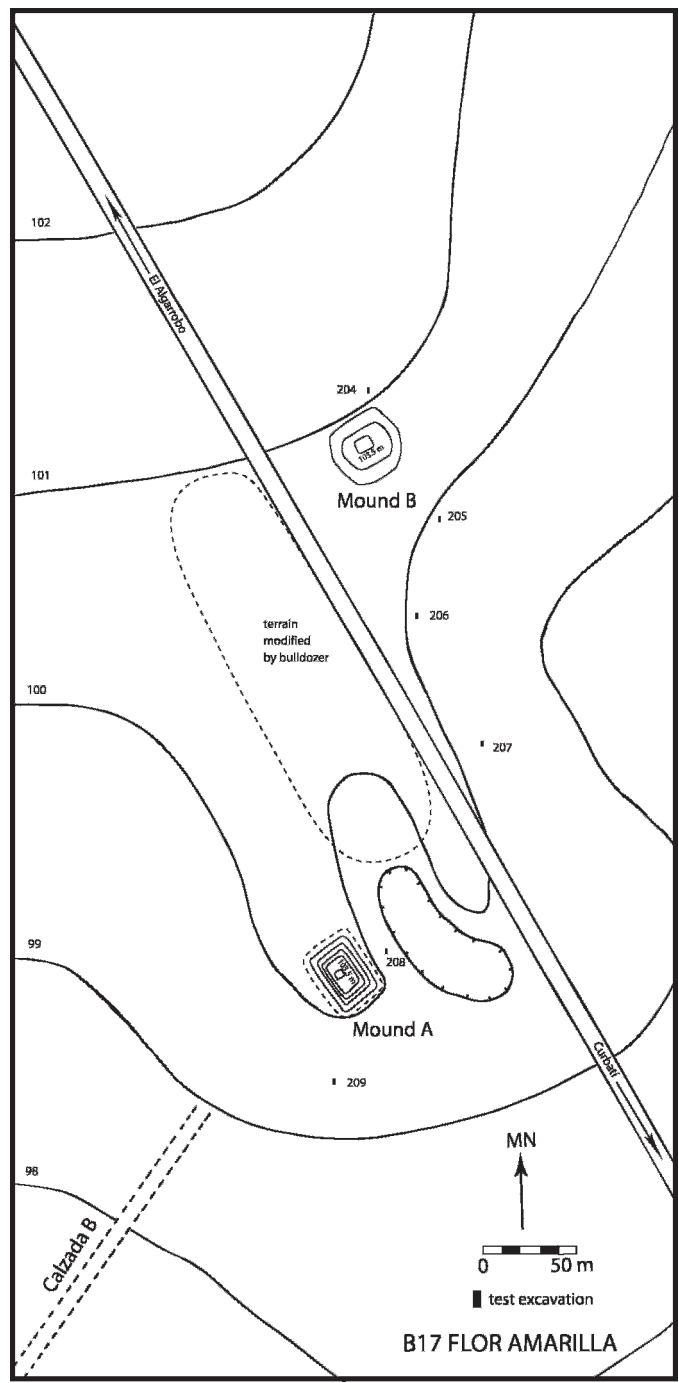


Fig. 4.119. Topographic map of Flor Amarilla (B17) at 1:1,000 scale, showing the locations of the mounds and the test excavations.



Fig. 4.120. View of eastern face of Mound A from road, facing southwest. This photograph was taken in July 1983, when this portion of the site featured secondary growth. A short segment of the causeway (Calzada B) leading away to the southwest from B17 can be seen at the extreme left of the photograph in the distance.



Fig. 4.121. View of eastern face of Mound A from road with a person standing at its base for scale, facing southwest. This photograph was taken in August 1985, when this portion of the site had been recently cleared and we took the opportunity to map the site with a plane table and alidade.



Fig. 4.122. View of southeastern and southwestern sides of Mound B from road, facing north.



Fig. 4.123. Distant view of causeway (Calzada B) leading from the southwest (and right side of this photograph) toward B17's Mound A, which is in the *mata* of trees in the center left of this photograph taken facing southeast toward the Curbatí River.

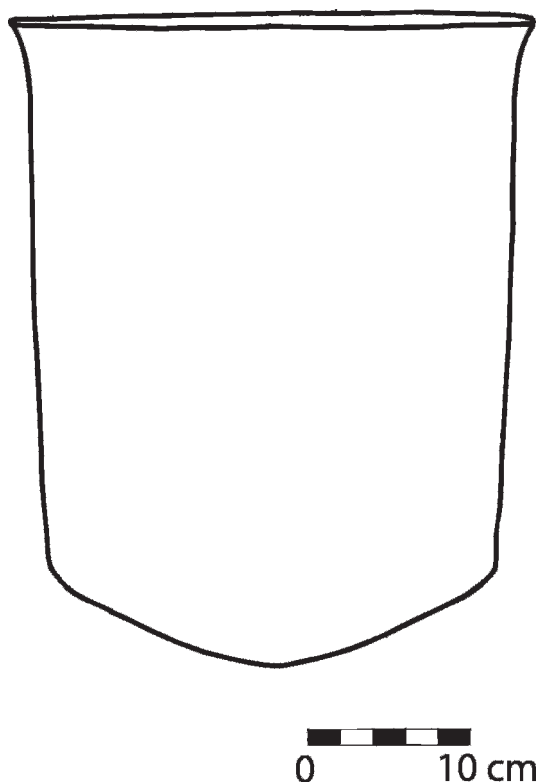


Fig. 4.124. Drawing of *olla* recovered face down with another vessel and a *metate* fragment by construction workers at the site of El Matadero (B18). Scale 1:2. The vessel is 40 cm tall and has a rim diameter of 32.5 cm. The reinforced rim is 1.8 cm thick. The vessel wall at the neck is 1 cm thick.

B18

SITE NAME: El Matadero.

OTHER SITE DESIGNATION: None.

SITE LOCATION: On a piedmont spur overlooking the *vega* on the southern bank of the Canaguá River (figs. 4.2, 4.3). The site lies on the southern side of the Panamerican highway directly west of the bridge over the Canaguá River and on the northeast side of the turnoff from the highway onto the road to Ciudad Bolivia. The site lies on the premises of an industrial slaughterhouse (*matadero*) that was still under construction in July 1983.

VEGETATION: The landscape on this piedmont spur has been heavily modified

by heavy machinery and is generally devoid of vegetation.

ARCHAEOLOGICAL REMAINS: Pablo Novoa A. of the Centro Arqueológico “Kuayú” had been given a ceramic vessel that was found by construction workers at the slaughterhouse during the 1981–1983 construction. The vessel is a brick-colored *olla* with steep-sided walls and a reinforced rim. It is 40 cm tall, with a rim diameter of 32.5 cm and a wall thickness at the reinforced rim of 1.8 cm and at the neck of 1 cm (fig. 4.124).

We visited the slaughterhouse, and the construction engineer showed us the spot where the vessel had been uncovered, face-down, at a depth of 80–90 cm below the ground surface. Another vessel had been recovered, in fragments, of which nothing more was known. A fragment of a large *metate* had been recovered, as well. According to the engineer, the construction workers proceeded with care after encountering the ceramic vessel but uncovered no other remains. Our survey of the site, from the top of the spur down to the *vega*, did not succeed in finding any additional remains or signs of prehistoric occupation.

SITE MAP: None.

DISTURBANCE: The site is overlaid by the newly constructed slaughterhouse.

SURFACE-COLLECTION DATA: None. The *olla* is in the care of Pablo Novoa A. of the Centro Arqueológico “Kuayú”.

SITE SIZE AND CLASSIFICATION: We cannot estimate the site size. This may represent the remains of a Caño Seco-complex burial or isolated household on this piedmont spur. Given the reported similarities between this *olla* and the whole vessels recovered at B86, it may pertain instead to the Gaván complex.

DATES RECORDED: July 27 and 31, 1983.

B19

SITE NAME: Fundo Las Delicias.

OTHER SITE DESIGNATION: El Tesoro.

SITE LOCATION: The site is located on a *banco* overlooking the Viejo River some 200 m to the south, and north of the

Acequia River, in El Tesoro (fig. 3.1). The site is located on Fundo Las Delicias, owned by Don Pablo Ignacio Torres, whose blue *fundo* house is on the south side of the main road of El Tesoro, 50–75 m from the Plaza Bolívar. The site extends onto neighboring *fundos*, including the *fundo* of Luis María Guerrero on the same *banco* to the southeast on the same side of the road, before the road crosses the Caño Vichiviche (on the old road to Ciudad Bolivia).

VEGETATION: This is a settled area characterized by small farms and cattle ranches. The forests and savanna have been largely cleared for small agricultural plots (*conucos*) and pastures. We noted many plots of manioc.

ARCHAEOLOGICAL REMAINS: We followed up on reports of ceramics and figurines recovered on Sr. Torres's property. Sr. Torres recalled that when the foundations for his house and corral were laid many years ago, ceramics had been encountered at a depth of 1 m. He also reported that when family members excavated a pit for a subterranean tank or latrine, they had exposed a brick-colored *olla* with a rounded base and without handles that was about 35 cm tall. We surveyed the *fundo* and did not recover any ceramics on the surface. We had also received information about ceramics and figurines on the neighboring *fundo* owned by Luis María Guerrero, where our survey enabled us to recover some Osoid ceramics (probably related to the Gaván complex) along the eroding slope of the *banco* (at a depth of about 40 cm below the ground surface) (B19-0025). We drew the site in on the aerial photograph as extending approximately 400 m along the *banco* overlooking the Viejo River, based on the distance measured from Luis María Guerrero's property to Pablo Ignacio Torres's property along the south side of the main road of El Tesoro and about 150 m from the road south to the edge of the *banco*. Yet another inhabitant in El Tesoro, Julio Rafael Guerrero, told us that wherever any inhabitant digs in the area from the main road of El Tesoro southwest to the Viejo River, he or she encounters ceramics. This probably means that our site-size estimate should be considered

a minimum estimate for this non-mound Osoid Gaván-complex habitation site.

SITE MAP: None.

DISTURBANCE: The inhabitants of the line of small farms that overlie the site encounter archaeological remains when they penetrate the ground surface for any reason.

SURFACE-COLLECTION DATA: B19-0025 recovered from Luis María Guerrero's property (table 4.1).

SITE SIZE AND CLASSIFICATION: 6.25 ha drawn on the aerial photograph. Based on other reports of ceramics in the area between the road and the Viejo River by inhabitants of El Tesoro, this must be a minimum estimate of this non-mound site's size. B19 was probably a satellite village of Los Morritos (B2).

DATES RECORDED: July 31, 1983; August 1, 1983; January 7, 1984.

B20

SITE NAME: La Piedra Herrada.

OTHER SITE DESIGNATION: Potrero de La Piedra Herrada; Fundo La Madre del Monte; Curbatí 2 petroglyph site (Centro Arqueológico "Kuayú", 1981: 51–53).

SITE LOCATION: The site extends along the southern bank of the Curbatí River for some 300 m, and across the alluvium (*vega*) to the southwest for some 140 m, still east of the Curbaticito River (figs. 4.1, 4.3). The site does not seem to extend onto the river terrace to the west and the north that overlooks the *vega*. The *vega* on which the site lies is called Potrero de La Piedra Herrada ("pasture of the branded stone") after the large boulder with petroglyphs on it (fig. 4.125). The site is on Fundo La Madre del Monte, owned by Dr. Molina. Fundo La Madre del Monte can be reached by a trail along the east side of the road from Curbatí to El Algarrobo.

VEGETATION: The forest has been cleared for cattle pastures, but they are overgrown. The riverbank is lined with trees, and the *vega* is dotted with palm trees and other tall hardwood trees (fig. 4.125).

ARCHAEOLOGICAL REMAINS: The site is recognized for the boulder with petroglyphs on all of its surfaces, from which the site's



Fig. 4.125. View of La Piedra Herrada (B20) on *vega* from bank of Curbatí River, facing west toward boulder with petroglyphs.

name derives. The Centro Arqueológico “Kuayú” designated the boulder Curbatí 2 and recorded the petroglyphs on its surfaces (Centro Arqueológico “Kuayú”, 1981: 51–53). The boulder measures 10–12 m in diameter and is located some 110 m southwest of the riverbank (figs. 4.125, 4.126). There are petroglyphs carved on all the surfaces of the boulder. Perhaps the densest concentration of petroglyphs occurs on the boulder’s northeastern surface (figs. 4.127, 4.128). Birds in flight make up the most numerous motif, often in pairs; there is one vertical stack of three birds, and a series of four birds of the same size and shape are depicted under a horizontal bar. The largest petroglyph on the boulder’s northeastern face may represent the head, shell, and tail of a turtle, whose shell has circular and linear markings. Above it is what Polly Schaafsma would describe as a row of “decorative bear tracks” (Schaafsma, 1980: 150, 207); the prints have five to seven short appendages

on their top ends and contain between five and 11 coupled points. A snake wriggles up the stone between two of them. Two zoomorphic quadrupeds are represented in profile, and some bats are shown in flight. Farther north (and to the right) on the boulder’s northeastern surface are more birds and bats in flight and some circles containing semicircles and coupled points, one of which may represent a mask. The largest petroglyph is a rectangle that contains semicircular lines on each side of a trunk-like element (fig. 4.128). On the boulder’s southeastern face to the left (and south) of the “bear tracks” containing coupled points are a bat shown in flight, a circle containing three internal radii and three coupled points that may represent a mask, other circles containing one to four coupled points, clusters of five to nine coupled points, and a free-form spiral with flanges (fig. 4.129) (Centro Arqueológico “Kuayú”, 1981: 52). The top surface of the boulder has an oval

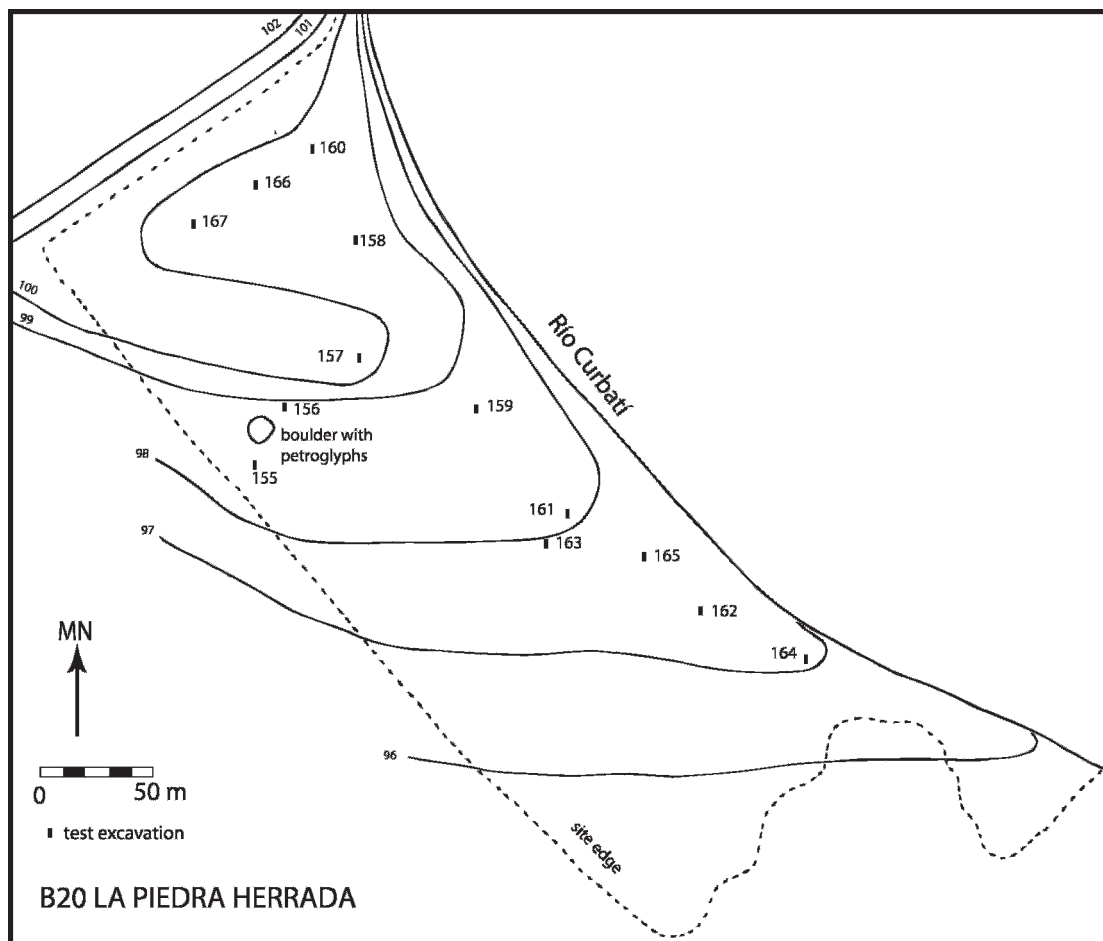


Fig. 4.126. Topographic map of Piedra La Herrada (B20) at 1:1,000 scale, showing the locations of the boulder with petroglyphs and of the test excavations carried out there in 1986.

cartouche containing an outlined cross on its easternmost edge and a bird in flight nearby (fig. 4.130). On the western side of the boulder's top surface are a petroglyph composed of concentric circles, a spread-eagle zoomorph or male anthropomorphic figure, a spiral that is in the process of uncoiling itself, and a pair of quadrupedal zoomorphs with raised tails that are depicted in profile (fig. 4.131).

When we visited the boulder in August 1983, we found a pile of Caño Seco-complex ceramics and a ground-stone *mano* fragment on the boulder's southern edge. Two *metate* fragments lay on the ground at the base of the boulder (fig. 4.132). Dur-

ing our survey of the *vega* surrounding the boulder, we collected Caño Seco ceramics along the eroding bank of the Curbatí River (B20-0018). On a return visit to the site in January 1985, we surveyed the terrace overlooking the *vega* and examined a road cut across the higher terrace carefully for any archaeological remains but did not see any. During this second visit, the *vega* and higher terrace were covered with tall *monte*, which made surface survey difficult.

During the 1986 field season, we returned to B20 to map the site with an alidade and plane table and to carry out a program of systematic test excavations (fig. 4.126). The *monte* was taller and denser than it had



Fig. 4.127. View of petroglyphs carved on the northeastern face of boulder at La Piedra Herrada (B20), facing west.

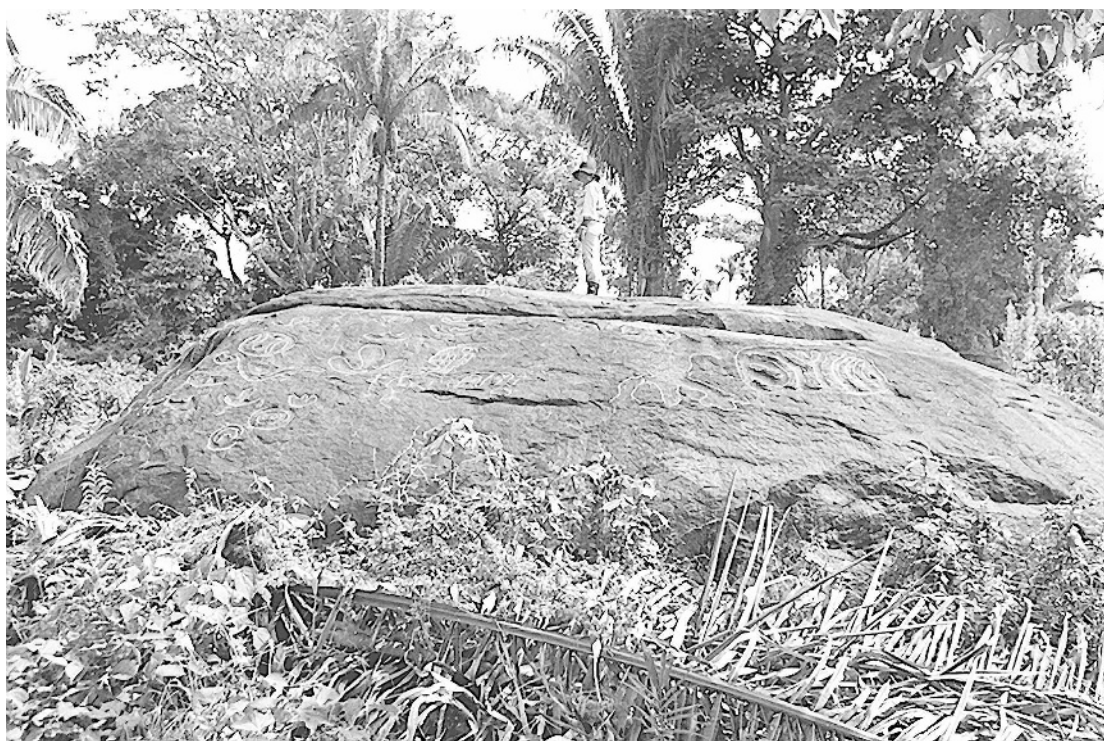


Fig. 4.128. View of northeastern face of boulder at La Piedra Herrada (B20), facing west.



Fig. 4.129. View of B20 and southeastern face of boulder with T. 156 and T. 157 in progress during the 1986 season, facing northeast.

been the previous year, which meant that in many areas of the *vega* we had to clear *brechas* to map and locate our test pits (fig. 4.129). The site extends to the north, east, and southeast of the boulder along the riverbank (figs. 4.125, 4.126, 4.129). The dense vegetation that we encountered at the site's southern edge made it difficult for us to continue to map and carry out test excavations to determine exactly how far the site extended here. We did recover a ceramic spindle whorl in the road cut at the southern end of the site, southeast of T. 164 (B20-0098). All 13 test pits yielded Caño Seco ceramics. Five test pits produced some Curbatí-complex ceramics, as well. With one exception, the test pits with Curbatí ceramics were located in the area of the site closest to the boulder. We will be reporting on the results of the systematic test excavations at B20 in a future monograph (Redmond and Spencer, n.d.).

SITE MAP: Figure 4.126. Topographic map of B20 at 1:1,000 scale shows the location of the boulder with petroglyphs and the locations of the test excavations.

DISTURBANCE: It is quite possible that the site has been eroded considerably by the Curbatí River. We collected material that was eroding out of the riverbank. We also noted the presence of an oval *metate* fragment lying on the east bank of the Curbatí River in January 1985 when the river was low and we forded it from the east. During the 1986 season we noted that some pot hunting had occurred in the area adjacent to the boulder.

SURFACE-COLLECTION DATA: A general surface collection (B20-0018) was made along the riverbank (table 4.1). The ceramic spindle whorl found on the surface during the 1986 season at the southern end of the site, in the road cut southeast of T. 164, was designated B20-0098 but will appear in a future monograph about the 1986 investi-



Fig. 4.130. View of eastern side of top of boulder at La Piedra Herrada (B20), showing oval cartouche containing an outlined cross and a depiction of a bird in flight.

gations at B20 (Redmond and Spencer, n.d.).

SITE SIZE AND CLASSIFICATION: A Caño Seco-complex habitation site of minimally 3.125 ha. The distribution of Curbatí-complex ceramics in our test excavations revealed that a Curbatí-complex habitation site extended over approximately 2 ha of the *vega*, in the area surrounding the boulder (table 5.1).

DATES RECORDED: August 12, 1983; January 8, 1985.

B21

SITE NAME: Fundo Buenos Aires.

OTHER SITE DESIGNATION: Fundo Bello Monte.

SITE LOCATION: The site of Fundo Buenos Aires (B21) is situated on a *banco* some 500 m

east of the Caño Mericacoy in the area of Chuponal between Curbatí and Chuponal Alto (fig. 4.2). A *desaguadero* on the site's eastern edge drains into an unnamed *cañito*. The site can be reached by taking the dirt road or *vía* Chuponal southwest from Curbatí that originally went to Pedraza (Ciudad Bolivia) for a distance of approximately 8 km. The dirt road crosses three *caños* (Caño Mitiao Seco, Caño Mitiao Hondo, and Caño Anime) en route to the Caño Mericacoy. The site is on the property of Fundo Buenos Aires, which was renamed Fundo Bello Monte between 1983, when we first visited the site, and 1985, when we returned to map the site. The renaming of Fundo Buenos Aires followed the death of its owner, Gervasio Andrade, and the inheritance of the *fundo* by his four sons and daughter. One of Gervasio Andrade's sons, Mauro Andrade, lives in the *fundo* house, which is located on the eastern bank of the Caño Mericacoy and on the south side of the *vía* Chuponal, directly adjacent to the pastures across which the mound site extends. At the point where the dirt road from Curbatí makes a sharp turn to the west to reach the Caño Mericacoy and the *fundo* house is visible on the south side of the road, there is a road that heads to the east and a *falso* (barbed-wire gate). Mound A lies approximately 300 m east of the *falso* along the south side of this road.

VEGETATION: The original forests and savanna grasslands have been converted into cattle pastures, in various states of growth. A *mata* of trees covers the northern slope of the site's principal mound. An elongated *mata* lies at the site's eastern edge, some 100 m to the southeast of the main mound. The south and southeast edges of the *banco* on which the site lies and the adjoining *vega* are forested with palm trees and other forest trees. A gallery forest also lines the bank of the Caño Mericacoy, where the *fundo* house lies.

ARCHAEOLOGICAL REMAINS: This mound site features four earthen mounds and two causeway segments visible on the surface, in spite of the land-clearing operations carried out by the cattle ranchers who own Fundo



Fig. 4.131. View of western side of top of boulder at La Piedra Herrada (B20), with spiral that is uncoiling itself, spread-eagle zoomorph, concentric circles, and a pair of zoomorphic quadrupeds shown in profile with raised tails.

Buenos Aires. The mounds lie on the site's central axis, along a compass bearing of N 8°W (fig. 4.134). The largest mound, Mound A, stands at the northern end of the central axis. Mound A measures approximately 35 m by 35 m at its base and has a maximum basal diameter of 40 m. Mound A is 2 m tall and its top surface measures approximately 8 m by 5.5 m (fig. 4.135). Mound B lies at the southern end of the 240 m-long central axis that may have served as a central avenue or plaza (fig. 4.136). Mound B has a maximum basal diameter of 22 m. Mound B is approximately 1 m tall, and its top surface measures 4 m by 3 m. At the midpoint of the central axis, two mounds flank the 10 m-wide avenue or plaza thus defined on its western and eastern sides. Mound C extends on the western side of the plaza's midpoint. Mound C has a roughly oval shape that measures 52 m long and 26 m wide at its

base. On this 50–80 cm-tall earthen platform stood two structures (fig. 4.134). T. 122 exposed a portion of the northern structure on top of Mound C, which has



Fig. 4.132. *Mano* and *metate* fragments lying by the boulder with petroglyphs. The more complete *metate* measures 55 cm in length, and its grinding basin is 47 cm long.



Fig. 4.133. View from the top of Mound A at the site of Buenos Aires (B21) facing southwest toward the Caño Mericacoy that is lined by gallery forest.

surface dimensions of approximately 7 m by 4 m (fig. 4.139). T. 108 sampled the second structure evident on the surface at the southern end of Mound C, which has dimensions of approximately 4 m by 4 m (figs. 4.137, 4.138). Finally, Mound D is located on the eastern side of the plaza's midpoint (fig. 4.137). Mound D measures approximately 12 m long and 8 m wide at its base, and is 0.5 m tall. The top surface of Mound D measures 4 m by 4 m. The alignment of the site's mounds is reminiscent of the configuration of mounds along the avenue or plaza at the regional center at El Gaván (see B12) (Spencer and Redmond, 1992: 145; Redmond and Spencer, 1994: 434).

When we returned to visit and map the site in July 1985, we made a general surface collection (B21/B99-0079) that included surface remains visible in the courtyard of the *fundo* house and the western edge of the *banco* (see B99), along the southern edge of

the *banco*, along the road that skirts the northern slope of Mound A, and along a tractor trail in the pasture heading toward the unnamed *cañito* on the southeastern edge of the site. The surface collection is made up of Gaván, Caño Seco, and Chuponal ceramics, chipped stone, and polished stone (table 4.1). The collection should be considered a mixed provenience because it includes material from neighboring B99, which was recognized as a separate site as a result of the program of systematic test excavations at B21 during a subsequent field season.

In March 1986, we returned to Buenos Aires to carry out a program of systematic test excavations. The results obtained from the 33 test pits we excavated here allowed us to determine the site's boundaries. The area of occupation at B21 was confined to the elongated area defined by the mounds on the *banco*, west of the *cañito*, and south of the road that skirts the northern slope of

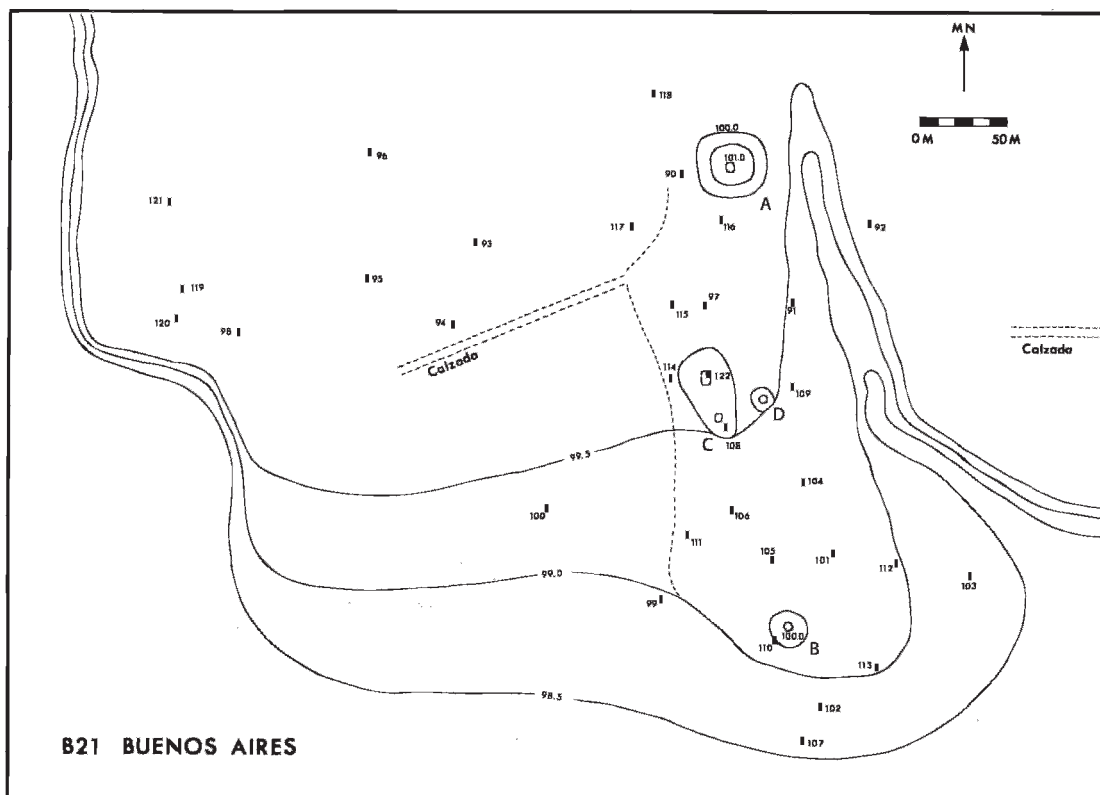


Fig. 4.134. Topographic map of Buenos Aires (B21) at 1:1,000 scale, showing the locations of the mounds, causeway segments, and the numbered test excavations.

Mound A. We drew the western edge of the *banco* on which the site is located on the map of the site because this rise coincided with the site's western boundary; our test pits in the pasture to the west of the dotted rise proved to be devoid of archaeological remains (fig. 4.134). The results of these test excavations are presented in a companion volume (Spencer and Redmond, n.d.). Future investigations at Buenos Aires (B21) may reveal the remains of an encircling causeway like the one at the regional center at El Gaván (B12). In support of the possibility that an earthwork may have circumscribed this secondary mounded center are the two segments of causeway discovered at B21 (fig. 4.134). One 30 cm-tall *calzada* that is 5 m wide leads from the site's western edge southwest across the pasture at a bearing of S 68°W for a distance of

140 m and then peters out (fig. 4.133). During our survey of the area, we discovered another causeway some 65 m east of the eastern bank of the *desaguadero*, at its intersection with the road that skirts the northernmost Mound A, on the adjacent Fundo Santa Rosalía, owned by Sósimo Callejas (fig. 4.140). The causeway is less than 1 m in height and 5 m wide. This causeway, which we designated Calzada C (Spencer and Redmond, 1998: 101, fig. 3), leads off to the east-southeast at a bearing of E 12°S for 5 km in the direction of the Caño Mitiao Hondo and the regional center at El Gaván (B12) (fig. 4.2).

SITE MAP: Figure 4.134. Topographic map of Buenos Aires (B21) at 1:1,000 scale, shows the locations of the mounds, causeway segments, and the numbered test excavations.



Fig. 4.135. The eastern side of Mound A, the principal mound at Buenos Aires (B21), facing northwest. A stand of tall trees covers the mound's northern slope.



Fig. 4.136. This view of the southern end of Buenos Aires (B21) taken from the eastern edge of site, facing southwest, shows Mound B, which served as the original plane-table station. T. 101 is in progress in the left foreground, as is T. 107 in the distance, beyond Mound B.



Fig. 4.137. View from Mound B north along the central axis of Buenos Aires (B21) north to Mound A, which is under the *mata* of trees. T. 108 is in process of being excavated on the southern end of Mound C (on the left), and T. 109 is in progress, directly east of Mound D.



Fig. 4.138. View of Mounds A and C at Buenos Aires (B21) from the causeway segment on the site's western edge, facing northeast. Mound A is visible at the left side of the photograph, although it is partially covered by trees. T. 122 is in progress on the northern end of the top surface of Mound C on the far side of the fence in the center right of this photograph.



Fig. 4.139. View of Mound C while T. 122 is in the process of being excavated, facing east. Mound A is in the clump of trees to the left.



Fig. 4.140. Calzada C from Buenos Aires (B21) that leads to the southeast toward the regional center at El Gaván (B12), facing east.

DISTURBANCE: The fact that the owners of Fundo Buenos Aires clear the pastures regularly with a tractor is probably responsible for the fact that only partial causeway segments are visible on the ground surface today. A drainage ditch runs across the pasture about 10 m south of the site's main mound.

SURFACE-COLLECTION DATA: B21/B99-0079 (see table 4.1). This is a general surface collection that includes material from B99, which was recognized as a separate site during the 1986 field season.

SITE SIZE AND CLASSIFICATION: Our topographic map of B21 and the results of the systematic test excavations revealed that the site extends over 4.56 ha; secondary center linked by causeway to regional center (B12).

Dates Recorded: August 23, 1983; July 30, 1985; August 14, 1985.

B22

SITE NAME: El Cementerio de Palma Sola.

OTHER SITE DESIGNATION: Fundo Palma Sola.

SITE LOCATION: The site of El Cementerio (B22) is located on a *banco* on the southwestern bank of the Acequia River, south of the ford of the Acequia River along the old road from Palma Sola to Pedraza (Ciudad Bolivia), and east of Caño Chivoy (figs. 3.1, 4.141). We were informed that the *banco* occupied by the site is never inundated, even during the rainy season. The site is located on Fundo Palma Sola, owned by Juan Gómez; the entrance to the *fundo* on the old road from Palma Sola to Pedraza has red-brick columns set into a white concrete base and iron gates painted blue. The distance from the gated entrance to the site on the *banco* along the riverbank is 0.7 km. The *potrero* adjacent to the riverbank is called El Cementerio because it was the site of the cemetery of the original *caserio* (hamlet) of Palma Sola, which was located here. After the Panamerican highway was built, Palma Sola moved northwestward to its present location, and its inhabitants began burying their dead in Ciudad Bolivia.

VEGETATION: A gallery forest covers the riverbank and *banco* on which the site of El Cementerio (B22) is situated (fig. 4.142). Cleared pastures extend to the west of the forested riverbank.

ARCHAEOLOGICAL REMAINS: The non-mound site stretches along the southwestern bank of the Acequia River for a distance of at least 300 m. We surveyed the riverbank profile, from which ceramics erode out of deposits 0.60 m to over 1 m below the ground surface. We collected Osoid ceramics and some polished-stone artifacts from the riverbank (see B22-0024), but failed to recover any chipped-stone artifacts. We also recorded several cultural features that were evident in the profile (figs. 4.143, 4.144). One feature was a black ashy deposit over 1 m below the surface of the riverbank, from which ceramics were eroding (fig. 4.143). There were two bell-shaped pits containing a loose, dark-brown deposit; we recovered a flotation sample (Flotation Sample 11) from the bottom of one of the bell-shaped pits (fig. 4.144).

A laborer on Fundo Palma Sola named José Pérez, who lives in a concrete-block house opposite the school in Palma Sola, has a collection of ceramics from B22 that includes a small *olla*, a biconvex bottle rim, a possible *budare* rim (or shallow convex-wall bowl rim), and a hollow figurine. Sr. Pérez also reported a *metate* fragment from the site (B22) at Fundo Palma Sola.

SITE MAP: None.

DISTURBANCE: The site of El Cementerio is being eroded by the Acequia River.

SURFACE-COLLECTION DATA: B22-0024 from riverbank (see table 4.1).

SITE SIZE AND CLASSIFICATION: A non-mound Osoid habitation site that extends over a minimum of 3.125 ha.

DATES RECORDED: August 3, 1983; January 7, 1984.

B23

SITE NAME: El Fraile.

OTHER SITE DESIGNATION: Fundo Filipino.

SITE LOCATION: The site is located on a piedmont *meseta* northeast of the Acequia



Fig. 4.141. View of southwestern bank of the Acequia River, on which the site of El Cementerio de Palma Sola (B22) is located, facing southwest. This photograph was taken early in the dry season, in January 1984, when the river could be easily forded.

River at an elevation of about 560 m, before Potreros de Palmarito (fig. 3.1). The site is on Fundo Filipino, owned by Lisandro Castillo of Barquisimeto. Fundo Filipino is a large ranch that extends from the Acequia River to the headwaters of the Canaguá River. At the intersection before the suspension bridge over the upper Acequia River take the road that climbs the *meseta* toward Potreros de Palmarito. If the *portón* to Fundo Filipino is locked, the key can be obtained at Sr. Castillo's cheese factory near the *bodega* at the intersection at the base of the *meseta*.

VEGETATION: The forest has been cleared at this end of the *meseta*, but the pastures were overgrown when we visited. Elsewhere at this elevation the Andean piedmont is heavily forested.

ARCHAEOLOGICAL REMAINS: El Fraile is the name given to the boulder with petro-

glyphs on Fundo Filipino. We photographed the boulder, which lies close to the western edge of the *meseta* (figs. 4.145, 4.146). We did not systematically record the petroglyph motifs carved on the boulder. There were no reports of ceramics or other artifacts from the area where the boulder is situated, or from any part of the *meseta*. Sr. Castillo did know of a habitation site with ceramics along the upper Canaguá River, at a distance of one hour by horse from Fundo Filipino.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

B24

SITE NAME: Fundo Los Cachilapos.



Fig. 4.142. The non-mound site of El Cementerio (B22) is located on a *banco* covered with gallery forest along the southwestern bank of the Acequia River. We surveyed the riverbank profile and recovered Osoid ceramics and some polished-stone artifacts.

OTHER SITE DESIGNATION: El Molino.

SITE LOCATION: The mound site of Los Cachilapos is located on a *banco* south of the Canaguá River and east of the Caño Cajarito, on the Sabana El Romereño (fig. 3.1). From Ciudad Bolivia, Fundo Los Cachilapos, which previously formed part of Fundo El Diamante, is located some 22 km to the southeast on the *vía* Las Peñitas. The owner of Fundo Los Cachilapos is the dentist Dr. Alexis Mejías. The mound site is north of the *molino* (mill) on Fundo Los Cachilapos and is referred to sometimes by the landmark El Molino. From the intersection off the *vía* to Fundo Los Cachilapos, the El Molino mound site is situated at a bearing of N 105°E.

VEGETATION: Overgrown savanna grasslands and gallery forest along the Caño Cajarito.

ARCHAEOLOGICAL REMAINS: We had learned of a *cerrito* (earthen mound) and *ter-*

raplenes (causeways) that traverse Fundo El Diamante. When we reached Fundo El Diamante on January 9, 1984, the *en-cargado* of Fundo El Diamante, Ramón Ramírez, warned us that the mound site known as Cerrito El Yopito on Fundo El Diamante was not accessible due to a muddy *madrevieja*, and he advised waiting and returning to visit the mound site in February. Sr. Ramírez was referring to a 4 m (or greater)-tall mound situated in the *montaña* between Caño Guacharaca and the Canaguá River, on Fundo El Yopito, which is part of Fundo El Diamante. Ceramics are eroding from one side of this mound, which lies along a pasture known as La Guinea. The son of the owner of Fundo El Diamante, Dr. José Juan Aries Luzardo, told us about the mound site and causeways on the neighboring Fundo Los Cachilapos to the north, which used to form part of Fundo El



Fig. 4.143. In the profile of the riverbank at the site of El Cementerio (B22) we recorded cultural features, such as the ashy deposit that María Andueza is examining in this photograph, facing northwest.

Diamante but is now owned by Dr. Alexis Mejías.

The El Molino mound site features three mounds that adhere to the site's overall orientation of N 15°W (fig. 4.147). Mound A measures 43 m by 32 m and is approximately 3.5 m tall (fig. 4.148). The top surface of Mound A measures approximately 10 m by 8 m. Some 37 m to the southeast of Mound A lies Mound B. Mound B measures 29 m by 29 m at its base and is 1.75 m tall. Mound B's top surface is approximately 10 m by 10 m. Mound C lies about 25 m southeast of Mound A (fig. 4.147). Mound C has basal dimensions of 15–20 m on each side and is 1 m tall. We did not recover any sherds on the surface of this mound site. We did not see the causeway that is reported to lead from the El Molino mound site (B24) southwest toward the Caño Cajarito and the Sabana de Cajeta.

SITE MAP: Sketch map of principal mounds at El Molino (B24) (fig. 4.147).

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site-size estimate; probably a second-order Osoid center related to the Gaván complex, linked by causeway to an as yet unknown regional center.

DATE RECORDED: January 9, 1984.

B25

SITE NAME: La Cotiza.

OTHER SITE DESIGNATION: Fundo Brisas del Río, Fundo La Fe.

SITE LOCATION: The site is located in the forested Montaña El Chuponal on the northeastern bank and *vega* of the Canaguá River, west of the junction of the Caño Guabinas with the Canaguá River (fig. 4.2). The site's main Mound A is



Fig. 4.144. The bell-shaped pit containing a loose dark-brown deposit in the riverbank at the site of El Cementerio (B22), from which we collected a bag of dirt for flotation analysis, is evident in the profile just above Maria Andueza.

within 125 m northeast of the river. The central mounded area is on slightly elevated terrain, which may well be the alluviated remains of a *banco*. In 1984, the site was situated on Fundo Brisas del Río farmed by Luis Arturo Hernández, approximately 400 m at a bearing of N 110°E from Sr. Hernández's house. At that time, the neighboring Fundo La Fe to the southeast, which belongs to Victor Alvarez Jiménez of Barinas City, was a large cattle ranch that was in the process of enlarging its boundaries and incorporating small farmsteads such as Sr. Hernández's. Sr. Hernández told us that in 1980 he had helped to clear the 11 ha in the immediate area of the site for Sr. Alvarez. Sr. Hernández also informed us that the land on which the site is situated was previously

called La Cotiza. During our 1988 season of excavations at El Gaván (B12) we learned that La Cotiza had been cleared again. The site can be reached from Curbatí on the Panamerican highway by proceeding on the dirt road to the southeast through El Toro. About 11 km from the highway, at a fork in the road southeast of El Toro, take a right turn and continue in a southwesterly direction, crossing a small stream (*cañizo*) on a metal bridge and reaching the metal gate that is painted orange and bears the name Gabán at the entrance to the *fundo* house of Fundo El Gaván, approximately 15 km from the highway. The dirt road then veers to the southeast and runs along the northeast side of and roughly parallel with the Caño Guabinas, then crosses it on a wooden bridge and heads west toward the Canaguá River. Some 50 m after crossing the Caño Guabinas, turn to the south and reach a locked gate. The key can be procured from a nearby house. This road continues southward for 2.3 km and, after passing through two barbed-wired gates (*falsos*), ends at a cluster of three houses, one of which is the home of Sr. Hernández.

VEGETATION: The site of La Cotiza (B25) lies in the forested Montaña El Chuponal that lines the Canaguá River (fig. 4.149). The gallery forest is dotted with small farmsteads and their fields (*conucos*) of maize, manioc, beans, and plantains (figs. 4.150, 4.151). We learned that the forested area where the site is located was cleared in 1980 and 1988, which is what prompted us to return to survey, map, and photograph the site (fig. 4.152).

ARCHAEOLOGICAL REMAINS: We had learned about a *cerrito* in the Montaña El Chuponal from Ramón Gutiérrez of Fundo El Cerrito and Fundo Párate Duro when we visited El Gaván (B12) during our first field season in July 1983. But Sr. Gutiérrez had recommended that we visit that *cerrito* in the dry season. In January 1984, we reached Sr. Hernández's house and found him fishing on the Canaguá River. He accompanied us to the main Mound A, through thick *monte* (fig. 4.149). We were able to determine that the mound was a little



Fig. 4.145. View of boulder with petroglyphs designated El Fraile (B23) on Fundo Filipino, facing west toward Acequia River.



Fig. 4.146. Boulder with petroglyphs (B23) on Fundo Filipino, facing west.

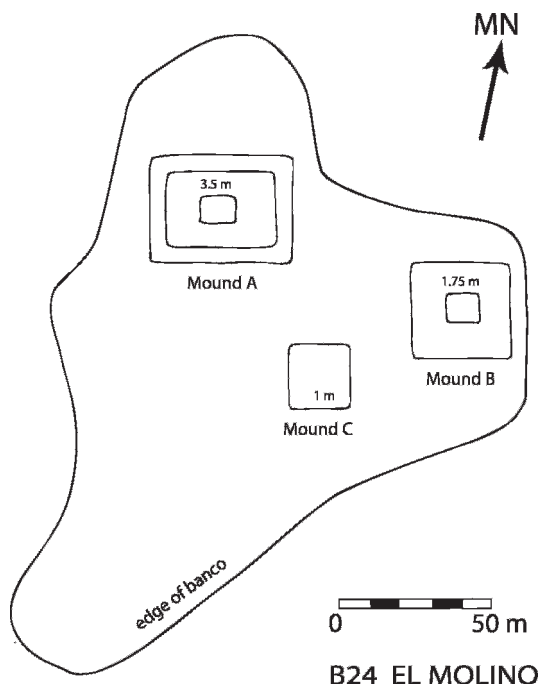


Fig. 4.147. Sketch map of the principal mounds at the site of El Molino (B24) on Fundo Los Cachilapos.

over 5 m tall and that its top surface was approximately 8 m wide. Our search for surface remains resulted in the discovery of two sherds, one of which came from the top surface of Mound A (see B25-0026).

During the 1988 field season, we heard that the La Cotiza site had been cleared by Victor Alvarez Jiménez. Toward the end of that field season, Spencer and Rafael Gasón spent an afternoon surveying the site and preparing a sketch map (fig. 4.153). They determined that the previously visited Mound A stands at the western end of a 184 m-long plaza that is oriented N 60°E, and that a second mound, Mound B, stands at the plaza's eastern end (figs. 4.152, 4.154). This central mounded precinct occupies slightly higher ground than the surrounding *vega*.

Mound A is the main mound at La Cotiza. It measures 40 m by 36 m at its base and is 6 m tall. The top surface of Mound A measures 5 m by 5 m (figs. 4.154, 4.155). Our original surface collection (B25-0026) made during the January 1984 season con-

sisted of ceramics from this mound, and one sherd was collected on its top surface. A ground-stone *metate* was reported from the plaza, roughly 20 m east of Mound A.

Mound B is the second-tallest mound at La Cotiza (B25) (figs. 4.152, 4.153). It measures approximately 24 m by 24 m at its base. Mound B is 3 m tall, and its oval-shaped top surface measures about 12 m long and 6 m wide.

Two low house mounds flank the plaza's approximate midpoint, and at least four other low house mounds were evident on the surface north of the plaza. Surface remains extended over an area up to 160 m north of Mound A and as far as the Caño Guabinas north of Mound B (fig. 4.153). From the site's central axis, surface remains were evident over 100 m to the south. The site extended some 50 m east of Mound B. A second general surface collection (B25-0931) was made during the survey of La Cotiza in 1988.

A causeway that we designated Calzada G (fig. 4.2) (Spencer and Redmond, 1998: 101) leads from the regional center of El Gaván (B12) to the southeast in the direction of La Cotiza (B25). We traced this causeway for a distance of 5.75 km until we lost sight of it in the Montaña El Chuponal, less than one km west of La Cotiza. In 1988, Spencer noted a 250 m-long stretch of causeway along the western edge of the *banco* to the west of Mound A that headed in the direction of Calzada G (figs. 4.154, 4.155). He designated this probable causeway link Calzada H (Spencer and Redmond, 1998: 101–102) (see fig. 4.2).

In July 1984, we learned about a possible non-mound site farther to the southeast on the northeastern bank of the Canaguá River on Fundo La Fe, roughly 1.25 km southeast of La Cotiza (B25). Victor Alvarez Jiménez's children reported finding ceramics in two places on the sandy riverbed (*playitas*) of the river southwest of the *fundo* house during the dry season, when the river is low. One of his sons took us to one spot along the riverbank in the gallery forest and pointed out the place, but the river was too high to allow us to investigate, and we failed to recover material on the riverbank. We



Fig. 4.148. View of Mound A at the El Molino site (B24) on Fundo Los Cachilapos.

noted the location of this candidate for a non-mound site on our aerial photographs but did not assign it a site number (see also B46).

SITE MAP: Sketch map that shows the mound site's areal extent and location with respect to the Canaguá River and the Caño Guabinas and the configuration of the site's principal mounds (fig. 4.153).

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B25-0026 was made on Mound A in January 1984. A general surface collection B25-0931 was possible in May 1988, after the area had been cleared of its vegetation (see table 4.1).

SITE SIZE AND CLASSIFICATION: 8.28 ha; second-order, Gaván-complex center.

DATES RECORDED: January 10, 1984; May 5, 1988.

B26

SITE NAME: Potrero Urpianero.

OTHER SITE DESIGNATION: Potrero del Apamatal.

SITE LOCATION: The non-mound site is located on the southwestern edge of a *banco* overlooking the eastern *vega* of the Canaguá River (fig. 4.2). The Caño Colorado (also known as Caño La Macana) traverses the *vega* in a southeasterly direction at a distance that ranges from 10 m to 100 m south and southwest of the edge of the *banco* on which B26 lies (figs. 4.156, 4.157). The site extends across Potrero Urpianero and Potrero del Apamatal, approximately 200 m southwest—at a bearing of S 50°W—of the causeway (Calzada G) that leads from the regional center of El Gaván (B12) to the southeast (Spencer and Redmond, 1998: 101), and between 0.4 km and 0.7 km northwest of Fundo Párate Duro, where Ramón Gutiérrez lives.

VEGETATION: Potrero Urpianero and Potrero del Apamatal are pastures that are periodically cleared with a *rastrillo de verano* and planted with pasture grass. The *banco* is dotted with palm trees, and the Caño Colorado is lined with a strip of gallery forest (fig. 4.156). The northern



Fig. 4.149. Redmond climbing main Mound A at La Cotiza (B25) with measuring tape in 1984, when the site was covered with secondary forest growth, four years after it reportedly had been cleared.

edge of the site was covered with stands of *estoraque* (*Styrax* sp.) in March 1986, when we returned to map and carry out a program of test excavations at Potrero Urpianero (fig. 4.158).

ARCHAEOLOGICAL REMAINS: In July 1984, we were taken to inspect the edge of the *banco* on Potrero del Urpianero by Alberto Ayala, son-in-law of Ramón Gutiérrez at Fundo Párate Duro. Sr. Ayala reported that when this pasture was cleared in 1983, the *rastrillo de verano* had gathered ceramics immediately below the ground surface along the southwestern edge of the *banco* across a one ha area. Moreover, he showed us a particular spot along the edge of the *banco* where the *rastrillo de verano* had exposed the circular yellow clay sur-

face of a possible structure approximately four m in diameter. Adjacent and lower on the *banco*'s southwestern edge was another circular surface of yellow clay and two sunken pits that might represent cultural features. Our survey of the *banco*'s edge failed to produce any ceramics.

When we surveyed the adjacent Potrero del Apamatal to the south and east of Potrero Urpianero and east of the Caño Colorado (Caño La Macana), we examined the edge of the *banco* east of the palm-trunk bridge over the *caño*, where Sr. Ayala had also seen ceramics. We did not see any ceramics on the surface along the edge of the *banco*. We spoke to Renato Gudiño's wife, who was sweeping outside her traditional thatch-roofed *bajareque* house to the west of the palm-trunk bridge (fig. 4.159). We spotted ceramics and chipped stone on the surface of the house's courtyard and a *metate* fragment lodged in the 40 cm-tall house mound (fig. 4.160). Our surface collection from site B26 (B26-0028) was made here at its southwestern end in the courtyard of the Gudiño family's house on Potrero del Apamatal and included ceramics, chipped stone, and burned daub.

We returned to B26 in March 1986 to map the site and to carry out a program of systematic test excavations at this non-mound site. The results of the test excavations will be reported in a future volume (Spencer and Redmond, n.d.).

SITE MAP: Topographic map at 1:1,000 scale that shows the site's location with respect to the Caño Colorado and the locations of the numbered test excavations (fig. 4.157).

DISTURBANCE: A *quebrada* cuts through a portion of the *banco*.

SURFACE-COLLECTION DATA: Surface collection B26-0028 was made in the courtyard of Renato Gudiño's traditional thatch-roofed *bajareque* house at the southern end of Potrero Apamatal (see table 4.1).

SITE SIZE AND CLASSIFICATION: 3.125 ha on aerial photograph and 3.02 ha on site map; third-order, Gaván-complex habitation site.

DATES RECORDED: July 19–20, 1984; March 1986.



Fig. 4.150. Maize *conuco* on Fundo Brisas del Río in Montaña El Chuponal on the northeastern bank of the Canaguá River.



Fig. 4.151. Field of plantains, manioc, and beans on the northeastern bank of the Canaguá River, adjacent to La Cotiza (B25).



Fig. 4.152. View of mound site of La Cotiza (B25) shortly after the area had been deforested in 1988, facing east toward Mound B in the distant left side of the photograph. The site's principal Mound A is on the right.

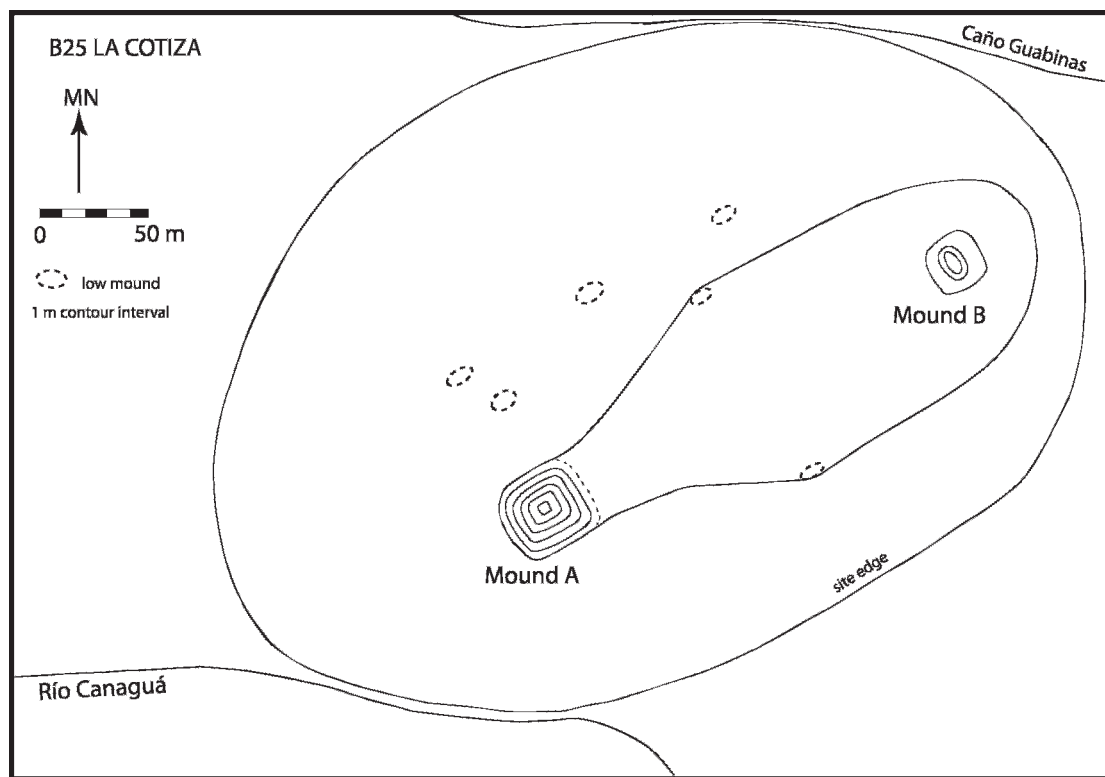


Fig. 4.153. Sketch map of La Cotiza (B25) mound site, showing its location with respect to the Canaguá River and the Caño Guabinas and the locations of the site's principal mounds.



Fig. 4.154. View of main plaza of La Cotiza (B25) toward Mound A at a bearing of S 60°W from Mound B.



Fig. 4.155. View of 6 m-tall Mound A at La Cotiza (B25), facing west toward Canaguá River.



Fig. 4.156. View of non-mound site of Potrero Urpianero (B26) facing west toward the Caño Colorado that traverses the *vega* of the Canaguá River. Test excavation 84 is in progress to the left, and the plane-table and alidade station is evident in the right foreground.

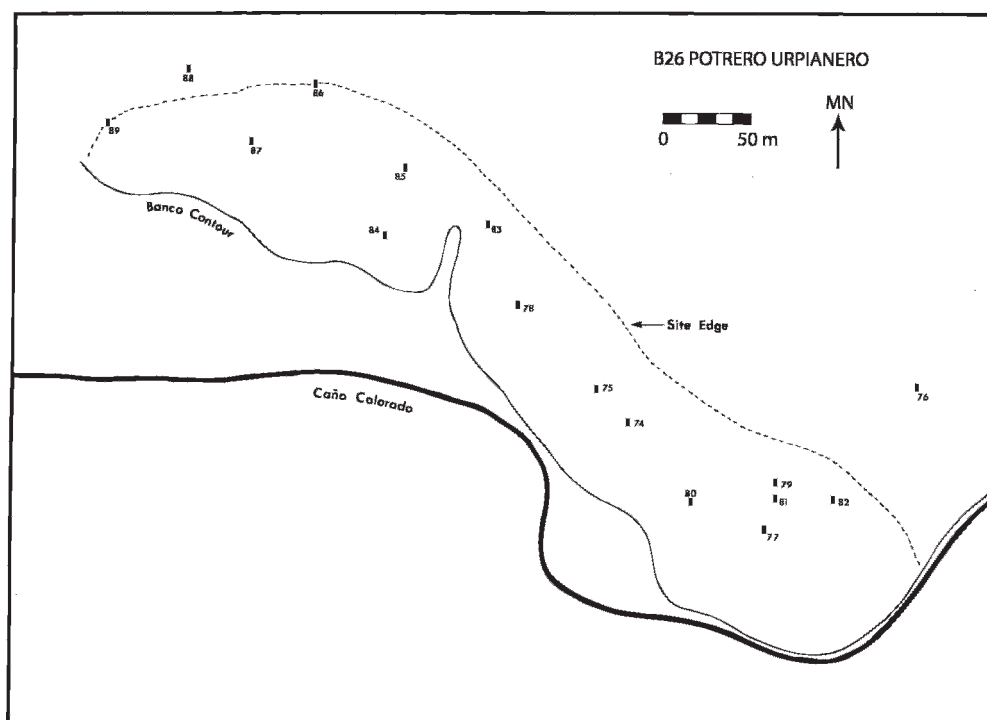


Fig. 4.157. Topographic map of Potrero Urpianero (B26) at 1:1,000 scale, showing the site's location with respect to the Caño Colorado and the locations of the test excavations.



Fig. 4.158. Stands of *estoraque* (*Styrax* sp.) were prominent along the northern edge of Potrero Urpianero (B26) when we returned to map the site in 1986 and carry out systematic test excavations.



Fig. 4.159. View of southwestern portion of non-mound site of B26 that extends across Potrero del Apamatal, facing south-southwest toward the *bajareque* house of the Gudiño family along the Caño Colorado.



Fig. 4.160. Surveying the courtyard of the Gudiño family's house along the Caño Colorado, where ceramics were evident on the ground surface and a *metate* fragment was evident in the 40 cm-tall house mound on which the traditional *bajareque* house is constructed, facing northeast.

B27

SITE NAME: La Recostón de La Tigra.

OTHER SITE DESIGNATION: Potrero de Los Becerros.

SITE LOCATION: The drained fields extend across the eastern alluvium (*vega*) of the Canaguá River, about 250 m from the current watercourse (fig. 4.2, 4.161). The Caño Colorado empties into the expanse of drained fields from the northwest, on its way to the Canaguá River. The northernmost drained fields are located within 200 m south of the *calzada* (Calzada G) that emanates from the regional center of El Gaván (B12) in a southeasterly direction (fig. 4.2). In 1984, the expanse of drained fields extended across the Potrero de Los Becerros on Fundo Párate Duro, owned by Ramón Gutiérrez (whose *fundo* house and corral lay along the causeway roughly one km northwest of the site), and the adjoin-

ing fields to the south toward the Canaguá River that were referred to as "*en la recostón de la tigre*" and owned by Oscar Díaz.

VEGETATION: According to both Sr. Gutiérrez and Sr. Díaz, the *vega* on which the drained fields extend was part of the forested Montaña El Chuponal when they moved here in the 1950s and cleared and established their farms. The site's local name may well allude to its original forested setting (De Armas Chitty, 1991: 191). Today, secondary growth (*monte*) extends over much of the alluvium (fig. 4.162), but there are areas that have been cleared for cattle pastures (fig. 4.163) and agricultural plots. We saw maize and plantains being cultivated (fig. 4.164), but we learned that beans, manioc, *batata* (*Ipomoea batatas*), *ocumo* (*Xanthosoma sagittifolium*), and *ñame* (*Dioscorea alata*) are also cultivated here. Palm trees dominate the arboreal cover of the area.



Fig. 4.161. Aerial view of drained fields at La Tigra (B27), facing east, with the crescent-shaped oxbow lagoons clearly visible to the north and left of the Canaguá River in this photograph taken in January 1985.

ARCHAEOLOGICAL REMAINS: As Alberto Ayala of Fundo Párate Duro guided us across the Caño Colorado in a southwesterly direction on July 20, 1984, to show us some possible elongated “*cerritos*” or “*banquitos*” that were approximately 0.5–1 m tall on the area of the Canaguá River alluvium that the Gutiérrez family designated the Potrero de Los Becerros, he mentioned that the *banquitos* were easy to distinguish when the vegetation was cleared because of their clay composition and the intervening sunken hollows that contained a black deposit. Although it was covered with knee-high *pasto*, at best, and generally with denser *monte*, we immediately recognized the pattern of *banquitos* and canals as an area of drained fields (figs. 4.163, 4.164). Given the height of the secondary growth and the water-laden canals, it was difficult to obtain measurements on the fields and canals and to search for surface remains. Sr. Ayala noted that when the

pasture had been cleared with a *rastrillo* to plant the grass, sherds that the *rastrillo* had gathered were visible.

On August 10, 1984, we returned to the area and surveyed the adjacent farm of Oscar Díaz, designated La Recostón de La Tigra. We spent some time surveying the drained field on which a thatch-roofed *bajareque* hut stood that had been occupied until relatively recently by Eriberto Méndez, because a previous tenant had mentioned recovering ceramics in the vicinity of two lime trees near the hut, but we did not recover any ceramics. We delimited at least four drained fields, one of which measured 80 m by 50 m, and the intervening canals ranged between 3 m and 10 m in width. The fields extended as far south as the edge of an oxbow lagoon that was luxuriantly green with aquatic vegetation. On the opposite bank of the lagoon to the south lay a field of tall, tasseled maize (fig. 4.164). The area of drained fields ex-



Fig. 4.162. Much of the expanse of drained fields at La Tigra (B27) is covered by secondary growth today. This photo of two of the fields flanking a canal was taken in August, when the canals serve to drain and channel the excess water from the fields and minimize the effects of flooding in the rainy season.



Fig. 4.163. Crossing a canal intersection to one of the drained fields at La Tigra (B27) that has been cleared for a cattle pasture.



Fig. 4.164. View across an oxbow lagoon at La Tigra (B27) to a drained field on which maize is growing. Local farmers told us that the drained fields are better for growing maize than manioc. Annual maize yields are on the order of 3,600 kg of husked maize per hectare here, and double the maize yields obtained from fields elsewhere on the *vega* of the Canaguá River.

tended from the Caño Colorado and Potrero de Los Becerros south and west to La Recostón de La Tigra and included oxbow lagoons of the Canaguá River.

In the third week of April 1988, we returned to B27 to map the expanse of drained fields and to carry out a program of test excavations (fig. 4.165) that were designed to collect artifacts and ecofacts associated with the prehistoric fields. The first plane-table station and the first test excavation (T. 185) were located on Field A, alongside the remains of the *bajareque* dwelling that had been occupied by Eriberto Méndez, which we had visited in 1984 but that had since been razed. In the process of mapping the site, we learned that the fields and canals that made up the drained fields at La Tigra were of variable size and shape and that their construction involved the ingenious modification of nat-

ural features. The fields had been created by tapping and modifying the course of the Caño Colorado, carving a network of artificial canals across the fertile alluvium and linking two remnant oxbows of the Canaguá River (figs. 4.161, 4.165, 4.166). The result is a patchwork of fields and canals (figs. 4.167, 4.168, 4.169, 4.170).

The canals range in width from 1–8 m, although most canals have widths of 4–6 m. Canal depths vary from 0.3 m to 3 m, with the majority in the range between 0.5 m and 1.5 m deep. We mapped some 2,960 m of canals with an alidade and plane table, as well as some 534 m of modified sections in the course of the Caño Colorado. Due to the extremely dense vegetation we encountered at the facility's eastern end, some 832 m of canals in this area had to be mapped less precisely with a Brunton compass, tape measure, and the help of the ae-

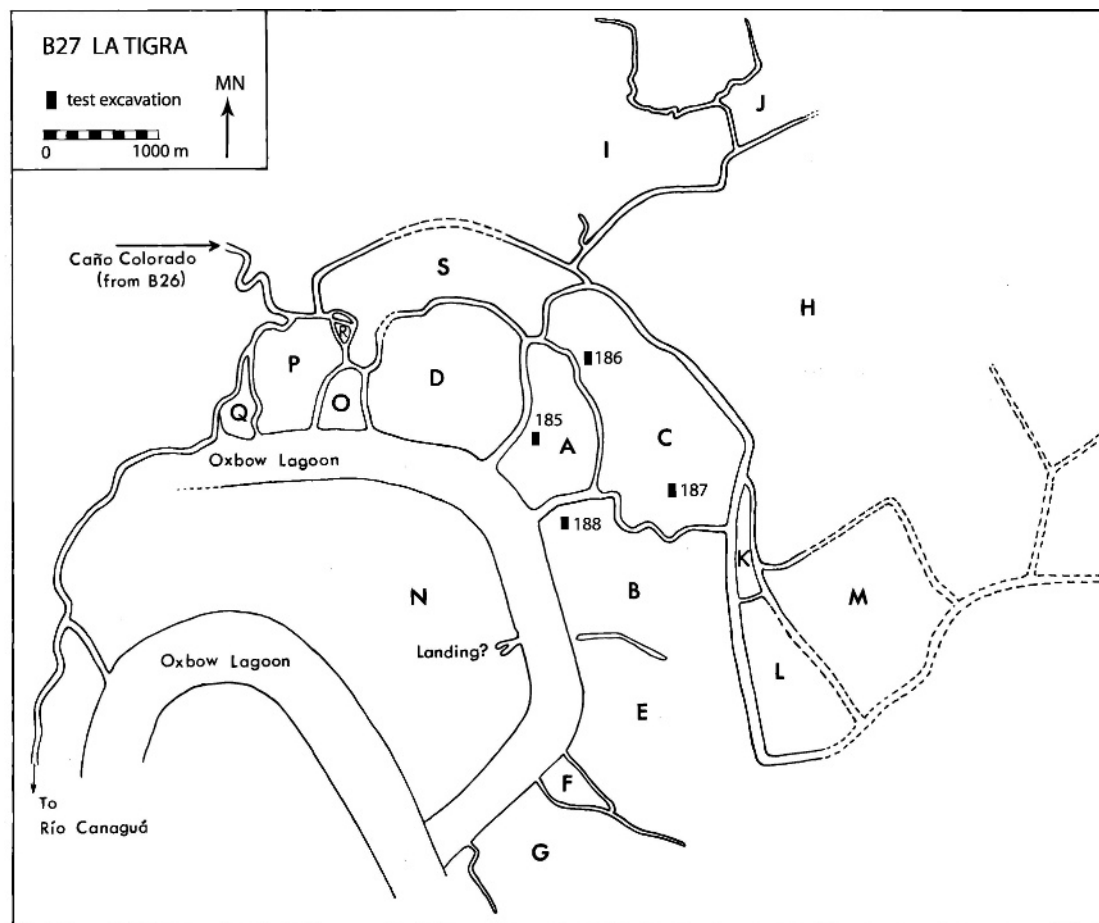


Fig. 4.165. Topographic map of the drained fields of La Tigua (B27), showing the fields and canals, the Caño Colorado, and the oxbow lagoons of the Canaguá River that constitute the facility, along with the numbered test excavations.

rial photograph. The drained fields of La Tigua (B27) consisted of at least 4,326 m of man-made canals and the two oxbow lagoons, which seemed unmodified, although we mapped one possible canoe landing in the northern oxbow lagoon (figs. 4.165, 4.171). The drained-fields facility extended over an area of at least 35 ha.

While we mapped the facility, we placed four test excavations in Fields A, B, and C and recovered stratigraphic information and associated soil samples but no ceramics that could be used to confirm the probable association of the fields with the nearest sites (B26, B96, B12, B97, and B98), all of the Late Gaván phase. The site of Potrero

Urpianero (B26) lies one km northwest of the La Tigua fields and was most likely the home village of those who cultivated the drained fields (Spencer et al., 1994: 130). Additional information on the drained fields' stratigraphy and the soil samples recovered in our test excavations will appear in a subsequent volume (Spencer and Redmond, n.d.).

We learned about the advantages of drained-field cultivation from Oscar Díaz, who had discovered the network of fields and canals when he settled in the area in the 1950s and deforested the *vega* to plant maize, beans, manioc, sweet potatoes, and other crops. He discovered that the canals



Fig. 4.166. View of the northwestern corner of the expanse of drained fields at La Tigra, where the Caño Colorado empties into the facility, facing west.



Fig. 4.167. View of the canal between Fields H and C, from the intersection at the western end of Field H facing southeast. This photograph of the drained-field facility (B27) was taken in April 1988, at the height of the dry season.



Fig. 4.168. María Andueza G. stands in the canal at the intersection between Fields A, B, and C about 50 m from the northern oxbow lagoon. This photograph was taken facing south.



Fig. 4.169. María Andueza G. stands at the intersection of the canal between Fields A and B with the northern oxbow lagoon. This photograph was taken from Field N facing northeast across the lagoon.



Fig. 4.170. View of Rafael Gassón holding stadia rod in the canal between Fields A and D, facing northeast from the northern oxbow lagoon. Test excavation 185 is in progress on Field A in the distance behind Gassón.

facilitated drainage in the area during the rainy season, especially from September through November, when severe flooding occurs. But the canals also marshaled water during the dry season that lasts from January to May. Early in the dry season, water was distributed effectively throughout the area and was retained for a longer period of time. Rainfall from sporadic showers that mark the end of the dry season could also be marshaled through the network of canals (figs 4.161, 4.167). According to Sr. Díaz, the network of canals and drained fields not only minimized crop loss through flooding and dehydration, but also extended the effective growing season. He noted that the drained fields were better suited for growing maize than manioc, and that they were also good for cultivating *caraotas*, or beans. Maize is the crop preferred by farmers throughout this stretch of the Canaguá River because it has a shorter growing season, is easier to cultivate, and yields

more food. Most important was the fact that, while single cropping is the general practice in the area, Sr. Díaz consistently reaped two successful harvests of maize each year on the drained fields and obtained annual yields on the order of 3,600 kg of shelled maize per hectare, double the amount harvested on other alluvial soils in the area.

The possibility that maize was also the principal crop grown on the drained fields in Late Gaván times is supported by the results of Milagro Rinaldi's pollen analysis of soil samples from the La Tigra fields (B27) and the nearby village at Potrero Uripianero (B26) (Rinaldi, 1990). Maize pollen was predominant in the soil samples from both sites and derived from an indigenous Yucatán variety whose pollen grains were somewhat smaller in diameter than those of contemporary maize. The high frequency of maize pollen recovered in the samples from the drained fields and the nearest village



Fig. 4.171. View of Rafael Gassón in possible canoe-landing in Field N, facing west-southwest.

supports not only Morey's assessment of maize as the major crop cultivated by Amerindian societies in the northern and western llanos (Morey, 1975: 46), but also the preference of farmers in the area today. A number of other crops were present in the pollen samples, including quinoa (*Chenopodium quinoa*), corozo palm (*Acrocomia sclerocarpa*), tomatoes (*Lycopersicum esculentum*), chili peppers (*Capsicum frutescens*), arrowroot (*Maranta arundinacea*), and tubers such as *ocumo* (*Xanthosoma sagittifolium*) (see Spencer et al., 1994: table 2).

We have determined that the 35 ha expanse of drained fields at La Tigra (B27) could easily have been farmed by inhabitants of B26, and that with the potential for double cropping, large surpluses of maize could have been harvested each year here (Spencer et al., 1994: 133–37). Finally, because both sites lie along a causeway that emanates from the regional center of El Gaván (B12), we have suggested that much, if not all, of the surplus produced on the fields

at La Tigra was sent to the regional center (Spencer et al., 1994; Spencer and Redmond, 1998: 105). See also B52, which may represent another area of drained fields in the El Gaván locality.

SITE MAP: Figure 4.165. Our topographic map of La Tigra (B27) at 1:1,000 scale shows the fields and canals, the Caño Colorado, and the oxbow lagoons of the Canaguá River that constitute the facility, along with the numbered test excavations.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None. Neither our intensive mapping of the facility nor our test excavations succeeded in recovering any artifacts, contrary to our informants' sightings of ceramics on Potrero de Los Becerros and on the western edge of Field A in the area of La Recostón de La Tigra. That agricultural fields might have little in the way of domestic debris is not surprising, especially since the nearest village lay one km away. A similar situation obtained at another drained-field facility on

the Caño Ventosidad that Denevan and Zucchi mapped and excavated in 1972, where they recovered only three small and nondescript body sherds from the fill in the canal that lay between two elongated fields or ridges exposed by their 22 m-long trench across two ridges and the intervening canal (Denevan and Zucchi, 1978: 240–243). The more recent discovery of drained fields at El Cedral (B33) over an area of 416 ha has also failed to produce much in the way of artifactual remains on the surface (see B33 and Gassón, 1998: 68).

SITE SIZE AND CLASSIFICATION: 35 ha; drained fields.

DATES RECORDED: July 20, 1984; August 10, 1984; April 1988.

B28

SITE NAME: Fundo La Esperanza.

OTHER SITE DESIGNATION: El Tesoro.

SITE LOCATION: The site is located on a *banco* 225 m north of the main road through El Tesoro and roughly 25 m southwest of the Caño Vichiviche on Fundo La Esperanza that is owned by the Moreno family (fig. 3.1).

VEGETATION: The site is situated in what was originally a gallery forest lining the Caño Vichiviche. Much of the gallery forest has been cleared, and today pastures and manioc fields associated with the many small farms of El Tesoro extend across the *banco*.

ARCHAEOLOGICAL REMAINS: Thick-walled ceramics characteristic of the Caño Seco complex turned up in a recently plowed and planted manioc plot roughly 25 m south of the Caño Vichiviche. We searched the pasture to the north and northwest and a stretch of the bank of the Caño Vichiviche but did not see any material. The owners of Fundo La Esperanza told us that they recover ceramics and figurines over their entire property. We detected the remains of 5–10 possible house mounds consisting of oval-shaped rises measuring between 30 cm and 40 cm in height. We collected ceramics from these possible house mounds and their surroundings (B28-0032).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B28-0032 was made in the manioc plot, where we also noticed the possible remains of house mounds (see table 4.1).

SITE SIZE AND CLASSIFICATION: 3.75 ha; a Caño Seco-complex habitation site.

DATE RECORDED: July 24, 1984.

B29

SITE NAME: Fundo Los Limones.

OTHER SITE DESIGNATION: Fundo Campo Alegre.

SITE LOCATION: The site is located on a terrace overlooking the alluvium (*vega*) roughly 200 m east of the Canaguá River on Fundo Los Limones, where Comisario Miguel Briceño of Caño Lindo and his family live (fig. 4.3). The Briceño family's traditional *bajareque* house is located on the west side of the dirt road that leads from the Panamerican highway to Caño Lindo, approximately 2.4 km from the highway. The site extends over the terrace occupied by the house and plantain field south of the house and east across the dirt road into a pasture on Fundo Campo Alegre that belongs to Sra. Briceño's mother, Alejandra Mora (figs. 4.172, 4.173). A small *caño*, referred to as Caño La Arenosa, bounds the site to the north.

VEGETATION: The alluvial terrace on which the site extends features a plantain field south of the Briceño family's house and west of the dirt road to Caño Lindo (fig. 4.173). The remainder of the terrace not occupied by the house and tree-studded courtyard features overgrown pasture grass. Overgrown pastureland extends east of the dirt road on Fundo Campo Alegre (fig. 4.172).

ARCHAEOLOGICAL REMAINS: Sra. Mora de Briceño of Fundo Los Limones directed us to the family's plantain field, south of the *fundo* house and west of the dirt road. We spotted Caño Seco ceramics on and just below the tilled surface, in a dark-brown deposit. Sra. Briceño reported that she and the children also found ceramics along the west-



Fig. 4.172. View of the terrace on which the site of Los Limones (B29) is located, facing northwest toward *vega* of upper Canaguá River. The traditional *bajareque* house of Fundo Los Limones is in the center of the photograph.

ern edge of the terrace, overlooking the alluvium (*vega*) of the upper Canaguá River, which flows approximately 200 m to the west. We surveyed east across the dirt road on pastures belonging to Fundo Campo Alegre. We estimate that the site extended across the terrace east of the dirt road and north to the *caño*.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B29-0033 consists of material recovered mainly in the plantain field, around the house, and along the northern edge of the terrace on which the house and field are situated, on the west side of the dirt road to Caño Lindo (see table 4.1).

SITE SIZE AND CLASSIFICATION: A Caño Seco-complex habitation site that extended over an area of about 300 m north-south and 200 m west-east, with an estimated site size of 5–6 ha.

DATE RECORDED: July 25, 1984.

B30

SITE NAME: Fundo Los Lirios.

OTHER SITE DESIGNATION: Pozos de Las Palmitas.

SITE LOCATION: The site is located on a *banco* on the east bank of the Curbatí River and northwest of Caño Cañaverales, which empties into the Curbatí River downstream (fig. 4.2). At least one former channel of the Curbatí River meanders across the alluvium on the west side of the river and east of El Toro, attesting to the site's original distance from the river. The site is on Fundo Los Lirios, owned by Gustavo Gilly. The entrance to Fundo Los Lirios is on the south side of the Panamerican highway, roughly 800 m east of the Curbatí River and across the highway from the turn-off to Fundo La Esmeralda (B8). Enter through the locked gate to the west of the *fundo* house and proceed on a dirt road in a southeasterly direction across the savanna,

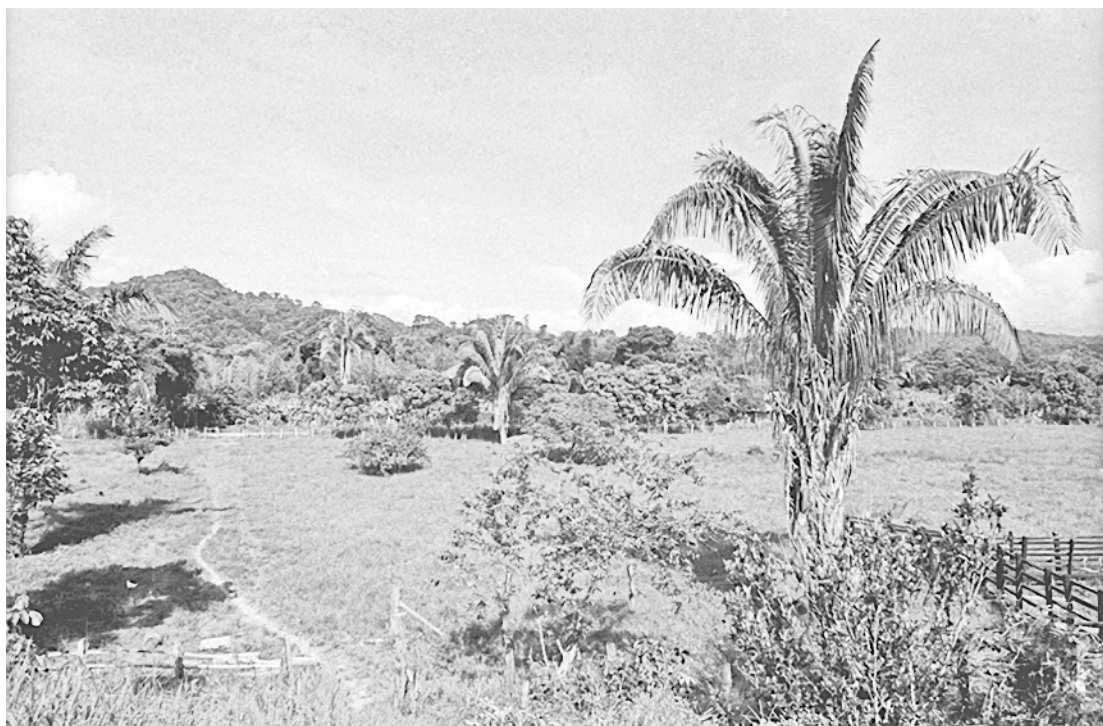


Fig. 4.173. View of the southern edge of the terrace on which the site of Los Limones (B29) is situated, facing west, with a partial view of the *bajareque* house behind palm tree in the right half of the photograph and a full view of the plantain field in which Caño Seco-complex ceramics appeared.

crossing over the Quebrada Mojamoja, for a distance of 2.7 km. Turn right at an iron gate, which is located some 100 m beyond the easternmost mound.

VEGETATION: The site lies on savanna grasslands that are cleared periodically and studded with palm trees. Mound B is covered by especially dense secondary growth (fig. 4.179). The *caño* west of Mound D is lined by forest (fig. 4.177).

ARCHAEOLOGICAL REMAINS: This mound site on Fundo Los Lirios (B30) consists of three large earthen mounds, house mounds, and a stretch of *calzada* (fig. 4.174). A single mound, Mound A, rises at the eastern end of the plaza (fig. 4.175). Mound A measures 38.5 m (on a N 60°W bearing) by 27.9–29 m at its base and rises 2.2 m. Its top surface measures 23.1 m by 12 m; there is a curious 4 m-long projection on the northeastern corner of this top surface over a 12.5 m length of its northern end. A *calzada* passes along the northeastern edge

of the site, skirts Mound A at a distance of 16.3 m southeast of Mound A's southeastern corner (fig. 4.176). This causeway (*Calzada I*) rises less than 1 m in height, and its top width varies between 8.3 m and 10 m and forms an arc originating from the site's southeastern corner overlooking the Curbatí River at a bearing of N 15°E that heads at a northerly bearing (N 2°E), then a northwesterly bearing (N 25°W), over a distance of at least 182 m (fig. 4.2).

Mound B stands roughly 230 m west across the plaza from Mound A (fig. 4.177). Since Mound B was covered by dense secondary growth, our measurements of it with a cloth tape and Brunton compass should be considered preliminary and subject to revision someday (fig. 4.178). Mound B measures 40–43 m by 22–26.6 m (on a N 65°W bearing) at its base and has an oval configuration. Mound B rises 4.13 m in height, and its top surface measures 7 m by 3.5 m. Surface collection

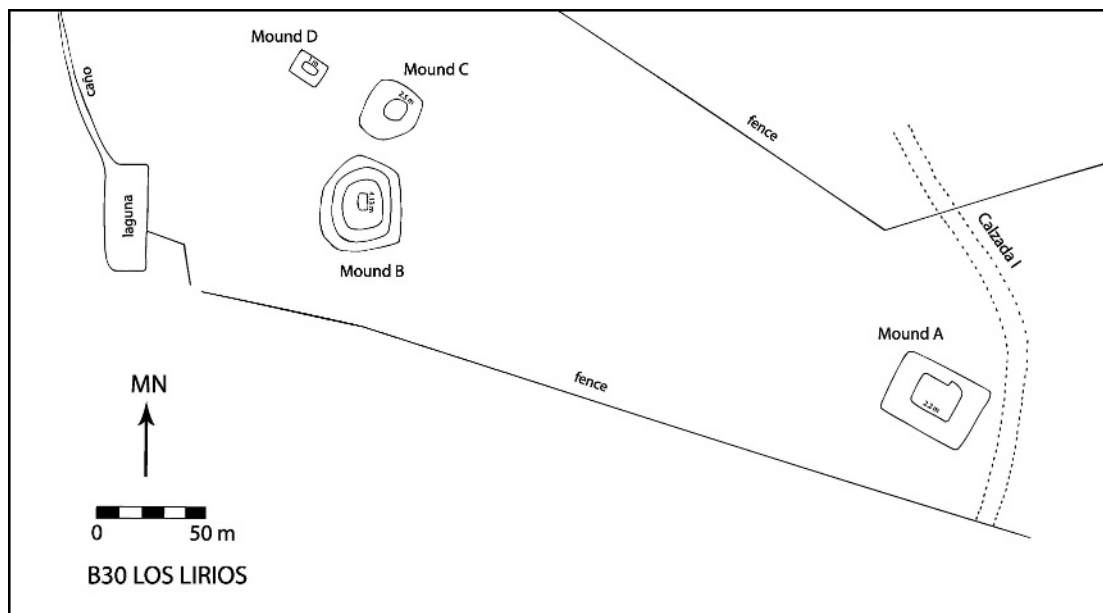


Fig. 4.174. Sketch map of Fundo Los Lirios (B30) mound site showing the approximate locations of the secondary center's mounds and associated *calzada* and the artificial *laguna* along whose banks we recovered ceramics and other artifactual remains.

B30-0035 was made on Mound B and included a ground-stone mortar (fig. 4.179).

Mound C lies 20.5 m northeast of Mound B (fig. 4.174). Mound C measures 26 m by 21 m at its base and rises 2.5 m in height. We estimate that its top surface had a diameter of about 10 m (fig. 4.180).

Less than 25 m to the west of Mound C is a small mound, Mound D (figs. 4.174, 4.181). Mound D measures 14.3 m (at a N 60°W bearing) by 11.5 m at its base and is 1 m tall. The top surface of Mound D measures 8 m by 4 m. A couple of other such rises that may represent house mounds were noted but not drawn in on the sketch map. A single sherd collected on the surface of Mound D was bagged separately as collection B30-0048.

Few artifactual remains were visible on the surface at Los Lirios (B30). We had previous reports from informants across the Curbatí River to the west in El Toro of Gaván-complex ceramics recovered in a place on the east bank of the river that they referred to as Pozos de Las Palmitas. Our informants in El Toro described a *laguna* adjacent to a *caño* where they had col-

lected the hollow foot supports they showed us. The reported *laguna* turned out to lie at the southwestern edge of the *banco* on which the site of Los Lirios (B30) is situated (figs. 4.174, 4.178). Just north of where a *caño* meets the Curbatí River is the man-made *laguna* that measures approximately 45 m in a north-south direction and about 15 m wide. The artificial *laguna* had been excavated with heavy machinery, which had exposed the subsurface artifactual remains that we saw along its banks. Surface collection B30-0034 contains the ceramics and other artifacts collected along the edges of this *laguna*.

SITE MAP: Figure 4.174 is a sketch map of Fundo Los Lirios (B30) that shows the approximate locations of the secondary center's mounds and associated *calzada* and the artificial *laguna* along whose banks we recovered ceramics and other artifactual remains.

DISTURBANCE: The excavation of the artificial *laguna* with heavy machinery has exposed subsurface archaeological deposits at the site's southwestern edge. The material is eroding and being washed into



Fig. 4.175. View of Mound A from plaza of Los Lirios (B30), facing east toward the site's *calzada* in the background on which our field vehicle is parked.



Fig. 4.176. View of Calzada I at the northeastern edge of the mound site Los Lirios (B30), facing north. Mound A rises in the background behind the person and field vehicle on causeway. The causeway can be traced in a northern-northwestern arc for a distance of at least 182 m.



Fig. 4.177. View of Mound B (just left of a single, tall palm tree) and Mound C (to right and with person for scale) from the plaza of Los Lirios (B30), facing northwest.



Fig. 4.178. Mound B at Los Lirios (B30) is covered with dense secondary growth, facing west. The forest-lined *caño* and *laguna* are situated beyond Mound B to the west.



Fig. 4.179. Ground-stone mortar from Mound B (B30-0035) at Los Lirios.

the Curbatí River, accounting for the reports of ceramics in the riverbed during times of the year when the river is low.

SURFACE-COLLECTION DATA: Surface collection B30-0034 contains the ceramics and other artifacts collected along the edges of the man-made *laguna* at the southwestern

edge of the site. Surface collection B30-0035 was made on Mound B. A single sherd was collected on the surface of the house mound, Mound D, and assigned collection B30-0048 (see table 4.1).

SITE SIZE AND CLASSIFICATION: 9.4 ha; second-order Gaván-complex center.

DATE RECORDED: July 27, 1984.

B31

SITE NAME: La Meseta.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site is located on the westernmost edge of the flat ridgetop or *meseta* at an elevation of approximately 600 masl directly north of Caño Sucio, a tributary of the upper Canaguá River on its western side (figs. 4.3, 4.186). The site is about an hour's climb from Caño Sucio and about a half-hour's climb from the house of Samuel Alquichire, who has cleared a field on the ridgetop and planted



Fig. 4.180. View of southern face of Mound C at Los Lirios (B30), facing north.



Fig. 4.181. View of 1 m-tall Mound D at Los Lirios (B30), facing east. The top surface of this house mound measured 8 m by 4 m.

manioc. Access to Sr. Alquichire's house and the site is by way of the dirt road from the Panamerican highway that proceeds up into the piedmont on the western side of the Canaguá River to San Francisco. Take the left at a fork in the road for a distance of some 6.6 km to Caño Sucio. In July 1984, we were able to cross the Caño Sucio to the north by means of a recently bulldozed road to reach Sr. Alquichire's compound (fig. 4.182).

VEGETATION: The ridgetop called La Meseta has been cleared for agriculture and features secondary growth, but patches of the Andean piedmont's tropical forest remain.

ARCHAEOLOGICAL REMAINS: At Sr. Alquichire's house on the north side of Caño Sucio and uphill, he showed us a reconstructible *olla* with the remains of a strap handle, made from a coarse-tempered paste with a blackened core (fig. 4.183). Along with the *olla* he had recovered fragments of a shallow vessel—possibly a *budare*

(griddle)—that had broken into many pieces. Alongside these reconstructible vessels Sr. Alquichire had also recovered a ground-stone *metate*, oval in shape, that measured approximately 25 cm long and 18 cm wide, and a chunk of rock containing mica. One possibility is that the collection of artifacts that Sr. Alquichire found together at the westernmost edge of the ridgetop comprised burial offerings. Alternatively, they might represent the material remains of an abandoned household.

We climbed up to the ridgetop (fig. 4.184) and noted the occurrence of a face-down, ground-stone *metate* and *mano* lying on the ground surface at La Meseta (B31) (fig. 4.185). We saw no other surface remains. We interpret the site as an isolated household that may date to the Late Caño Seco phase or to more recent times.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.



Fig. 4.182. Recently bulldozed road in the upper Canaguá River valley that crosses Caño Sucio north to Samuel Alquichire's compound, from where we climbed to La Meseta (B31).

SITE SIZE AND CLASSIFICATION: No site size for this small site, perhaps an isolated household of the Late Caño Seco phase or the colonial era.

DATE RECORDED: July 29, 1984.

B32

SITE NAME: Fundo Guasimal.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The ruins of a colonial-period or post-colonial-period hacienda lie some 50 m from the west bank of the Canaguá River on Fundo Guasimal, owned by Joseito Sánchez (fig. 4.5). The turnoff from the *vía* Las Peñitas that leads southeast from Ciudad Bolivia is approximately 11.4 km from the end of the paved road in Ciudad Bolivia. Enter the *fundo* of the Méndez family through a blue *portón* on the east side of the road, pass through a *falso*, and continue east toward the Canaguá River to the thatch-roofed compound of Joseito Sánchez called Fundo Guasimal.

The ruins lie along the trail from the Sánchez compound east to the river.

VEGETATION: The site lies in a gallery forest east of the Sabana de Corocito and north of Sabana Guasimal.

ARCHAEOLOGICAL REMAINS: Joseito Sánchez showed us the ruins of a colonial-period or post-colonial-period hacienda in the gallery forest some 50 m from the west bank of the Canaguá River. A mound and traces of walls were visible in spite of the dense vegetation. Fragments of bricks and brick tiles were evident along the northern edge of the trail (fig. 4.187). Sr. Sánchez knew of no prehistoric remains on this side of the Canaguá River, and we saw no prehistoric ceramics here.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: A Chuponal-complex or post-colonial-period ruin of unknown size.

DATE RECORDED: July 31, 1984.



Fig. 4.183. Reconstructible coarse-tempered olla with the remains of a strap handle that was recovered at La Meseta (B31) by Samuel Alquichire, who lives on the north side of Caño Sucio.

B33

SITE NAME: El Cedral.

OTHER SITE DESIGNATION: Fundo El Cedral, Fundo Puerta La Cruz, Las Lomitas (Gassón, 1998: 56), and C1 (Gassón, 1998: 57), Fundo Las Colinas, Fundo Monte Cristo (Gassón, personal commun., 2002)

SITE LOCATION: The mound site of El Cedral is situated in a diverse high llanos landscape formed by the drainage of the Ticoporo, Acequia, and Anaro rivers. The site is closest to the Acequia River, approximately 3.5–4 km to the west. The site lies on a *banco* flanked by two *caños* that form part of the Acequia–Anaro drainage; Caño Chorrerones runs along the center's east side (fig. 3.1). In 1995, Rafael Gassón recorded the site's coordinates with GPS instrumentation: 8°09'23''N and 70°27'15''W (Gassón, 1998: table 2.1). The site lies on Fundo El Cedral, owned by Corcino Díaz of Ciudad Bolivia, and extends onto the adjacent *fundo* to the south, Fundo Puerta



Fig. 4.184. On the trail from Caño Sucio up to the ridgetop on which the site of La Meseta (B31) is located.



Fig. 4.185. Ground-stone *mano* and *metate* lying face-down on the surface at La Meseta (B31).

La Cruz, owned by José Márquez. Fundo Puerta La Cruz of the Márquez family, on which the site's major mounds lie, has gone through several changes of name since 1984; it was renamed Fundo Las Colinas (Gassón, 2000b) and currently has the name Fundo Monte Cristo (Gassón, personal commun., 2002). Fundo El Cedral can be reached by way of the road south and east from Ciudad Bolivia, for a total distance of 23.1 km on the gravel road that passes through Mijaguas toward Boca de Anaro and 9.1 km beyond the turnoff to the *vía* Montaña de Concha. To enter by way of Fundo El Cedral, take a left turn off the *vía* Boca de Anaro at this point beyond San Antonio and continue in an easterly direction for 1.8 km on a field road, which makes use of a 2–2.75 m-tall *calzada* as one approaches the *fundo* house and the site of El Cedral (B33). Fundo Puerta La Cruz (Fundo Monte Cristo) can be reached by continuing beyond the turnoff to Fundo



Fig. 4.186. View of ridgetop on which the site of La Meseta (B31) is located.



Fig. 4.187. Brick fragments and brick-tile fragments can be seen in the profile of the trail that cuts through the ruins of an hacienda in the gallery forest at Fundo Guasimal (B32), on the west bank of the Canaguá River.

El Cedral on the *vía* Boca de Anaro for 2.3 km and taking the next left turn through a gate and past the *fundo* of Hector Colmenares and heading east toward the forested *montaña* for some 400 m.

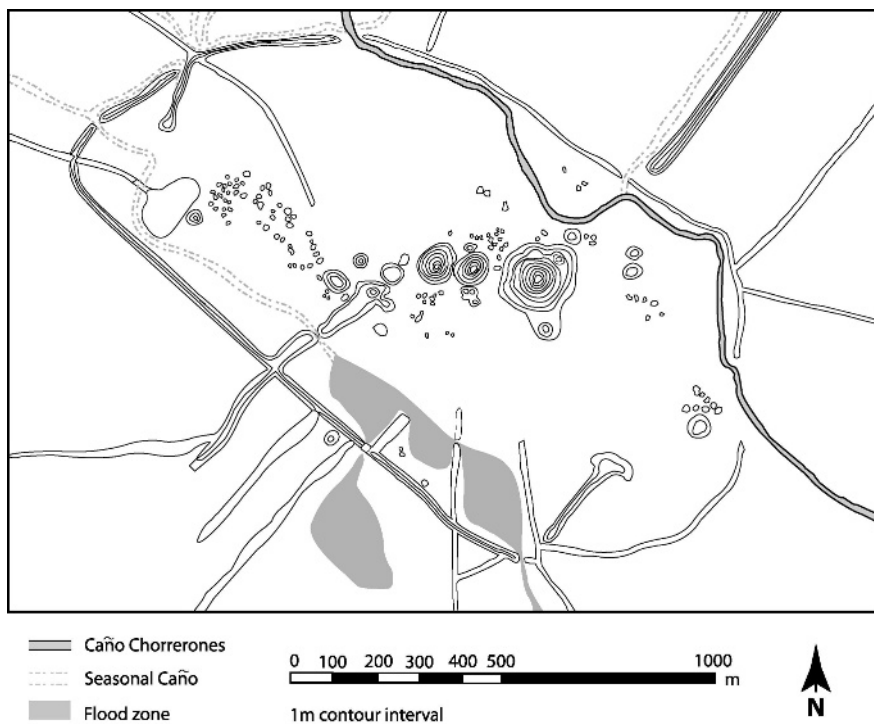
VEGETATION: The site lies at the western edge of the forested *Montaña de Concha*, which is much reduced today due to deforestation for cattle ranching and agriculture. Much of the site of El Cedral (B33) is covered by pastureland dotted with palm trees and other hardwood trees (fig. 4.193). We noted the presence of a field of maize and plantains at the southern edge of Fundo El Cedral in August 1984.

ARCHAEOLOGICAL REMAINS: This description of the mound site of El Cedral (B33) is based on our field notes, photographs, and sketch maps during our visits in August 1984, April 1988, and August 1992. Since 1995, Rafael Gassón has been carrying out investigations at this regional center and in the greater Cedral region. We refer to his doctoral dissertation (Gassón, 1998), which reported the results of his intensive survey and topographic mapping of the center, its causeways and drained fields in 1995–1996. We also refer to Juan Carlos Rey's examination of the network of causeways that radiate from El Cedral (Rey, 2003).

Gassón's survey of the greater Cedral region has determined that the site of El Cedral was the first-order center of a regional

settlement hierarchy composed of secondary centers and third-order villages (Gassón, 1998: 62–66). The regional center of El Cedral features 139 earthen mounds, causeways, and drained fields of impressive dimensions. As a result of Gassón's original survey, the center was considered to have been enclosed on its northern, western, and southern sides by a *calzada* that has an average height of 2.67 m and that encompasses an area of 135 ha (Gassón, 1998: 62). Recent deforestation east of Caño Chorrerones has allowed Gassón's team to continue to trace the remains of this encircling causeway along its northeastern, eastern, and southern edges and to enlarge the site's area within the oval causeway to 150 ha (Gassón, personal commun., 2004; Rey, 2003: 37, mapa 5) (figs. 4.188–4.192).

Gassón has mapped 139 earthen mounds within the peripheral causeway, most of which are likely house mounds 1 m or lower in height. A linear cluster of three conical mounds tower over the center's 11–14 earthen mounds that rise 2 m or more in height. The southeasternmost of these three mounds is the site's principal mound. This principal mound measures more than 150 m in diameter at its base and rises 12 m in height. Its top surface is heavily eroded but measures approximately 20 m by 8 m (figs. 4.193, 4.194). Less than 50 m to the northwest rises the middle mound (fig. 4.195), and almost directly to the northwest, lies the third major mound (fig. 4.196). Both of these mounds measure over 80 m in diameter at their bases and are 9 m tall. The middle mound's top surface measures approximately 16 m by 5 m, and the northwesternmost mound's top surface measures approximately 10 m by 4 m. The son of Corcino Díaz recalled collecting shell, greenstone beads, and black-colored, lightweight exotic stones from these three major mounds. Gassón has suggested that the flat area southeast of the main mound may have served as the center's plaza (Gassón, 1998: 62–63). One of Gassón's test excavations in this mounded precinct, Operation 2 (see Gassón's map in Redmond et al., 1999: fig. 7.8), has produced two radiocarbon dates with midpoints of A.D. 680 $\pm$ 50



B33 EL CEDRAL

Fig. 4.188. Rafael Gassón's map of El Cedral (B33), showing the regional center's mounds and causeways.



Fig. 4.189. Causeway that encircles the regional center of El Cedral (B33) on its northwestern end, facing east.



Fig. 4.190. Causeway that encircles the regional center of El Cedral (B33) on its western side, facing southwest.



Fig. 4.191. Causeway that encircles the regional center of El Cedral (B33) on its northeastern end, facing east.



Fig. 4.192. Closer view of the causeway that encircles the regional center of El Cedral (B33) on its northeastern end. The causeways at B33 range from .5 m to 7 m-tall and their top surfaces range between 1.2 m and 4.5 m wide (Rey, 2001).

and A.D. 690 ± 50 (Gassón, 2002: 260–261; Redmond et al., 1999: 123). To the west of the linear cluster of tall mounds are several broad platforms, including a possible intra-site causeway (fig. 4.197). Gassón mapped many low house mounds along the top of the *banco* to the northwest of these broad platforms.

Gassón's team obtained a reading of 303°NW to 123°SE for the enclosed center's axis (Rey, 2003: 92). Gassón and Rey have suggested that this orientation of the site's axis is in alignment with the glacier-capped Humboldt and Bonpland peaks of the Sierra Nevada of Mérida, a major landmark in the western Venezuelan llanos (Rey, 2003: 93, mapa 17). In addition to the causeway that encircles the center, Gassón and Rey have traced nine causeways that emanate from the center in all directions. One leads from the encircling causeway at this same bearing (303°NW to 123°SE) in the direc-

tion of the *vía* Montaña de Concha and extends to the secondary center of Cerro Mijaguas (B1). Another heads in a westerly, then southwesterly, direction to the Acequia–Anaro rivers. Three *calzadas* traverse the expanse of drained fields east of Caño Chorrerones in a northeasterly direction; among them is the tallest causeway recorded at El Cedral, with a maximum height of 7 m and an average width of 2.73 m (Gassón, 1998: 66; Rey, 2001: 12, 2003: 56, tabla 1) (figs. 4.198, 4.199). Two causeways lead in a southeasterly direction (at approximately the same bearing of 303°NW to 123°SE) to the secondary center of Las Lomitas Florideñas (B13), some 9.86 km away (Rey, 2003: 54, 93, fig. 20). Finally, two causeways head south and west of El Cedral across the savanna toward the Anaro River, probably to drained fields detected on aerial photographs but not yet verified on the ground (Gas-



Fig. 4.193. View of the main mound at El Cedral (B33) in August 1984 with a person standing on the top surface, facing east.

són, 1998: 64; Rey, 2003: 52–53, 64, mapa 11).

Gassón mapped a vast expanse of drained fields directly northeast of El Cedral (B33) and the Caño Chorrerones and fed by several additional *caños*, as well. The patchwork of raised fields of varying shapes and sizes that received water from these *caños* by means of a network of canals and ditches extended over an area of 416 ha, minimally (figs. 4.199, 4.200). Gassón has carried out a series of soil tests and two test excavations in the fields directly east of the El Cedral (see Gassón's map in Redmond et al., 1999: fig. 7.8). More recently, Gassón and Rey have discovered a second drained-field facility at El Cedral composed of multiple parallel ridges (*camellones*), akin to those reported by Denevan and Zucchi (1978) at Caño Ventosidad (fig. 3.1). These *camellones* are located directly southwest of El Cedral's encircling causeway and extend over an area of 20 ha (Rey, 2003: 48).

Finally, Gassón's intensive survey of the 60 km² area immediately surrounding the regional center of El Cedral (B33) in 1995 succeeded in locating nine third-order habitation sites that ranged in size from 0.5 ha to 1 ha and that lacked mounded architecture (Gassón, 1998: 65, fig. 2.2, table 2.1). The scatters of utilitarian Osoid ceramics recovered by Gassón's team at these village sites were similar to the two sherds scatters they spotted within the area of drained fields (Gassón, 1998: 65, 68). The ceramic assemblages from El Cedral contain more decorated serving vessels than the more abundant utilitarian vessels represented in the sherd scatters at these lower-order villages (Gassón, 1998: 124). Corcino Díaz reported finding whole vessels that contained ash and bone fragments, although he did not specify from which area or mounds at the site these finds derived. He also recalled collecting figurines and chipped-stone artifacts there. Some of the fine polychrome



Fig. 4.194. Main mound at El Cedral (B33) in April 1988, with a person on the summit, facing northeast. José and Abelardo Márquez of Fundo Puerta La Cruz (Fundo Monte Cristo) stand at the base of the mound.



Fig. 4.195. View of the middle mound of the mound cluster at B33 that measures over 80 m at its base and is 9 m tall, with a person for scale, facing east.



Fig. 4.196. Northwesternmost mound of the cluster of three mounds at B33, with a person standing at its base, facing northeast.



Fig. 4.197. View of the elongated mound at the southern end of Fundo El Cedral (B33) that may have served as an intrasite causeway, facing southeast.



Fig. 4.198. View of one of the causeways at El Cedral (B33) that traverses an area of drained fields to the northeast of the Caño Chorrerones. This causeway has a maximum height of 7 m.



Fig. 4.199. Area of drained fields at El Cedral (B33) bounded and traversed by three causeways, one of which runs along the left edge of this photograph, facing northeast, and taken in April 1988.



Fig. 4.200. A sector of the drained fields east of El Cedral (B33) that flank a dry but still verdant channel at the height of the dry season (April 1988).

ceramics and lithics from El Cedral are reproduced in color in a recent article by Gassón (2000b). The surface collection we made at El Cedral (B33) in August 1984 (B33-0037) is a general one that includes material we collected from its mounds and from cuts in the *calzadas* across both Fundo El Cedral and Fundo Puerta La Cruz (Fundo Monte Cristo) (see table 4.1).

SITE MAP: We prepared a sketch map in August 1984 that includes the approximate locations of the site's major mounds and causeways, but Gassón has generously allowed us to reproduce his complete topographic map of El Cedral (fig. 4.188).

DISTURBANCE: We noted that the tallest mound was suffering from severe erosion on our first visit in 1984, due to the forces of rainfall, cattle hooves, and treasure seekers on its deforested surfaces. Other mounds and causeways had suffered some exposure from heavy machinery. Since 1988, however, many areas of the site have been plowed with tractors, and a dirt

road now traverses the heart of the site. The open space to the southeast of the tallest mound now serves as a soccer field (Gassón, 1998: 63, fig. 2.3).

SURFACE-COLLECTION DATA: General surface collection B33-0037 includes material collected from El Cedral's mounds and from cuts in the *calzadas* across both Fundo El Cedral and Fundo Puerta La Cruz (Fundo Monte Cristo) (see table 4.1).

SITE SIZE AND CLASSIFICATION: 150 ha; first-order, regional center.

DATES RECORDED: July 31, 1984; August 2, 1984; April 8, 2002; and August 1992.

B34

SITE NAME: Fundo Juan Gregorio Rojas.

OTHER SITE DESIGNATION: see Fundo Las Lajitas (see B5).

SITE LOCATION: The boulders with petroglyphs on Fundo Gregorio Rojas occupy a flat-topped piedmont spur (*meseta*) that is directly north of the Caño Merepure and



Fig. 4.201. Preparing Las Lajitas (B5/B34) Piedra 9 on the northern piedmont spur for photographing, facing southwest across Caño Merepure and *vega* toward southern piedmont spur dotted with occasional tall trees in the distance.

that extends immediately west of the Panamerican highway (and south of the Caño Barro Amarillo) (fig. 3.1). Although they may be related to the many boulders bearing petroglyphs on the neighboring piedmont spur to the south on Fundo Las Lajitas (B5), the boulders with petroglyphs on Fundo Gregorio Rojas have been assigned a separate site number (B34). The turnoff from the Panamerican highway comes after one crosses the Acequia River from Barinas city in a southwesterly direction and before one reaches the Caño Merepure, on the north side of the highway at the bend in the road opposite Finca La Roma. A trail through a manioc and plantain field leads northwest from the highway at the bend to Sr. Rojas's house. Directly upslope from his house lie two of the boulders that bear petroglyphs on their surfaces.

VEGETATION: The meseta has been deforested and cleared for pastures (fig. 4.201).

ARCHAEOLOGICAL REMAINS: Three boulders with petroglyphs lie on the top of the piedmont spur directly north of the Caño Merepure.

Piedra 9: Piedra 9 is located on the southern slope of the piedmont ridge north of the Caño Merepure (fig. 4.201), at a bearing of N 22°E from the *fundo* house of Las Lajitas. Piedra 9 lies some 600 m west of Piedras 18 and 19. Its undulating eastern surface has at least seven petroglyphs, including concentric circles, coupled points and other free-form designs (fig. 4.202). Its western face has an elaborate free-form petroglyph characterized by wandering lines and loops, below which is a spread-eagle zoomorph or a male anthropomorphic figure. To the right is a possible upended quadruped with raised tail. At the southern end of the west-



Fig. 4.202. The undulating eastern face of Las Lajitas Piedra 9 (at B34) has concentric circles, coupled points, and other petroglyphs. María Andueza G. outlines petroglyphs on the boulder's western face with chalk.



Fig. 4.203. Piedra 9's western face has an elaborate free-form design of wandering lines and loops, a possible spread-eagle zoomorph or male anthropomorphic figure below, and a cluster of three concentric circles at the southern end.

ern face is a cluster of three concentric circles (fig. 4.203).

Piedras 18 and 19: Piedras 18 and 19 are located on top of the northern piedmont spur, directly upslope from Sr. Rojas's house and about 180 m west of the Panamerican highway. The boulders are approximately 80 m from one another. We located them on the aerial photograph but did not photograph them or describe their petroglyphs. Piedra 19 had two or three carved petroglyphs on its surface.

We had received a report of ceramics eroding out of the base of the scarp and systematically surveyed the cleared *meseta* but did not spot any artifactual remains.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATES RECORDED: July 1983; August 1, 1984.

B35

SITE NAME: Fundo Guasimito.

OTHER SITE DESIGNATION: Las Pintaderas.

SITE LOCATION: The site extends from the southern tip of the Andean piedmont south onto the high llanos northeast of the Acequia River and west of the Caño Mericacoy (fig. 3.1). The site lies on Fundo Guasimito owned by Juan Crisótomo Castillo. The blue-and-yellow-painted *fundo* house (with a front porch) lies on the northeastern side of the road from the Panamerican highway through the small settlement (*caserío*) of Las Pintaderas to El Tesoro, approximately 1 km to the southeast from the highway turnoff and after a bend in the road. The site extends over a manioc field planted on a natural rise or *loma* some 600 m north of the road and the adjacent *potrero* to the south.

VEGETATION: Some 3.5 ha of the site's area lie in a manioc field. The site extends onto an adjacent fenced *potrero*, which is grassland.

ARCHAEOLOGICAL REMAINS: We had received reports of ovens with bricks and

ceramics on the *finca* of Juan Castillo. Upon our arrival at the *fundo* house, Sra. Castillo showed us some thick-walled, emerald-green glazed potsherds and a trough-shaped *metate* and *mano* from the site. Then she led us northeast from the house across two pastures up to the *loma* that was under the cultivation of manioc, an area of some 3.5 ha, where the clearest surface remains of a colonial-period Chuponal-complex settlement obtained. The manioc field was dotted with brick-red-colored house mounds associated with concentrations of clay tiles, bricks, ceramics, and river cobbles. The ovens (*hornos*) that had been reported to us lay here, as well, in the form of two or three circular pits or depressions some 8 m in diameter. In the pasture south of the cultivated *loma* lay a house mound with rectangular stone foundations intact along its southern end, a large pile of stones, and the remains of another circular pit or possible kiln.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B35-0036 was made in the manioc field (see table 4.1).

SITE SIZE AND CLASSIFICATION: 7.19 ha drawn on aerial photograph. We estimated a minimal site size of 5 ha for this Chuponal-complex habitation site with numerous kilns.

DATE RECORDED: August 1, 1984.

B36

SITE NAME: Hacienda La Palmita.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site occupies an alluvial terrace overlooking the broad expanse of *vega* on the western bank of the upper Canaguá River and northeast of where the Caño Sucio joins the river (figs. 4.1, 4.204). Site B36 lies on Hacienda La Palmita owned by a Sr. Navas, who lives in San Cristóbal but spends Thursday and Friday here and at a recently renovated and plastered farmhouse at the southern entrance of the *caserío* of San Francisco, on the east side of the road. The turnoff to Hacienda La Palmita from the road to-



Fig. 4.204. View of the alluvial terrace rising above *vega* of the upper Canaguá River on which B36 lies, facing west.

ward San Francisco is at a metal gate on the east side of the road, just before the road climbs steeply. Once inside the property, proceed northward across a pasture and cross the Caño Sucio (by foot in August) and ascend to a *falso*. One reaches a house with a porch (painted blue in 1984) and a coffee grove across the road from the house. After crossing another *falso*, past another house and corral, one is on the alluvial terrace on which B36 lies (figs. 4.205, 4.206).

VEGETATION: A maize and plantain field extended over the southern edge of the terrace occupied by B36. The remainder of the terrace away from the house and corral featured a grove of palms and *monte* (fig. 4.204).

ARCHAEOLOGICAL REMAINS: We had received reports of a big rock with incrustations at the Canaguá River's edge on Hacienda La Palmita. We expected to find a boulder with petroglyphs, but the rock in

question proved to be a fossil-rich rock, not a boulder with petroglyphs. According to Nelson Molina, the manager of Hacienda La Palmita, his father had reported a large rock at the river's edge, but we failed to see any such rock, especially at the height of the rainy season. We were also told about big boulders on the ridge to the northwest, which we did not survey because they can be reached only by a trail along a stretch of the riverbank and are not accessible in the rainy season when the river is high. But our survey of the alluvial terrace and expanse of *vega* in the company of Nelson Molina and a ranch hand led to the discovery of the Curbati-complex site B36 on the terrace where the house and corral lie and of a Caño Seco-complex site (B37) on the adjacent *vega*. Most of the Curbati-phase ceramics we collected from the surface came from the road cut (figs. 4.204, 4.205) at the terrace's eastern edge and from some recent backdirt piles produced by a tractor.



Fig. 4.205. The road across Hacienda La Palmita drops down from the terrace occupied by B36 onto the *vega* in the foreground (facing west). The road cut yielded Curbatí-complex sherds.

We would estimate that the Curbatí-phase site B36 extended over an area of 4 ha, maximally. A single Gaván-complex sherd was present in the surface collection (B36-0038) (table 4.1).

SITE MAP: None.

DISTURBANCE: The day we visited Hacienda La Palmita, Sr. Molina and his team of laborers were clearing stretches of the *vega* with a tractor, responsible also for the road cut and the backdirt piles where we collected subsurface remains associated with B36.

SURFACE-COLLECTION DATA: Surface collection B36-0038 consists of the ceramics collected in the road cut and from the backdirt piles on the alluvial terrace (see table 4.1).

SITE SIZE AND CLASSIFICATION: A Curbatí-complex habitation site extending over 2 ha to, at most, 4 ha (table 5.1).

DATE RECORDED: August 3, 1984.

B37

SITE NAME: Vega de La Palmita.

OTHER SITE DESIGNATION: Hacienda La Palmita (see B36).

SITE LOCATION: The site extends on the broad expanse of alluvium (*vega*) on the western bank of the upper Canaguá River, at a loop in the river (fig. 4.3). The site lies on Hacienda La Palmita owned by Sr. Navas of San Cristóbal, who also maintains a house in the nearby *caserío* of San Francisco. A metal gate on the east side of the road to San Francisco, just before the road climbs steeply, allows access into Hacienda la Palmita. Once inside the property, proceed northward across a pasture, cross the Caño Sucio (by foot in August), and ascend to cross a *falso*. The farm road leads to a house with a porch (painted blue in 1984) and a coffee grove across the road from the house. Past another *falso* is



Fig. 4.206. View of the terrace and road cut at B36 northeast toward the *vega* below on which B37 extends and the forest-lined Canaguá River in the distance.

another house and corral on the palm-studded alluvial terrace on which B36 lies (figs. 4.205, 4.206), before descending onto the flat expanse of *vega* and east toward the river (fig. 4.207).

VEGETATION: Most of the *vega* on Hacienda La Palmita was covered with overgrowth (*monte*), strips of which were in the process of being cleared with a tractor during our survey (figs. 4.208, 4.209). A field of maize and plantains extended across the southern portion of the alluvium.

ARCHAEOLOGICAL REMAINS: The western *vega* of the upper Canaguá River, at a major bend in the river, was littered with characteristic thick-walled, brick-colored Caño Seco ceramics. The young ranch hand who led us to the river remarked that such ceramics turned up all over the 30 ha of the *vega*. Based on the occurrence of Caño Seco ceramics in all of the cleared strips of the *vega*, we estimated an occupation of some 20 ha on the *vega* at the loop in the river. The earlier Curbati-phase community (B36)

lay on the higher alluvial terrace directly above and adjacent, to the west.

SITE MAP: None.

DISTURBANCE: The *vega* is being cleared with a tractor.

SURFACE-COLLECTION DATA: Surface collection B37-0039 comes from the recently cleared strip of *vega* near the river (see table 4.1). A few days after our first visit to the site we returned and received additional ceramics that the manager, Sr. Molina, had recovered from the *vega* and saved for us, which we added to the original collection.

SITE SIZE AND CLASSIFICATION: A Caño Seco-complex habitation site of 20–30 ha.

DATES RECORDED: August 3 and 9, 1984.

B38

SITE NAME: Fundo Buena Vista.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site lies on a *banco* overlooking the southwestern *vega* of the



Fig. 4.207. View of the *vega* extending west of the upper Canaguá River on which B37 lies toward the higher terrace studded with palm trees on which the earlier site of B36 lies.

Curbatí River and directly southwest across the Curbatí River from the mound site of Los Lirios (B30) (fig. 4.2). An oxbow empties into the Curbatí River here. Fundo Buena Vista of Raimundo Mejías lies northeast of the junction of the two roads leading southeast from the *bodega* (general store) in El Toro, on the southeastern outskirts of Curbatí.

VEGETATION: Sr. Mejías told us that when the *fundo* was established in the 1940s, the *banco* featured a gallery forest, but the forest has been cleared and today the *banco* is covered by secondary growth (*monte*) dotted with trees (fig. 4.210), fruit trees, and a plantain garden.

ARCHAEOLOGICAL REMAINS: This is a non-mound Gaván-complex settlement that extends along the eastern edge of the *banco* directly overlooking a sizable area of alluvium on the southwestern bank of the Curbatí River. The Mejíases reported seeing ceramics in the courtyard of their house

and in the garden, where we collected ceramics and a piece of burned daub with a cane impression (B38-0040). The site extends some 450 m to the north, because the inhabitants of the neighboring *fundo* also reported bringing up Gaván-complex ceramics when they dug holes for fence posts and showed us a Gaván-complex vessel fragment with a foot stub or a handle still attached.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B38-0040 comes from the courtyard and plantain garden of Fundo Buena Vista (see table 4.1).

SITE SIZE AND CLASSIFICATION: We drew 3.75 ha on the aerial photograph, but a maximum site-size estimate might well be 5 ha; third-order, Gaván-complex habitation site.

DATE RECORDED: August 6, 1984.



Fig. 4.208. Surveying a recently cleared strip of *vega* on Hacienda La Palmita, where the Caño Seco-complex settlement (B37) lay, facing east toward the bend in the upper Canaguá River.



Fig. 4.209. Surveying and surface collecting B37 on the tractor-cleared *vega* of the upper Canaguá River, facing north.



Fig. 4.210. On the *banco* on which Fundo Buena Vista sits today, overlooking an oxbow and *vega* southwest of the Curbati River, lies a Gaván-complex village (B38) lacking any mounded architecture. This photograph is taken from the house facing northeast toward the river, across which lay the mound site of Los Lirios (B30).

B39

SITE NAME: Fundo Los Pinos.

OTHER SITE DESIGNATION: Vega del Fundo San Francisco.

SITE LOCATION: The site extends along the alluvium (*vega*) on the western bank of the Upper Canaguá River between the Caño San Francisco north for a distance of some 900 m to just north of the next *cañito* that empties into the river on its western bank (figs. 4.2, 4.3). The site extends from the riverbank west across the road that leads from the Panamerican highway to San Francisco. The site extends from the riverbank property of Fundo Los Pinos, just north of the Caño San Francisco, whose owners live in a small white and blue-painted house with flowers on the east side of the road to San Francisco, across the broad expanse of *vega* on Fundo San Francisco, owned by Sr. Solano

(fig. 4.211), and into the neighboring property on the *vega* north of the *cañito*, but before the road climbs steeply.

VEGETATION: Most of the alluvium has been converted to pasture (fig. 4.211), but the inhabitants of Fundo Los Pinos on the east side of the road were growing plantains, sugarcane, and manioc on the riverbank. The site's northernmost end lay in a maize field on the riverbank.

ARCHAEOLOGICAL REMAINS: We recovered Caño Seco-complex ceramics in the cultivated riverbank on Fundo Los Pinos, whose inhabitants reported finding these ceramics all over their property and in the dirt road that leads from the Panamerican highway north to San Francisco (fig. 4.212). Surface collection B39-0041 constitutes this sample of ceramics (table 4.1). We estimated that the site extended over 10–15 ha of the *vega* of Fundo Los Pinos and the large Fundo San Francisco, as far



Fig. 4.211. A Caño Seco-complex site (B39) extends across the *vega* in the foreground on the western side of the upper Canaguá River on Fundo Los Pinos and Fundo San Francisco. The photograph is taken from the road to San Francisco, facing west across the *vega* toward the terrace occupied by B40.

north as the next *cañito* to the north. On a second visit, we entered the neighboring riverbank property of Sr. Solano to the north of the next *cañito* north of Caño San Francisco to try to determine the site's northern extent. A recently plowed field east of the road on the riverbank with young maize plants yielded a light scatter of the same thick-walled ceramics over the entire field, an area of some 6 ha. The surface collection (B39-0047) from this maize field contained both Caño Seco-complex ceramics and Gaván-complex ceramics (table 4.1). We cannot explain the occurrence of Gaván-complex ceramics in the second surface collection from this site in the upper Canaguá River; two separate occupations may well be represented at B39. Although no Caño Seco-complex ceramics turned up in either the surface collections or the systematic test excavations at

the neighboring Curbatí-complex site B40, we were unable to detect on the surface how far west of the road site B39 extends.

SITE MAP: None.

DISTURBANCE: The road to San Francisco traverses the site.

SURFACE-COLLECTION DATA: Surface collection B39-0041 comes from the site's southern end on the riverbank property of Fundo Los Pinos and from the road. Surface collection B39-0047 comes from a maize field within 20 m of the river at the site's northernmost extent on the *vega* of Fundo San Francisco (see table 4.1).

SITE SIZE AND CLASSIFICATION: Originally we estimated a Caño Seco-complex occupation of 10–15 ha, but with the discovery of Caño Seco-complex ceramics on the riverbank north of the *cañito* we revised the site's size estimate to 16–21 ha. The occurrence of Gaván-complex ceramics in the second



Fig. 4.212. Collecting Caño Seco-complex ceramics in the road to San Francisco at B39, in the company of the wife of the owner of Fundo Los Pinos, whose property extends to the riverbank. The photograph is taken facing north.

surface collection (B39-0047) over an area of some 6 ha deserves further attention. See also site B47 across the river, where we also recovered Gaván-complex ceramics.

DATES RECORDED: August 9 and 15, 1984.

B40

SITE NAME: Fundo San Francisco.

OTHER SITE DESIGNATION: None.

SITE LOCATION: A terrace directly west of the broad expanse of *vega* on the western bank of the Upper Canaguá River that stretches from the Caño San Francisco north to just beyond the next *cañito* (fig. 4.1). The site is named for the Fundo San Francisco, owned by Sr. Solano, on which it lies today. Access to Fundo San Francisco is a red metal gate on the west side of the road from the Panamerican highway to San Francisco, some 120 m north of Caño San Francisco. The terrace

occupied by the site rises some 3–4 m above the broad expanse of *vega* that stretches to the east toward the dirt road and the riverbank (figs. 4.211, 4.213).

VEGETATION: Pasture.

ARCHAEOLOGICAL REMAINS: We recovered Curbatí-complex ceramics along the eastern edge of the terrace that rises 3–4 m above the *vega*, where the eroding slope is free of the *pasto* cover. The three boulders on top of the terrace do not display any modifications. The surface collection (B40-0042) made along the eroding eastern edge of the terrace contained a good sample of Curbatí-complex ceramics, including some sherds with red paint (table 4.1). We also recovered a ground-stone *mano* fragment.

In August 1985, we returned to map the site in preparation for a program of test excavations (fig. 4.214). While mapping the site we again collected sherds (B40-0081)



Fig. 4.213. A member of the survey teams stands at the eastern edge of the terrace on which the Curbatí-complex site of B40 lies. This photograph is taken from the *vega* below, facing west.

from the eroding scars down the eastern slope of the terrace on which the site extends. This surface collection, which also represented a good sample of Curbatí-complex ceramics, included two Gaván-complex sherds (table 4.1).

In May 1988, while carrying out a program of test excavations at B40, a third general surface collection was made (B40-0878) (table 4.1). Our original field estimate of the site's size was on the order of 2–3 ha. We mapped an area of 1.5 ha, a figure that makes 2 ha a more likely estimate of the site's maximum size. The results of the program of test excavations at B40 will appear in a future volume and help to refine our understanding of the site's Curbatí-complex occupation and the occurrence of Gaván-complex ceramics (Redmond and Spencer, n.d.).

SITE MAP: Figure 4.214. Topographic map is at 1:1,000 scale, showing the locations of the test pits excavated there in May 1988.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B40-0042 and B40-0081 were made along the eroding eastern edge of the terrace, where sherds are visible on the surface. Surface collection B40-0878 consisted of additional sherds collected on the site's surface during the program of test excavations in early May 1988 (table 4.1).

SITE SIZE AND CLASSIFICATION: 1.5–2 ha; Curbatí-complex habitation site (table 5.1).

DATES RECORDED: August 9, 1984; August 2 and 7, 1985; and May 1988.

B41

SITE NAME: El Estero del Fundo San Antonio.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B41 is located in the broken relief characteristic of the Chuponal alluvium between the Caño Mitiao Hondo and the Caño Mericacoy that consists of elevated *bancos*, and sunken *bajíos*, and

atop a pre-Hispanic causeway, which we have designated Calzada E (fig. 4.2) (Spencer and Redmond, 1998: 101, fig. 3). Moreover, a trail of unknown date leads from B41 northwest and up the slope of a prominent *banco* to B81, another Gaván-complex site (see B81).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: The ceramics we were able to collect from the western edge of the *estero* were designated B41-0043 (see table 4.1).

SITE SIZE AND CLASSIFICATION: 4.37 ha; third-order, Gaván-complex habitation site.

DATE RECORDED: August 14, 1984.

B42

SITE NAME: Fundo San Antonio.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B42 lies on the Chuponal alluvium between the Caño Mericacoy and the Caño Mitiao Hondo on Fundo San Antonio owned by Sr. Majín Montilla (fig. 4.5). From the Panamerican highway we traveled southeast down the *vía* Chuponal, east across the bridge over the Caño Mericacoy, and continued 3.4 km past the bridge over the Caño Mericacoy to Fundo San Antonio.

VEGETATION: Fundo San Antonio has cattle pastures but also extensive manioc, maize, and plantain fields.

ARCHAEOLOGICAL REMAINS: Sr. Montilla told us that ceramics are recovered all over the 50 ha of his *fundo*. He took us to a *cañito* that runs east and parallel to the entry road to his *fundo* house, along the banks of which a high density of artifacts are seen eroding immediately below the ground surface. We recovered ceramics, porcelain, metal artifacts, and ground-stone tools here (B42-0044) associated with a large, Chuponal-complex occupation. The site extends across the *vía* Chuponal to the south, as well. We estimated that the site covers some 80 ha.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B42-0044 from the edges of the *cañito* (see table

4.1). See chapter 2 for more detailed information about the ceramics recovered in this surface collection.

SITE SIZE AND CLASSIFICATION: 78.74 ha drawn on aerial photograph; Chuponal-complex (colonial-period) habitation site, or post-colonial or recent habitation site.

DATE RECORDED: August 14, 1984.

B43

SITE NAME: Fundo Tamarindo.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B43 is on the lower Chuponal alluvium some 500 m north of the Canaguá River, some 800 m east of the Caño Mericacoy and west of the Caño Mitiao Hondo (fig. 4.3). It lies on Fundo Tamarindo, owned by Ezequiel Montilla, brother of Majín Montilla of the neighboring Fundo San Antonio (on which sites B41 and B42 lie). Continue to the southeast from the entrance to Fundo San Antonio for a little over 1 km to Ezequiel Montilla's *fundo* house, which is on the south side of the *vía* Chuponal.

VEGETATION: Fundo Tamarindo has cattle pastures and agricultural fields, including a plantain field on the north side of the *vía* Chuponal.

ARCHAEOLOGICAL REMAINS: Ezequiel Montilla took us north across the road from his *fundo* house into the plantain field where a tree had recently been removed, which had brought up subsurface deposits at about 20–30 cm below the ground surface. We recovered Caño Seco-complex ceramics from the large hole left by the uprooted tree (B43-0045). The Montillas also spoke of finding a whole vessel containing charcoal and ash at almost 1 m below the ground surface. They have also recovered ceramics at a depth of 50 cm. We estimate that the site extends over an area of roughly 650 m by 350 m.

In the patio of the *fundo* house we saw a trough-shaped *metate* (measuring 50 cm by 26 cm) and a *metate* fragment (fig. 4.215), which came from B43. The Montillas also showed us a solid ceramic appendage or figurine fragment, also from B43 (fig. 4.216).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B43-0045 was made in the plantain field (table 4.1).

SITE SIZE AND CLASSIFICATION: 20 ha; Caño Seco-complex habitation site.

DATE RECORDED: August 14, 1984.

B44

SITE NAME: Fundo Nueva Esperanza.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B44 is on the lower Chuponal alluvium a little less than 400 m north of the Canaguá River and 250 m southeast of the Caño Mericacoy (fig. 4.5). The site lies on Fundo Nueva Esperanza owned by Antonio Márquez on the southwest side of the *vía* Chuponal, a little over a kilometer southeast past the bridge over the Caño Mericacoy.

VEGETATION: Cacao trees surround the *fundo* house, and cotton fields extend to the south toward the river.

ARCHAEOLOGICAL REMAINS: The Márquez family reported finding ceramics, porcelain, flint, metal artifacts, glass, adobe, and fired bricks in the courtyard of the *fundo* house. They also reported finding this Chuponal-complex material in their cotton fields south of the *fundo* house and toward the river. We surveyed the cotton fields and recovered ceramics and other Chuponal-complex material in the plowed field (B44-0046). We stopped off and made another surface collection (B44-0932) in early May 1988. A *metate* that we saw at the Chuponal-complex site of Fundo Las Delicias (B76), a little over a kilometer to the northwest and owned by Emiliano Márquez, was reported to have come from this site (see B76).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B44-0046 from the cotton field south of the *fundo* house (table 4.1). Surface collection B44-0930 also sampled the Chuponal-complex occupation on the *vega*. See chapter 2 for more detailed information about the European wares recovered



Fig. 4.215. *Metate* fragments from the site of B43 in the patio of Fundo Tamarindo. The larger *metate* measures 50 cm long and has a maximum width of 26 cm.

in these Chuponal-complex surface collections.

SITE SIZE AND CLASSIFICATION: 25.63 ha; Chuponal-complex habitation site.

DATE RECORDED: August 14, 1984; May 1988.

B45

SITE NAME: Finca Hoyo Caliente.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B45 lies where the Andean piedmont meets the high llanos at



Fig. 4.216. Solid ceramic appendage or solid limb fragment of a figurine, 14 cm long, recovered from the site of B43 by the Montilla family at Fundo Tamarindo.



Fig. 4.217. View of the Andean Cordillera from the Sabanas de Anime road, facing west toward the upper Canaguá River. The site of B45 is located at the foot of the Cerro Mericacoy that rises at the right edge of this photograph.

the foot of the Cerro Mericacoy, directly west of the upper Caño Mericacoy and east of the upper Canaguá River (figs. 4.2, 4.217). Site B45 lies on Finca Hoyo Caliente and the adjacent *fundo*, which can be reached by taking the first entrance on the north side of the Panamerican highway after crossing the Caño Mericacoy heading west, in Anime. After entering through a red *portón*, Finca Hoyo Caliente is the house on the left (west side) of the road that leads to the adjacent *fundo* owned by a gynecologist in Barinas City at the end of the road and on the bank of the Caño Mericacoy (fig. 4.218). Alberto Escalona of Finca Hoyo Caliente is the *encargado* of the *fundo*.

VEGETATION: Pastures in various stages of growth.

ARCHAEOLOGICAL REMAINS: Sr. Escalona reports finding ceramics in any pits they excavate for inserting fence posts, for exam-

ple, and when they clear the overgrown pastures with a tractor. We also recovered ceramics from the pigpen and the courtyard of his house. He showed us a tubular-shaped Gaván-complex ceramic appendage that he had saved before taking us to the pit where they had found it, in an overgrown pasture some 70 m northwest of his house, at the foot of the piedmont spur (fig. 4.218). With a shovel Sr. Escalona continued excavating the profile of the pit and, at 20–25 cm below the ground surface, in a dark-brown deposit, exposed a small quantity of Gaván-complex ceramics (B45-0049). Based on Sr. Escalona's reports of the widespread distribution of ceramics across his *fincas* and across the larger adjacent *fundo*, we drew the site's estimated area in on the aerial photograph (2.5 ha) but estimated as much as 3 ha of occupation.

SITE MAP: None.

DISTURBANCE: None.



Fig. 4.218. View of Finca Hoyo Caliente (B45) at the foot of the Cerro Mericacoy, facing toward adjacent *fundo*. Gaván-complex ceramics turn up in any fence-post pit they dig at 20–25 cm depth and when they clear the overgrown pastures with a tractor.

SURFACE-COLLECTION DATA: B45-0049 (table 4.1) is the sample of sherds that Sr. Escalona exposed when he widened the pit he had excavated previously northwest of his house.

SITE SIZE AND CLASSIFICATION: 2.5–3 ha; Gaván-complex, third-order habitation site.

DATE RECORDED: August 16, 1984.

B46

SITE NAME: Sitio Juan Pío.

OTHER SITE DESIGNATION: Fundo La Providencia.

SITE LOCATION: The reported site is situated on the southwest bank of the Canaguá River, on Fundo La Providencia (see B63). Due to its inaccessibility during the rainy season, we were not able to visit this site in July 1985 when we surveyed the 1,500 ha *fundo* and learned about this site located on the riverbank at a bearing of N 14°E at a distance of 1.8 km from site B63.

VEGETATION: Gallery forest along the river, part of which was cleared to establish a *conuco*.

ARCHAEOLOGICAL REMAINS: In the process of surveying Fundo La Providencia (B63), we learned about a second site on this large property. A ranch hand named Juan Pío told us of another site on Fundo La Providencia to the northeast on the riverbank, where he had recovered ceramics, including a figurine or a large vessel fragment. The site is not accessible in the rainy season, but we marked its approximate location on the topographic map, approximately 1.8 km at a bearing of N 14°E from B63 (fig. 4.2). The site on the riverbank would lie directly south across the Canaguá River from Fundo La Fe, where previously we had received a report of ceramics being recovered on the riverbed in the dry season (see B25) (fig. 4.2).

SITE MAP: None.



Fig. 4.219. View of terrace overlooking the *vega* on Fundo Las Ardillas (B47) in the foreground, facing northeast.

DISTURBANCE: If sherds from this site on the riverbank are being recovered in the riverbed in the dry season, then site B46 is being eroded by the Canaguá River.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: Site B46 remains an information site that needs to be verified. Based on the information at hand, we presume that B46 is a non-mound Gaván- (or Caño Seco-) complex site.

DATE RECORDED: July 17, 1985.

B47

SITE NAME: Fundo Las Ardillas.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site occupies a 5 m-tall terrace some 125 m north of the Caño La Arenosa, which empties into the eastern bank of the upper Canaguá River (fig. 4.2). It is located on Fundo Las Ardillas, to which Comisario Miguel Briceño of Caño Lindo and his family moved just prior to our January 1985 season (fig. 4.219) from

their previous home at the nearby Fundo Los Limones 325 m to the south and south of Caño La Arenosa (see B29). Fundo Las Ardillas extends across the *vega* west of the dirt road that leads from the Panamerican highway to Caño Lindo on the eastern side of the upper Canaguá River, approximately 2.7 km from the highway. The dirt road traverses the terrace on which the site of B47 is located.

VEGETATION: Pasture.

ARCHAEOLOGICAL REMAINS: We recovered a few thin-walled Gaván-complex ceramics and a ground-stone *mano* from the eroded southern slope of the terrace overlooking the *vega* on which Sr. Briceño's *finca* house lies (fig. 4.220). We did not recover any ceramics from the *vega*, and Sr. Briceño said they have not seen any ceramics on the *vega*. The terrace extends east across the dirt road to Caño Lindo and has an estimated areal extension of 1.5 ha. While the discovery of a small collection of Gaván-complex ceramics from the eroding south-



Fig. 4.220. Members of the survey team walking along the southern slope of terrace where ceramics are seen and on the adjacent *vega* below, facing east.

ern slope of the terrace here in the piedmont was surprising, so, too, was the geological matrix from which the sherds seemed to be eroding at about 60–80 cm below the ground surface. In contrast to the fine, loose, black, ceramic-bearing deposits at Curbatí-complex sites in the piedmont, the sherd-bearing deposit along the eroding southern slope of the terrace was tan-colored and compact. It is the case that some Gaván-complex ceramics were also recovered in the maize field across the Canaguá River at B39 (Fundo Los Pinos) and farther upstream at B48 (Fundo El Cerrito).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B47-0051 from the terrace's southern slope (table 4.1).

SITE SIZE AND CLASSIFICATION: 1.5 ha; Gaván-complex habitation site?

DATE RECORDED: January 4, 1985.

B48

SITE NAME: Fundo El Palmar.

OTHER SITE DESIGNATION: Fundo El Cerrito.

SITE LOCATION: B48 occupies a boulder-lined terrace overlooking a narrow strip of *vega* some 100 m from the eastern bank of the upper Canaguá River and some 800 m northwest of Caño Lindo (figs. 4.2, 4.3). The site lies on Fundo El Palmar, owned by Bartolo Pérez (fig. 4.221), and the adjacent *fundo* 150 m to the north, Fundo El Cerrito, owned by the Sánchez family (fig. 4.222). Both *fundos* extend west of the road to Caño Lindo along the east side of the Canaguá River at a distance of roughly 8.8 km up into the piedmont from the Panamerican highway.

VEGETATION: The terrace across which B48 extends is covered with pastures dotted with hardwood trees and palms.

ARCHAEOLOGICAL REMAINS: Caño Seco-complex ceramics can be seen poking out

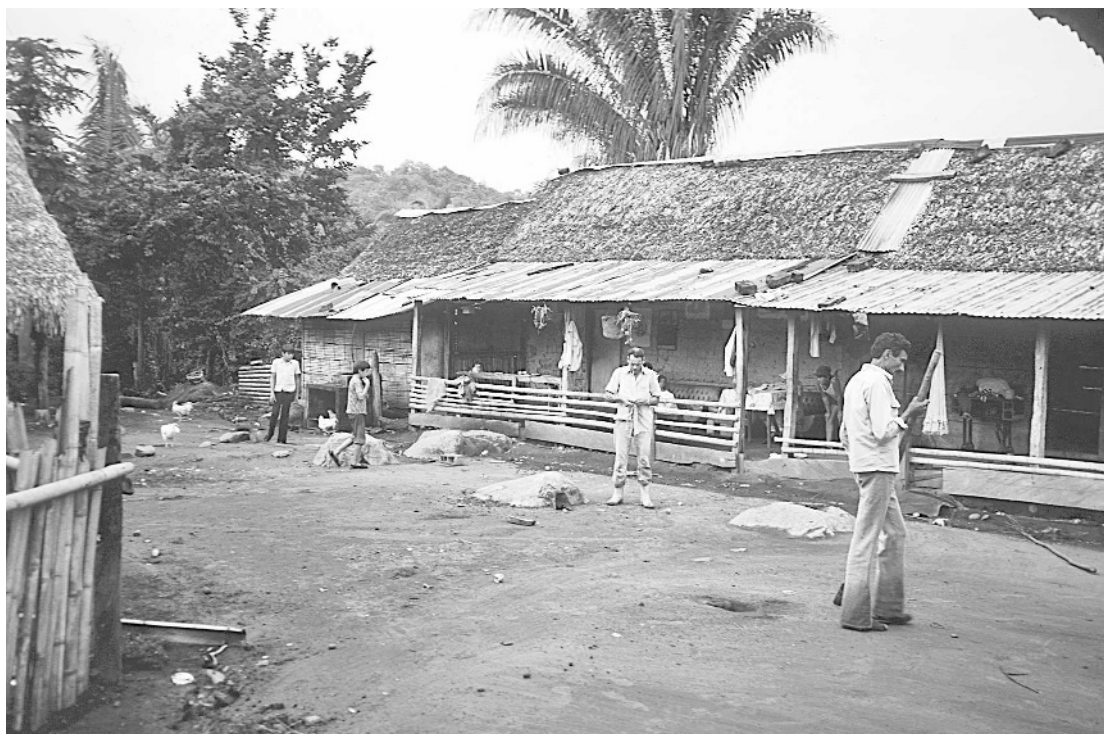


Fig. 4.221. Caño Seco-complex ceramics can be spotted poking out of the courtyard surface at Fundo El Palmar (B48) on a terrace overlooking the eastern bank of the upper Canaguá River.

of the courtyard surface of Fundo El Palmar (fig. 4.221). We also spotted them in the dirt road some 50 m from the terrace edge (B48-0052). We had received a report of ceramics turning up just below the ground surface in the courtyard of the house of Sr. Bustamante's daughter, whose house is some 200 m east and across a *caño* from Fundo El Palmar. Specifically, Sr. Bustamante recalled an excavation in the courtyard that encountered fragments of a ceramic vessel at 5 cm below the courtyard surface. No other material had ever been recovered by them there. We failed to see any artifactual remains in that courtyard during our follow-up visit.

We did not recover any Caño Seco-complex material from on top of the terrace at the neighboring Fundo El Cerrito, and the members of the Sánchez family there claimed that they had never encountered ceramics in their courtyard or anywhere on top of the terrace.

Rather, the Sánchezes reported finding ceramics eroding out of the southwestern slope of the terrace and along the trail down to the river, especially in the rainy season (figs. 4.222, 4.223). We surveyed the terrace slope and made a second surface collection along the trail down the terrace slope at Fundo El Cerrito (B48-0053), which yielded Gaván-complex ceramics eroding from sub-surface deposits along the terrace edge (table 4.1).

We checked all the boulders exposed along the terrace's edge at Fundo El Palmar and Fundo El Cerrito but saw no evidence of any carvings.

B48 is a multiple-component site made up of a Gaván-complex occupation that is less than 4 ha in area and known only from Fundo El Cerrito, and a Caño Seco-complex occupation that extends over at least 5 ha and perhaps as many as 8 ha of this broad terrace.

SITE MAP: None.



Fig. 4.222. View of boulder-lined terrace on which Fundo El Cerrito sits today and where a Gaván-complex habitation site lay (B48), facing east from *vega* below.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B48-0052 was made in the courtyard of Bartolo Pérez's Fundo El Palmar. Surface collection B48-0053 was made along the terrace edge at the neighboring Fundo El Cerrito, some 150 m to the north of Fundo El Palmar (table 4.1).

SITE SIZE AND CLASSIFICATION: A multiple-component site made up of a third-order, Gaván-complex habitation site (< 4 ha) and a 5–8 ha Caño Seco-complex habitation site.

DATES RECORDED: January 4 and 6, 1985.

B49

SITE NAME: Fundo La Parada.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site extends across the first alluvial terrace west of the upper Canaguá River at a distance of only 25–30 m from the river (figs. 4.2, 4.3). On this

broad *vega* some 2.5–3 km north of Caño Sucio, Gregorio Mora has his *fundo* and *bodega*. One reaches Fundo la Parada by way of the road to the *caserío* of San Francisco on the west side of the upper Canaguá River. Shortly after passing Sr. Navas's house (see B36), take the right fork in the road and cross the Caño Sucio. Traverse two red *portones* that demarcate José Contreras's *fundo* before descending to the broad *vega* dotted with palm trees (fig. 4.224) and crossing another red *portón* to enter Fundo La Parada (fig. 4.225).

VEGETATION: Most of the *vega* on which B49 extends is covered by pasture dotted with palm trees. The *fundo* house is surrounded by a plantain field and a manioc field (figs. 4.225, 4.226).

ARCHAEOLOGICAL REMAINS: Sr. Mora reported that right on the spot where he built his house and *bodega* some 25–30 m west of the river he finds ceramics just below the present-day ground surface. He



Fig. 4.223. Members of the Sánchez family at Fundo El Cerrito help us search for ceramics that are eroding out of the southwestern slope of the terrace.

took us behind his house, on the side facing the river, and pointed out the dense concentration of ceramics that were unearthed when he built the foundations for the house (fig. 4.226). We recognized the thick-walled Caño Seco-complex ceramics. But when we scraped the house mound's earthen bank with Sr. Briceño's machete, we also recovered thinner-walled Gaván-complex ceramics, including some sherds with red paint, in addition to abundant Caño Seco-complex ceramics (B49-0054) (table 4.1). We noted the presence of an oval ground-stone *metate* embedded in the stone foundations of the house, and our surface collection included a possible ground-stone artifact. At the neighboring house belonging to Gustavo García, we were shown a hollow figurine head and another hollow support or *adorno* (fig. 4.227). The occurrence of Gaván-complex ceramics here is supported by the Gaván-complex

occupation directly across the river at Fundo El Cerrito (B48).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B49-0054 is the sample of Caño Seco-complex and Gaván-complex ceramics that we recovered along the rear foundations of Sr. Mora's house at Fundo La Parada (table 4.1).

SITE SIZE AND CLASSIFICATION: A 5 ha multiple-component site made up of a Gaván-complex, third-order habitation site and a Caño Seco-complex habitation site.

DATE RECORDED: January 5, 1985.

B50

SITE NAME: Fundo Los Labreles.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site of Fundo Los Labreles is on the broad, boulder-studded



Fig. 4.224. View of the broad *vega* west of the upper Canaguá River on which Fundo La Parada (B49) extends, facing northwest.



Fig. 4.225. The house and *bodega* of Fundo La Parada owned by Gregorio Mora are engulfed by a plantain field and a manioc field on the east side of the road, facing northwest.



Fig. 4.226. Miguel Angel Briceño, comisario of Caño Lindo, helps to collect Caño Seco- and Gaván-complex ceramics along the foundations of the rear wall of Sr. Mora's house at Fundo La Parada (B49).

vega on the western side of the upper Canaguá River and across the river from where a tributary that drains the Mesa de Canaguá enters the river (fig. 4.3). This *vega* lies roughly 3.5 km northwest of Fundo La Parada (see B49) and is accessible by car only in the dry season. This was the northwesternmost alluvial fan of the upper Canaguá River valley that we surveyed, downstream from where the Canaguá River and Canaguacito River join (fig. 4.228). There are several *fundos* on the *vega*. One belongs to Estefana de Torres, and Fundo Los Labreles, owned by José Santiago Sánchez, lies to the northwest, just above the trail that crosses the *vega*. At the northwesternmost end of the *vega* on the river's west bank is a natural



Fig. 4.227. Hollow figurine head and hollow support or *adorno* recovered by the next-door neighbor, Gustavo García, at Fundo La Parada (B49).

source of asphalt, some 300 m from B50, which is known as La Mina de Aguascalientes (figs. 4.3, 4.228, 4.229, 4.230). East across the river and uphill along the bank of a *caño* are the widely known thermal springs, or *las aguas calientes* (fig. 4.3).

VEGETATION: The modern-day inhabitants of the *vega* across which B50 extends are cultivating manioc, sugarcane, and coffee. There is cleared pastureland, too.

ARCHAEOLOGICAL REMAINS: José Santiago Sánchez showed us a ceramic potstand that he had found in his sugarcane field on the edge of the *vega* above the river (fig. 4.232); the artifact now serves as a candle holder. We surveyed the coffee grove and the manioc field and recovered a small sample of Caño Seco-complex pottery (B50-0055). Sr. Sánchez reports finding sherds all over the *vega*, which extends over an area of 14 ha.

We also had a previous report of a petroglyph above Aguascalientes, but no one from Fundo Los Labreles knew its location.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B50-0055 consists of the few sherds we recovered from the coffee grove and



Fig. 4.228. View of *vega* on the western bank of the upper Canaguá River on which Fundo Los Labreles (B50) is located, facing north.

manioc field at Fundo Los Labreles (table 4.1).

SITE SIZE AND CLASSIFICATION: 10 ha; Caño Seco-complex habitation site.

ADDITIONAL INFORMATION: At the northwesternmost end of the *vega* on the river's west bank and some 300 m from B50 is a natural source of asphalt, which is known as La Mina de Aguascalientes (figs. 4.3, 4.229, 4.230). We visited the natural source of asphalt along the river at the *vega*'s northwesternmost end and collected a sample of the wet asphalt and a sample of fragments of dry asphalt along the trail uphill from the current source (figs. 4.230, 4.231). Asphalt was used as an adhesive in the production of marine-shell ornaments that have been recovered in funerary contexts at sites in the Quíbor Valley of the Boulevard Tradition, associated with radiocarbon dates that range between A.D. 145 and 575 (Vargas Arenas et al., 1997: 324–327). The use of asphalt was also reported

by the sixteenth-century chronicler Galeotto Cey as a sealant in the making of turtle-shell drums (Cey, 1995: 112; see also Wendt and Lu, 2006).

East across the river and uphill along the bank of a *caño* are the widely known thermal springs, or *las aguas calientes* (fig. 4.3).

DATE RECORDED: January 5, 1985.

B51

SITE NAME: Fundo Lechozote.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site of Fundo Lechozote lies on a *banco* in the middle llanos that extend between the Canaguá River and the Ticoporo River and at the southeastern end of the Sabana Lechozote (figs. 3.1, 4.233). Fundo Lechozote is owned by Don Francisco Grieco.

Site B51 lies 2 km southeast of the *fundo* house, some 500 m southwest of the Caño Guacharaca, and 200–250 m east of the dirt



Fig. 4.229. La Mina de Aguascalientes is a natural source of asphalt some 300 m north of Fundo Los Labreles (B50) on the upper Canaguá River's western bank.



Fig. 4.230. Close-up view of the natural source of asphalt at La Mina de Aguascalientes.

road that leads from Las Peñitas to the southeast, at a distance of roughly 30 km from Las Peñitas.

VEGETATION: Savanna grassland.

ARCHAEOLOGICAL REMAINS: We had received reports of two mound sites on Fundo Lechozote from Carlos Alberto Guzmán, who in 1983 was the *síndico procurador* of the municipal council of the district of Pedraza, and his assistant, Leonardo Obregón. In early January 1984, we had visited the neighboring Fundo El Diamante, owned by Dr. José Juan Aries Luzardo of Alto Barinas, and had been advised by the *encargado*, Ramón Ramírez, to return to visit the mound sites and causeways of Fundo El Diamante and Fundo Lechozote in February, when they were accessible (see B24).

In January 1985, we reached Fundo Lechozote, where the *encargado* (Sr. Daniel) reiterated that there were two mounds (“*cerritos*”) on Fundo Lechozote. One lay south of the *fundo* house along the road; the other, called Cerrito de los Giles, was more inaccessible.

Site B51 has two visible mounds. The principal mound is 7 m tall (fig. 4.234) and has an L-shaped configuration. The mound’s configuration may represent its original construction or may be due to recent disturbance with heavy machinery. We were able to collect a sample of Osoid ceramics from this mound (B51-0056). One hundred and fifty meters to the east lies a smaller, 2 m-tall mound.



Fig. 4.231. Uphill from the current source of asphalt we collected some fragments of dry asphalt.

We were not able to visit the other mound site or “*cerrito*”, which was still inaccessible and demanded the company of a *baquiano* (guide).

Sr. Daniel also described the Cerrito Molinero of Hato Buenos Aires, some “*tres leguas*” (i.e., 15 km) farther south (see fig. 4.235), which lies along the Ticoporo River. As we headed south from Fundo Lechozote, we traversed a 1 m-tall causeway at a distance of some 150 m from the main mound at Fundo Lechozote (B51). The causeway leads from the Ticoporo River



Fig. 4.232. Ceramic pot stand base from B50.



Fig. 4.233. View of the Sabana Lechozote from *vía* Las Peñitas near Fundo El Diamante and en route to Fundo Lechozote (B51).

and heads in a northeasterly direction toward the Caño Guacharaca. We failed to reach Hato Buenos Aires, owned by César Espinosa, where we had reports from the municipal authorities in Pedraza of a mound cut by the Ticoporo River, where painted ceramics with tripod supports and stone axes had been found (and given to Dr. García Miller, who lives on Avenida Sucre in Barinas City). Hato Buenos Aires is directly northwest and adjacent to Hato La Calzada. Adam Garson surveyed and test-excavated a non-mound site perched atop the 5–6 m-tall (in the dry season) bank of the Ticoporo River in 1976 and recovered Osoid and Caño Caroní-complex ceramics (Garson, 1980: 103–105, 137–141).

SITE MAP: None.

DISTURBANCE: The main mound may have been altered by bulldozing activities.

SURFACE-COLLECTION DATA: Surface collection B51-0056 is a sample of ceramics from the main mound (table 4.1).

SITE SIZE AND CLASSIFICATION: This mound site of unknown size is probably a second-order Osoid center linked by causeway to a regional center.

DATE RECORDED: January 7, 1985.

B52

SITE NAME: La Calentura.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B52 lies on the *vega* north of the Canaguá River and 200 m east of the Caño Mitiao Hondo in the forested Montaña El Chuponal (fig. 4.2). The Caño Pica Pico lies directly southeast and is the headwater of an oxbow (*madrevieja*) that extends to the south. The site extends across the slash-and-burn maize field of Renato Gudiño, an area called La Calentura, and extends to the northeast into the property of a Sr. Vidal.

VEGETATION: The site extends across a maize field (*conuco*) cleared and cultivated



Fig. 4.234. Main mound at B51, with members of the survey team near the top and at the base of the mound.



Fig. 4.235. On the road heading southeast across the middle *llanos* from Fundo Lechozote (B51) toward Hato Bueno Aires.

by means of traditional slash-and-burn methods in the forested Montaña El Chuponal.

ARCHAEOLOGICAL REMAINS: Renato Gudiño, who established Fundo La Fijanza, directly adjacent and to the northwest of Fundo El Gaván, many years ago, and who currently works for Lucio Laviano of Fundo El Gaván, took us to his maize field on the *vega*. His field is located to the northwest of his former house on top of a causeway (at a bearing of W 20°N from the house). In the field, Sr. Gudiño led us to a long ridge that rises 3–4 m in height, measures 15–20 m in width, and extends some 300 m at a bearing of N 15°E to the edge of his property before entering his neighbor's property. An arm of the ridge extends eastward. Sr. Gudiño reported seeing ceramics on the ridge at a depth of about 50 cm below the present-day ground surface. Sr. Gudiño recommended entering those adjacent properties to see some possible mounds on them by way of Tomás Silva's *fundo*, his neighbor to the north in an area called El Rincón del Mitiao. We did not see any ceramics on the ridge.

Given the long ridge's location on the broad alluvium north of the Canaguá River and east of the Caño Mitiao Hondo, its elongated configuration, and the possibility that more such mounds may exist in adjacent properties to the northeast, B52 may prove to be part of an area of drained fields, similar to B27 at La Tigra. Alternatively, if it is a single ridge that continues to the northeast, then it may be a segment of a causeway.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Sr. Gudiño reported seeing ceramics turn up in subsurface deposits on the ridge, but we did not spot any ceramics anywhere in the maize field and consequently have no surface collection. In this respect, B52 is similar to the drained fields of La Tigra (B27).

SITE SIZE AND CLASSIFICATION: 1.25 ha drawn on aerial photograph; a Gaván-complex habitation site, or a drained-fields site, or a causeway segment.

DATE RECORDED: January 8, 1985.

B53

SITE NAME: Fundo Brisas del Río.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B53 lies on the eastern edge of a *banco* overlooking the southwest bank of the Canaguá River (fig. 4.2). The site is located some 100 m southwest of the river. The site is situated on Fundo Brisas del Río, which is located on the northeast side of the paved road that leads from the Panamerican highway to Ciudad Bolivia, at a distance of 1 km from the highway. The site extends some 100 m east of the paved road to and from Ciudad Bolivia. Roberto Díaz is the owner of Fundo Brisas del Río.

VEGETATION: Pasture grassland and fallow fields.

ARCHAEOLOGICAL REMAINS: The *banco* features a fine-textured, dark-brown-black soil, which is in the process of being quarried by workmen and loaded onto a dump truck to sell (fig. 4.236). The workmen digging in the fallow field south of the *fundo* house reported that they have encountered ceramics in concentrations at a depth of about 40 cm below the present-day ground surface all over the 2 ha area they have been quarrying. The ceramics continue in the subsurface deposits down 50 cm or so.

We made a surface collection over the entire area and recovered Gaván-complex ceramics (B53-0057) (fig. 4.237). We also recovered a ground-stone artifact. We estimate that this non-mound Gaván-complex site extended over an area minimally of 2 ha, and as much as 3 ha.

SITE MAP: None.

DISTURBANCE: The exploitation of the *banco*'s topsoil for commercial purposes is exposing the subsurface deposits associated with the Gaván-complex occupation.

SURFACE-COLLECTION DATA: Surface collection B53-0057 was carried out in the area south of the *fundo* house where the quarrying operation was under way (table 4.1).

SITE SIZE AND CLASSIFICATION: 2–3 ha; third-order Gaván-complex site.

DATE RECORDED: July 10, 1985.



Fig. 4.236. The *banco* southwest of the Canaguá River on which B53 lies has a rich overburden of fertile soil that was in the process of being quarried and loaded onto the dump truck to sell. This photograph is taken facing east toward the river.

B54

SITE NAME: Caño Lindo.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B54 is located on the southern piedmont slope of Cerro La Arenosa northeast of the upper Canaguá River (fig. 4.3). The site is N 18°E across the dirt road to Caño Lindo from the *fundo* house of Carmelo Bustamante, which sits on a terrace overlooking the large *vega* northeast of the river. Sr. Bustamante's Fundo Caño Lindo begins at a red *portón* that traverses the dirt road to Caño Lindo, some 7.4 km from the Panamerican highway. A trail leads up across the high *vega* and up the piedmont slope for a distance of some 700 m (fig. 4.238).

VEGETATION: The forested slope has been cleared and is covered with *pasto*, dotted with palm trees.

ARCHAEOLOGICAL REMAINS: On our original stop at the *fundo* house in January 1985,

we asked the members of the Bustamante family about the two *metates* lying in the courtyard and were informed that one of them (fig. 4.239) had been brought down from the hillside. On a follow-up visit in July, Oswaldo Bustamante accompanied us to the piedmont ridge. The trail up the southern piedmont slope of Cerro La Arenosa traverses what appears to be an isolated household (fig. 4.238). A line of stone foundations and the oval *metate* found here are the only visible remains. We were not able to recover any ceramics from the *pasto*-covered ground surface anywhere on the slope. Given the occurrence of a Caño Seco-complex site (B58) down on the *vega*, we might guess that B54 pertains to the Caño Seco phase or later.

SITE MAP: None.

DISTURBANCE: A trail traverses the house foundations, and the entire ridgetop is suffering from erosion.

SURFACE-COLLECTION DATA: None.



Fig. 4.237. Surveying and surface collecting a field south of the *fundo* house at Fundo Brisas del Río (B53) where Gaván-complex ceramics turn up in the soil-quarry excavations over an area of 2 ha.

SITE SIZE AND CLASSIFICATION: 0.2 ha; isolated household of the Caño Seco complex?

DATES RECORDED: January 4 and July 11, 1985.

B55

SITE NAME: Fundo Campo Alegre.

OTHER SITE DESIGNATION: None.

SITE LOCATION: On a flat *meseta* (piedmont ridge) directly northeast and uphill from the terrace crossed by the road up the eastern side of Canaguá River to Caño Lindo on which B29 is situated (fig. 4.240). The site is located on Fundo Campo Alegre, owned by Alejandrina Mora, whose *fundo* house lies on the east side of the dirt road to Caño Lindo, 2.4 km from the Panamerican highway (see also B29). We proceeded northeast from Sra. Mora's house across a small *caño* and up onto the flat ridgetop some 400 m from the *fundo*

house of Fundo Los Limones on the west side of the road.

VEGETATION: Most of the ridgetop is covered with pasture grassland of the variety known as *pasto estrella*. Farther upslope lies a manioc field, and higher still on a steep slope is a maize field.

ARCHAEOLOGICAL REMAINS: The whole *metate* that sits on the front porch of Alejandrina Mora's house had been found on the *meseta* (fig. 4.241). The *metate* is oval in shape and measures 38 cm in length and 32 cm in width. Another whole *metate* lay by the post of a *ramada* erected on the ridgetop alongside a fence (figs. 4.240, 4.242). This second *metate* measures 50 cm in length and 40 cm in width. We surveyed the *meseta* and entered the manioc field but did not recover any ceramics. In view of the occurrence of a Caño Seco-complex habitation site (B29) on the alluvial terrace directly below and to the southwest, B55 may be an isolated



Fig. 4.238. Miguel Angel Briceño and Oswaldo Bustamante examining the line of stone foundations on the piedmont slope (B54) northeast of Fundo Caño Lindo down on the broad *vega* in the background (where B58 lies).



Fig. 4.239. Oval *metate* photographed in the courtyard of Fundo Caño Lindo, which the Bustamantes had found upslope at B54.

hamlet or household of the Caño Seco complex.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: 0.1 ha?; isolated household of the Caño Seco complex?

DATE RECORDED: July 11, 1985.

B56

SITE NAME: Fundo Las Palmeras.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B56 is located on a broad terrace overlooking the eastern *vega* of the upper Canaguá River on which Escuela Las Palmeras and Fundo Las Palmeras are situated (fig. 4.3). At a little over 4 km from the Panamerican highway on the dirt road to Caño Lindo



Fig. 4.240. Flat *meseta* on which B55 situated. One of the *metates* from this site lies by a post of the ramada.

turn off the road and head west toward the river, crossing a *falso* and passing the school before reaching the *fundo* house that is located on the western edge of the alluvial terrace (fig. 4.243).

VEGETATION: Pastures dotted with palm trees.

ARCHAEOLOGICAL REMAINS: We surveyed the terrace on which the school and the *fundo* house are situated and the lower *vega* (fig. 4.244). In the trail cuts and eroding exposed areas along the western edge and slope of the terrace we recovered some Caño Seco-complex ceramics (B56-0058). Our survey of the schoolyard did not yield any ceramics.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B56-0058 is the sample of ceramics recovered along the western edge of the broad terrace on which site B56 extends.

SITE SIZE AND CLASSIFICATION: 8 ha; Caño Seco-complex habitation site.

DATE RECORDED: July 11, 1985.

B57

SITE NAME: Fundo El Diamante.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B57 occupies an alluvial terrace east of the upper Canaguá River and adjacent piedmont spur directly to the east of the *fundo* house, at the base of Cerro La Cuchilla (fig. 4.3). Some 0.7 km by trail beyond (northwest of) the end of the dirt road serving the eastern side of the upper Canaguá River valley is Fundo El Diamante, owned by Rufo Velandria. The trail crosses two *falsos* and skirts the riverbank before reaching the *fundo* house that sits on a small alluvial terrace, at a total distance of some 9.5 km from the Panamerican



Fig. 4.241. Whole *metate* from B55 that is on the front porch of Alejandrina Mora's house at Fundo Campo Alegre. The oval *metate* measures 38 cm long and 32 cm wide.



Fig. 4.242. Second whole *metate* from B55 that lies by a post of the ramada erected on the ridgetop. The oval *metate* measures 50 cm long and 40 cm wide.



Fig. 4.243. View of the broad terrace on which Fundo Las Palmeras (B56) lies from the entry road, facing northwest.



Fig. 4.244. View southeast across the eastern lower *vega* of the upper Canaguá River toward the broad terrace on which the site of B56 (Fundo las Palmeras) extends.

highway (fig. 4.245). The foothills of Cerro La Cuchilla rise to the east.

VEGETATION: A plantain garden, vegetable garden, and coffee grove have been planted on the terrace occupied by Fundo El Diamante, but the piedmont ridge to the east and uphill is forested.

ARCHAEOLOGICAL REMAINS: An oval *metate* (fig. 4.246) lay in the courtyard of the *fundo* house, which the Velandrias had unearthed in their plantain garden (*platanal*). The *metate* measures 42 cm long and 36 cm wide. We surveyed the entire terrace on which the house and its gardens stand and collected a handful of ceramics from the vegetable garden and the adjacent coffee grove (B57-0059). The Velandrias reported seeing another *metate* on top of the steep piedmont ridge directly east of the alluvial terrace on which the house is situated. A single nondiagnostic body sherd was recorded for B57-0059 as pertaining

either to the Gaván complex or the Chuponal complex (table 4.1).

We interpret site B57 as consisting of two isolated households of either the Gaván complex or Chuponal complex (or later in time). One household lay on the terrace where the *fundo* house stands today; a second household lay on the piedmont ridge directly east and upslope of the modern-day house.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B57-0059 collected from alluvial terrace on which *fundo* house stands (table 4.1).

SITE SIZE AND CLASSIFICATION: 0.2 ha?; two isolated households of uncertain time period.

ADDITIONAL INFORMATION: Rufo Velandria and his family are originally from the Andean state of Táchira. They have established an extraordinarily self-sufficient



Fig. 4.245. Rufo Velandria and his wife at Fundo El Diamante (B57) in the upper Canaguá River. A Gaván-complex or historic-period site (B57) lay on the same alluvial terrace.

household on the eastern bank of the upper Canaguá River. Their traditional, tidy house and courtyard contain an array of useful and ornamental plants. We noted many traditional features and artifacts still being made and used by members of the household. Wooden mortars and pestles of various sizes stand alongside an oven for baking bread. Mud bricks lay drying under an ancillary *ramada*. Grain bins, baskets, gourd containers, and brooms were among the artifacts they showed us and allowed us to photograph (figs. 4.247, 4.248).

DATE RECORDED: July 12, 1985.

B58

SITE NAME: Fundo Caño Lindo.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B58 is located on a high alluvial terrace overlooking a large expanse of *vega* on the eastern bank of the upper



Fig. 4.246. Whole *metate* recovered from the *platanal* at Fundo El Diamante (B57).

Canaguá River (figs. 4.3, 4.238, 4.249). The *fundo* house of Carmelo Bustamante occupies the terrace today. Sr. Bustamante's Fundo Caño Lindo begins at a red *portón* that traverses the dirt road to Caño Lindo, some 7.4 km from the Panamerican highway. Cross two more red *portones* and traverse the *vega* to reach the *fundo* house (fig. 4.250).

VEGETATION: Northwest of the *fundo* house are a plantain field and a coffee grove. A large area of the *vega* to the southwest is under the cultivation of plantains, manioc, and sugarcane (fig. 4.250). The remainder of the low and high alluvium is pasture.

ARCHAEOLOGICAL REMAINS: We first visited Fundo Caño Lindo in early January 1985 and photographed two *metates* in the courtyard of the Bustamantes' house. Sra. Bustamante told us that one of the *metates* had been found down on the *vega* (fig. 4.251), and the other had been brought down from the hillside (B54) (fig. 4.239). A son reported recovering ceramics on the *vega* while working in the fields. We surveyed the *platanal* but did not see any ceramics (fig. 4.250).

When we returned in July 1985 and located site B54 uphill to the northeast, the Bustamantes showed us three Caño Seco-complex sherds from the *vega* that they had saved for us. Unfortunately, the son who had collected them and knew their provenience was not home. The next day we returned to continue surveying Fundo Caño Lindo, and María Andueza recovered some Caño Seco-complex ceramics from the courtyard of the *fundo* house (B58-0060). The terrace on which the *fundo* house lies extends over an area of about 1 ha. But since we know that the *metate* had been recovered from the *platanal* on the *vega* to the west toward the river (fig. 4.251), and we also had reports of ceramics being found in the fields on the *vega*, the site probably extended over a portion of the *vega*. We estimated that the site extended over an area of 2–5 ha. If contemporaneous with B58, site B54 might have been an isolated household of this village site closer to the river (fig. 4.249).



Fig. 4.247. Some of the baskets for seed and root crops made by the members of Velandria family at Fundo El Diamante (B57).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B58-0060 is the sample of ceramics collected in the

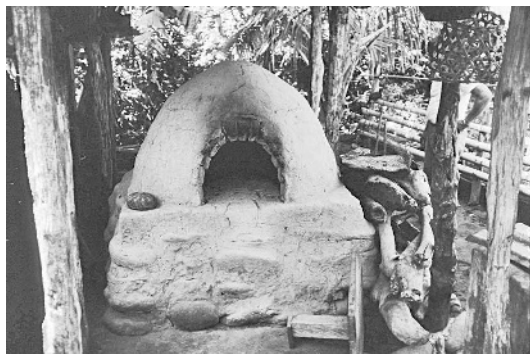


Fig. 4.248. Oven for baking bread at Fundo el Diamante (B57), whose inhabitants are originally from the Andean state of Táchira.

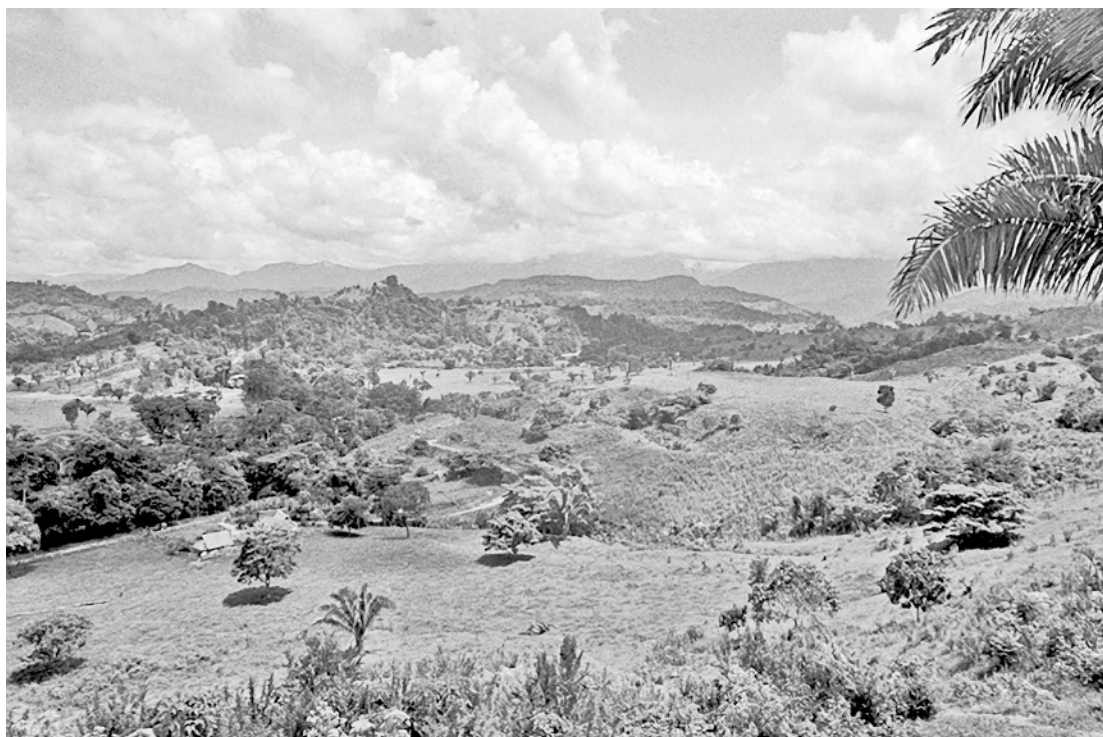


Fig. 4.249. Distant view of Fundo Caño Lindo (B58) in the center of this photograph taken facing west-northwest. A major bend in the upper Canaguá River has resulted in broad bands of alluvium on both sides of the forest-lined river.



Fig. 4.250. This photograph of the *fundo* house of Fundo Caño Lindo on the high alluvial terrace is taken from the lower *vega* where a plantain field extends, facing north-northwest. A Caño Seco-complex habitation site occupied the alluvial terrace, and a portion of the *vega* now covered by the plantain field.

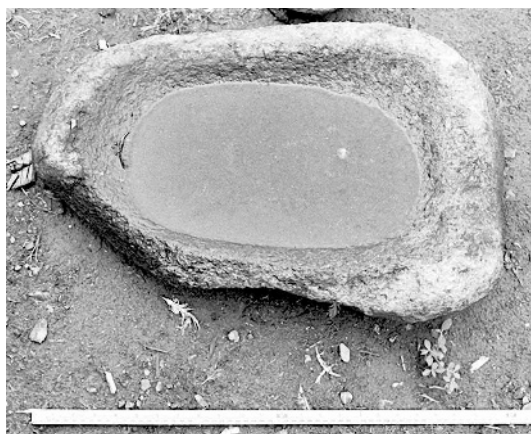


Fig. 4.251. This *metate* was recovered in the *platanal* at Fundo Caño Lindo (B58).

courtyard of the *fundo* house on the terrace (table 4.1).

SITE SIZE AND CLASSIFICATION: 2–5 ha; Caño Seco-complex habitation site.

DATES RECORDED: January 4 and 6, 1985; July 11 and 12, 1985.

B59

SITE NAME: Fundo Bello Monte.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B59 lies on a *banco* some 300 m southwest of the Canaguá River by the name of Banco El Jobo (fig. 4.3). Owned by the Briceño family, Fundo Bello Monte extends along the eastern side of the paved *vía* leading from the Panamerican highway to Ciudad Bolivia, roughly 8 km from the highway and adjacent to Fundo Acarigua. The area is referred to as Banco El Jobo. The site extends across recently plowed fields from the yellow-and-white *fundo* house that is graced by a big *samán* tree (*Pithecellobium saman*) northeast toward the river (fig. 4.252).

VEGETATION: The fields on Fundo Bello Monte had been recently plowed, so no cultigens or vegetation other than the big *samán* tree were visible.

ARCHAEOLOGICAL REMAINS: Although the Briceño family had not seen ceramics in their fields at Fundo Bello Monte, they gave us permission to survey their prop-

erty. The few ceramics we recovered lay in the fields northeast of the *fundo* house to the fence line at a distance of 200–300 m from the river. We noticed lighter-colored areas that stood out from the otherwise homogeneous dark-brown soil on the *banco*, which may represent the remains of *bajareque* structures. The few ceramics we collected were sparsely distributed and may have been associated with some of these vestiges of possible structures (B59-0061). Aside from the base of a ceramic vessel that is diagnostic of the Caño Seco complex, the limited ceramic sample was difficult to characterize.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B59-0061 is the small sample of ceramics collected in the plowed fields northeast of the *fundo* house (table 4.1).

SITE SIZE AND CLASSIFICATION: 2.5 ha; Caño Seco-complex habitation site?

DATE RECORDED: July 12, 1985.

B60

SITE NAME: Fundo El Corralito.

OTHER SITE DESIGNATION: Fundo Los Cafetales.

SITE LOCATION: B60 is located on the edge of a *banco* some 4–5 m above the southwestern *vega* of the Canaguá River (figs. 4.2, 4.3). The site extends across the fields to the north and south of the road that leads to the *fundo* house of Fundo El Corralito from the paved *vía* to Ciudad Bolivia. The *fundo* house is aqua in color and has a tower with a water tank in front. Fundo El Corralito lies on the northeast side of the paved *vía* from the Panamerican highway to Ciudad Bolivia at a distance of 3.9 km from the highway. We entered through a metal gate at the *vía* and drove east to the *fundo* house. A sand and gravel quarry by the name of Vincler lies immediately adjacent and north of the site.

VEGETATION: There are sorghum fields on the *banco*. The *vega* on the southwestern bank of the Canaguá River is a pasture.



Fig. 4.252. Surveying the recently plowed fields at Fundo Bello Monte (B59). We noticed lighter-colored areas on the surface that stood out from the otherwise dark-brown soil; these may represent the remains of structures of the Caño Seco-complex settlement.

ARCHAEOLOGICAL REMAINS: Sr. Hector at Fundo Aricagua, farther to the southeast toward Ciudad Bolivia along the same northeastern side of the paved *vía*, accompanied us to Fundo El Corralito, where he recalled finding ceramics when he installed fence posts on that property. He led us to the sprouting sorghum field on the north side of the road to the *fundo* house and along the edge of the *banco*. The topsoil on the *banco* is a fine, dark-brown-black soil seen elsewhere on this *banco* at B59. We collected ceramics along the edge of this field on the *banco* and south across the road into another field that had been recently plowed and planted in sorghum over a distance of some 500 m and some 150 m from the edge of the *banco* to the west. There was a moderately dense distribution of ceramics on the surface. The ceramics were the most numerous along the edge of the *banco* near the fence immedi-

ately north of the *fundo* house. The ceramics in our surface collection (B60-0062) are predominantly of the Caño Seco complex, but there were also some Gaván-complex ceramics and possibly some colonial-period or more recent ceramics. The surface collection included a figurine fragment (fig. 4.253) and some ground-stone artifacts (table 4.1).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B60-0062 is the collection from the fields to the north and south of the road to the *fundo* house (table 4.1).

SITE SIZE AND CLASSIFICATION: 3.75 ha drawn in on aerial photograph (a minimal estimate, since we estimated an overall area of 7–8 ha); a habitation site of the Gaván and Caño Seco complexes.

DATE RECORDED: July 16, 1985.

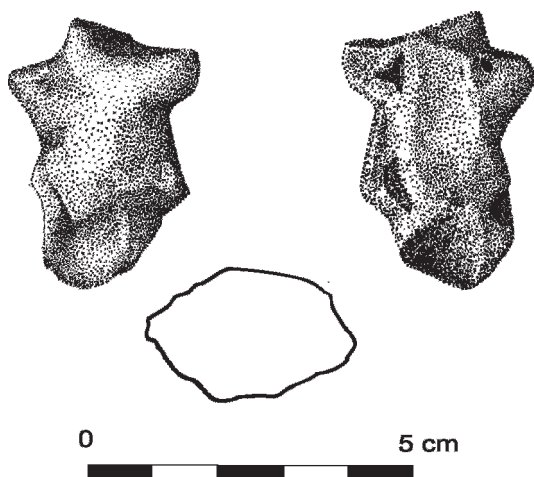


Fig. 4.253. Ceramic figurine fragment recovered at Fundo El Corralito (B60-0062).

B61

SITE NAME: Banco El Jobo.

OTHER SITE DESIGNATION: Las Monjas.

SITE LOCATION: B61 is located on a *banco* west of Caño El Burro in an area duly known as Banco El Jobo (fig. 3.1). After crossing Caño El Burro, the old road from Ciudad Bolivia to San Cristóbal (by way of El Tesoro) ascends the *banco* some 150 m after and west of a junction of three roads (fig. 4.254).

VEGETATION: The road is lined with *jobo* (*Spondias lutea*) trees (Pittier, 1970: 265). Many manioc, maize, and plantain fields are cultivated in the rich soil on the *banco*.

ARCHAEOLOGICAL REMAINS: Caño Seco-complex ceramics are visible on the surface of the *banco* along the road in the dark fine brown-black soil that is characteristic of this area. In the road cut we noticed that the ceramics appear at about 20–30 cm below the top surface of the *ban-*



Fig. 4.254. The old road from Ciudad Bolivia to San Cristóbal by way of El Tesoro climbs the *banco* on which the site of Banco El Jobo (B61) lies. The road is lined with *jobo* (*Spondias lutea*) trees (Pittier, 1970: 285).



Fig. 4.255. Collecting Caño Seco-complex ceramics from the backdirt of the post holes for the barbed-wire fences that flank the road at Banco El Jobo (B61).

co. Although the sherd density is moderate to dense, the greatest density of sherds came from the backdirt of the recently excavated holes for fence posts (fig. 4.255). This site features some of the heaviest sherd density we encountered during the survey (B61-0063). We also collected ground-stone artifacts. The site extends to the edge of the *banco* some 200 m to the west-northwest, over an estimated area of 4–5 ha.

It is possible that the road traversing the site makes use of a pre-Hispanic causeway that we detected along the edge of the same *banco* only 1 km to the north at the mound site of Los Morritos (see B2). If so, then we might expect to find Osoid ceramics at Banco El Jobo in subsurface deposits, as we noted in our field notes. The ceramic analysis recorded only Caño Seco-complex ceramics in surface collection B61-0063.

SITE MAP: None.

DISTURBANCE: The site is traversed by the old road, which is still heavily traveled.

SURFACE-COLLECTION DATA: Surface collection B61-0063 (table 4.1).

SITE SIZE AND CLASSIFICATION: 3.75 ha drawn in on aerial photograph (but may extend over as much 5 ha); Caño Seco-complex habitation site.

DATE RECORDED: July 16, 1985.

B62

SITE NAME: Fundo Los Mangos.

OTHER SITE DESIGNATION: La Quinta.

SITE LOCATION: The site lies on a 2 m-tall *banco* some 500 m south of the Canaguá River (fig. 4.2). It lies on Fundo Los Mangos in the community of La Quinta, some 1.6 km southeast from the terminus of the paved road in Ciudad Bolivia. Fundo Los Mangos extends on the northeast side of *via* Las Peñitas; a metal sign painted blue with orange letters marks the entrance. The reported site lies 400 m northeast (N 50°E) of the *fundo* house, a white-and-blue concrete



Fig. 4.256. Heading toward the edge of the *banco* at Fundo Los Mangos to reconnoiter a possible third-order Gaván-complex settlement (B62).

structure with ancillary wattle structures with thatch roofs.

VEGETATION: The *banco* is grassland pasture, and the broad *vega* to the north had tall maize fields and dense manioc gardens.

ARCHAEOLOGICAL REMAINS: Victor Ramírez led us from the *fundo* house northeast on a trail to the edge of the *banco* (fig. 4.256), and down onto the *vega*, before turning south and continuing parallel to a fence line. We crossed a *falso*, ascended a 2 m-tall rise, and were shown the fence post (four fence posts beyond the *falso*) (fig. 4.257) where a *metate* fragment and a large sherd reportedly had been encountered during the excavation of the fence-post hole at a depth of 25 cm. Inside the fence lay a dense manioc garden. There were no remains visible on the densely covered ground surface or path. Based only on this information, we decided to assign this reported site a number in view of the

likelihood of its being a third-order Gaván-complex site (or a Caño Seco-complex habitation site).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size for this possible third-order Gaván-complex (or Caño Seco-complex) settlement.

DATE RECORDED: July 17, 1985.

B63

SITE NAME: Fundo La Providencia.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site of Fundo La Providencia is on a 1.5 m-tall rise above the savanna that until recently had been a forested *mata* (fig. 4.258). The site would lie at the interface of the Sabana Guasimal and the gallery forest, the Montaña El Chuponal, which extends southwest of the



Fig. 4.257. Victor Ramírez points out the fence post where a large sherd and *metate* associated with the third-order site of B62 had been reportedly encountered.

Canaguá River, between 1 km and 1.5 km south of the river (fig. 4.3). Fundo La Providencia is a large (1,500 ha) *fundo* owned by the Díaz family. A metal sign marks the turnoff northeast from the *vía* Las Peñitas, some 12.5 km southeast of the southeastern terminus of the paved road in Ciudad Bolivia. After crossing two metal *portones*, one reaches the impressive *fundo* house, with its ancillary tractor sheds, corrals, and windmill. The site is located some 1,200 m due east of the *fundo* house, across a metal *falso* and roughly 1–1.5 km from the river.

VEGETATION: The natural rise had until recently been a forested *mata*, which had been cleared by the workers at Fundo La Providencia to plant maize, manioc, and *topochos* (*Musa paradisiaca sapientum*) (Zucchi, 1975: 19) in a rich dark-brown soil (fig. 4.258). Savanna grasslands extend in all directions, dotted with *matas*.

ARCHAEOLOGICAL REMAINS: Armando Jiménez, who lives next door to Fundo Los Mangos (B62), had told us about clearing the *mata* at Fundo La Providencia and finding sherds in the fence-post holes at a depth of two *cuartas* or spans of the hand (30–40 cm) below the ground surface (fig. 3.3). A hollow figurine fragment was also recovered and was left on top of a fence post. When we arrived at Fundo La Providencia, Juan Pío, the workman who had supervised the clearing of the *mata* and the fencing operation that had yielded the subsurface ceramics, was busy fumigating, but he gave the boy accompanying us directions to the fenced-in *conuco*.

Our surface collection from the tractor-plowed maize and *yuca* field (B63-0064) yielded a moderately dense distribution of Caño Seco ceramics, burned daub, and chipped stone. The field extends over 1 ha, and Juan Pío reported seeing ceramics be-



Fig. 4.258. Our field vehicle is parked by the maize and manioc field created by clearing a *mata* where site B63 lay. This photograph is taken facing south across the Sabana Guasimal.

yond the field, so we estimate that the site extends over a minimum of 2 ha and perhaps as many as 4 ha.

Juan Pío told us of another site on Fundo La Providencia to the northeast on the riverbank, where he had recovered ceramics, including a figurine and large vessel fragment (see B46). The site is not accessible in the rainy season, but we marked its approximate location on the topographic map, at a bearing of N 14°E from B63 (fig. 4.2). The site on the riverbank would lie directly south across the Canaguá River from Fundo La Fe, where we also received a report of ceramics on the riverbed in the dry season (see B25) (fig. 4.2).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B63-0064 was made in the maize and manioc field and included burned daub and chipped stone along with Caño Seco ceramics (table 4.1).

SITE SIZE AND CLASSIFICATION: 2–4 ha; Caño Seco-complex habitation site.

DATE RECORDED: July 17, 1985.

B64

SITE NAME: Fundo de los Méndez.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site is situated on a *banco* to the southwest of the Canaguá River and at the northwestern end of the Sabana El Romereño, also designated Sabana de Corocito, southeast of Ciudad Bolívar and some 0.6 km southeast of the *caserío* of Las Peñitas (figs. 4.2, 4.5). The site lies at the northwestern end of the large Fundo de los Méndez (fig. 4.259). It lies in a pasture directly northeast of the *vía* Las Peñitas and extends southwest across the *vía*, as well. A solitary 5 m-tall *corozo* palm tree on the northeast side of the *vía* and immediately inside the barbed-wire



Fig. 4.259. A member of the survey team stands on top of the low mound at Fundo de los Méndez (B64) and another at its western base. The *vía* Las Peñitas runs along the left side of photograph, taken facing west.

fence marks the relative location of the low mound in the pasture (fig. 4.260).

VEGETATION: Savanna grasslands dotted with forested *matas*, demarcated by pastures.

ARCHAEOLOGICAL REMAINS: Some 10–12 m northeast of the *vía* Las Peñitas lies a low mound with approximate dimensions of 20 m by 20 m at its base. The mound rises 50 cm above the surrounding pasture. The low mound rests on a *banco* that extends to the east for a distance of some 300 m and that is roughly 150 m wide. We also determined that the *banco* extends on the southwest side of the *vía* for a distance of at least 50 m. The site is oriented roughly N 20°W. There are natural depressions on the north, south, and east sides of the *banco*.

Although the dense grass cover prevents archaeological debris from being readily visible on the surface, we recovered a few

sherds in the road cut and along the trails that traverse the *potrero* on the northeast side of the *vía*. We also recovered Gaván-complex ceramics from a small probe we excavated on top of the low mound (fig. 4.260); at a depth of 25 cm below the grassy surface we began to recover ceramics in a fine dark-brown deposit. We continued recovering ceramics (B64-0065) down to some 40 cm below the ground surface, at which point we stopped and backfilled the hole, having determined that the low mound was a cultural feature. The low mound may represent a large house mound. We estimated that the site extended over an area of roughly 350 m by 150 m.

Driving past B64 on *vía* Las Peñitas in April 1986, we noticed a tractor plowing the pasture on the northeast side of the *vía*. We stopped and asked the tractor driver's permission to survey the pasture and make another surface collection (B64-



Fig. 4.260. Recovering Gaván-phase (Osoid) sherds from a probe into the surface of the low mound at Fundo de los Méndez (B64) at a depth of 25–40 cm below the ground surface.

0100). This second surface collection of the plowed surface of B64 yielded a good sample of Gaván-complex ceramics, along with burned daub, chipped stone, and polished-greenstone artifacts (table 4.1). We noted that the ceramics at B64 were made of a different paste type from Gaván-complex ceramics and that they included some rim forms that we were not familiar with and ceramics with red-painted exterior surfaces. It is highly possible that B64 represents a second- or third-order settlement associated with a distinct chiefly polity in this sector of the *llanos*. Red-painted ceramics were also collected at the mound site of Los Morritos (B2) to the northwest; a detailed comparison of the ceramic assemblages from the Gaván-phase (Osoid) sites west of the Canaguá River may support this proposition. On this second visit to B64 we enlarged the estimated site area to 8 ha.

During the second visit to B64 we noted a possible house mound that was character-

ized by a slight rise, remains of white plaster or whitewashed daub, a cobble-and-mortar post or pillar, and a single glazed sherd. There may also be a colonial-period occupation here.

SITE MAP: We drew a sketch map in our field notes.

DISTURBANCE: Continual tractor plowing of the pasture across which the site extends, and *vía* Las Peñitas traverses the southwestern end of the *banco* on which B64 lies (fig. 4.259).

SURFACE-COLLECTION DATA: Surface collection B64-0065 is the sample of sherds from the road cut and the probe that we excavated with a machete and trowel in the trail that crosses the low mound during our original visit. Surface collection B64-0100 is the collection made in the plowed pasture during our second visit (table 4.1).

SITE SIZE AND CLASSIFICATION: 5 ha drawn on aerial photograph, but the site could extend over as many as 8 ha; a second- or



Fig. 4.261. View of the bank of the former course of the Canaguá River on which the Caño Seco-complex site of El Almacén (B65) lay, facing east-southeast.

third-order, Gaván-phase Osoid settlement. There are some surface indications of a colonial-period (Chuponal-complex?) occupation, as well.

DATES RECORDED: July 18, 1985; April 29, 1986.

B65

SITE NAME: El Almacén.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B65 lies on the *vega* on the southwestern bank of the Canaguá River in the *caserío* of Las Peñitas (fig. 4.3). The site extends along the bank of an oxbow course (*madrevieja*) that was the actual river course in the 1920s but that today lies 100–180 m from the river (figs. 4.261, 4.262) and dries up in the dry season. The site lies some 500 m from the house of José Pereira in Las Peñitas at a bearing of N 20°E. The site's name comes from the fact that many years ago large dugout canoes called *bongos* navigated up the Canaguá

River to this bank, probably to provision or to obtain provisions from a storehouse here. There is a *laguna* some 150 m west of the bank that has water throughout the year.

VEGETATION: Most of the *vega* occupied by B65 is fallow pasture with waist-high *monte*. Two maize fields lie at the site's eastern extent along the bank of the *madrevieja* (fig. 4.262). The bed of the *madrevieja* is covered with aquatic vegetation, fallen trees, and other vegetation characteristic of *esteros*.

ARCHAEOLOGICAL REMAINS: Martín Fernández led us from the house of José Pereira some 500 m to the edge of the *vega* on a former course of the Canaguá River. Along the bank of the *madrevieja* over a distance of some 550 m we found Caño Seco ceramics, burned daub, chipped stone, and ground-stone artifacts at a depth of 40 cm below the present-day ground surface in a fine dark-brown deposit (fig. 4.263). We also recovered ceramics from the



Fig. 4.262. The eastern extent of site B65 lies in two maize fields along the former riverbank that are in the background of this photograph, taken facing east.

banks of a *laguna* about 150 m to the west of the bank.

Therefore, we estimate that the site extended along the *madrevieja* bank for a distance of at least 550 m and reached some 150 m in width.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B65-0066 from the bank of the *madrevieja* and the edges of the *laguna* consisted of Caño Seco ceramics, chipped stone, ground stone, and burned daub (table 4.1).

SITE SIZE AND CLASSIFICATION: We drew 4.4 ha on the aerial photograph, but the site may extend over as many as 8 ha; Caño Seco-complex habitation site.

DATE RECORDED: July 18, 1985.

B66

SITE NAME: Los Higuerones.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site is located on a *banco* overlooking a *bajo* a little less than 1 km east of the Canaguá River in Chuponal (fig. 4.2). The *bajo* may represent an old oxbow formation. The site is on Fundo Los Higuerones, approximately 2.8 km down the old road to Chuponal from the Panamerican highway, on the northeast side of the road after the road crosses a *caño* over a concrete bridge. The turnoff from the highway is directly east of the bridge over the river and the gas station. The owner of Fundo Los Higuerones is Guillermo Cadena. The site is situated about 150 m from the entrance to Sr. Cadena's *fundo* at a bearing of N 20°E.

VEGETATION: Sr. Cadena informed us that while manioc, cacao, and coffee are cultivated at Fundo Los Higuerones, the *fundo* is principally a cattle ranch.

ARCHAEOLOGICAL REMAINS: We had learned about site B66 from a brother of Fundo Los Higuerones's owner, Simón Cadena, who lives 1.1 km to the north-



Fig. 4.263. Martín Fernández helps us collect a sample of artifacts from the former riverbank (B65) at a depth of 40 cm below the present ground surface. This photograph was taken facing east-northeast.

west at Fundo La Esperanza along the same old road to Chuponal. During our visit and survey of that property, Simón Cadena's wife had shown us a *metate* that came from Los Higuerones (fig. 4.264). She also informed us that ceramics had been recovered at Los Higuerones.

Guillermo Cadena at Fundo Los Higuerones accompanied us to the *jagüey*, about 150 m northeast of the entrance to the farm at a bearing of N 20°E (fig. 4.265). He remembers recovering a ceramic jar at a depth of about 1.50 m during the excavation of a large hole for the *jagüey* here. Unfortunately, the ceramic jar had since been lost. The *metate* that we had seen and photographed up the road at Simón Cadena's Fundo La Esperanza (fig. 4.264) had been

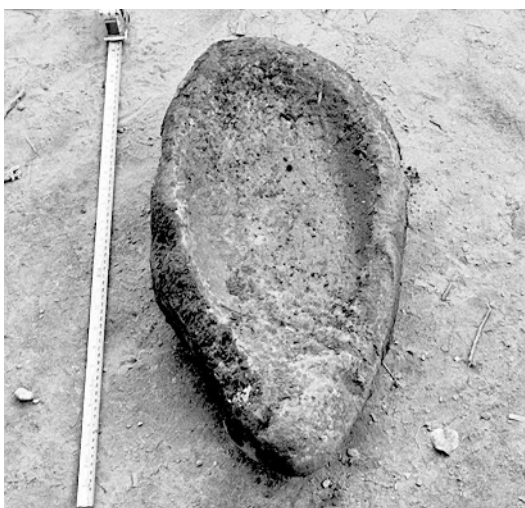


Fig. 4.264. Oval *metate* from B66, Fundo Los Higuerones, which we photographed up the road at Fundo La Esperanza. The *metate* measures 60 cm long and 30 cm wide.

unearthed from a fence-post hole associated with the fence that lies less than 10 m from the *jagüey* (fig. 4.265). We searched the area but failed to recover any surface remains.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site-size estimate; a third-order, Gaván-complex habitation site?

DATE RECORDED: July 23, 1985.

B67

SITE NAME: Los Caños.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B67 lies on a *banquito* alongside an unnamed small *caño* in the broken relief that constitutes the Chuponal area east of the Canaguá River (figs. 4.2, 4.266). The site lies on Fundo Los Caños, owned by Horacio Zambrán, on the northeast side of the old road to Chuponal at approximately 3.5 km from the Panamerican highway.

VEGETATION: The *banco* is largely covered with pasture grassland, but there are manioc and maize fields along the bank of the *caño*.



Fig. 4.265. María Andueza G. looks for sherds with Guillermo Cadena near the *jagüey* at Fundo Los Higuerones (B66). Behind them runs the fence where the *metate* was unearthed.

ARCHAEOLOGICAL REMAINS: Gaván-complex sherds were spotted in the road leading to the *fundo* house from the old road to Chuponal (fig. 4.267). We searched the tilled fields of manioc and maize along the *caño* but failed to recover any sherds. We also searched the patio of the *fundo* house, to no avail. The ceramics collected came from the road (B67-0069). It is probable that the sherds collected in the roadway came from subsurface deposits that were brought to the surface during the excavation of the fence-post holes that line both sides of the roadway.

The site's size is difficult to estimate, but on the basis of the distribution of sherds along the length of the roadway, it is likely that the entire *banquito* was occupied in the Gaván phase by a third-order settlement.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B67-0069 is the sample of the

sherds collected the length of the roadway to the *fundo* house (table 4.1). In the lab, the eight nondiagnostic sherds in the sample were classified as pertaining to the Curbatí complex. Given the site's location and our appraisal of the ceramics in the field, for the time being we will consider B67 a Gaván-complex occupation.

SITE SIZE AND CLASSIFICATION: 0.625 ha drawn on aerial photograph, but it is likely that the entire *banquito* may have been occupied, making the site-size estimate on the order of 2–3 ha; third-order Gaván-complex site.

DATE RECORDED: July 23, 1985.

B68

SITE NAME: Los Médanos.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B68 is situated on a low *banco* in Chuponal west of the Caño Mirí, less than 100 m east of an unnamed *caño*



Fig. 4.266. The site of B67 sits atop the small *banco* flanking the *caño* that can be seen in this photograph taken facing southeast.



Fig. 4.267. We collected Gaván-complex sherds in the roadway leading from the old road southeast to the *fundo* house at Fundo Los Caños (B67).



Fig. 4.268. At Fundo Los Médanos (B68), a Caño Seco-complex habitation site extended across the recently cleared and plowed *banco* in this photograph, taken facing northwest.

and roughly 750 m northeast of the Canaguá River (figs. 4.3, 4.268). A small *vega* extends between the northern end of the *banco* and the unnamed *caño* to the west. The site lies on Fundo Los Médanos owned by Jesús Briceño, on the west side of the old road to Chuponal 4.4 km from the Pan-American highway. Directly east of the site is a small schoolhouse, also on the west side of the road.

VEGETATION: A gallery forest lines the *caño* on the site's western edge, with a cluster of several large palm trees and bamboo trees at a point where the *caño* bends eastward. The *banco* on which the site extends had been recently cleared and plowed in preparation for planting *pasto*.

ARCHAEOLOGICAL REMAINS: Sr. Briceño had found sherds while clearing and plowing the *banco* shortly before our visit. Our surface survey of the recently plowed *banco*

(fig. 4.269) yielded Caño Seco ceramics (B68-0070). We estimated that the site extends over some 400 m in a north-south direction and 100 m in an east-west direction.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B68-0070 is the collection made across the recently cleared and plowed *banco* (see table 4.1).

SITE SIZE AND CLASSIFICATION: 3.75 ha drawn on aerial photograph; Caño Seco-complex habitation site.

B69

SITE NAME: El Diamante.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site is situated on the rich Chuponal alluvium east of the Cana-



Fig. 4.269. Surface survey across the southern half of B68, facing south, to where the forest-lined *caño* veers eastward and delimits the site's western edge.

guá River and on the north and south levees of a *bajo* or *caño*, so characteristic of the broken, low-lying relief here (fig. 4.2). Caño Mirí passes some 200 m south of the site on its way to the Canaguá River, a little over 500 m to the southwest. The site extends across both sides of the *bajo* or *caño* on Fundo El Diamante owned by Florentino Roa and the *fundo* of his neighbor to the south, Sebastián Peña, on the southwestern side of the old road to Chuponal at roughly 6.4 km from the Panamerican highway.

VEGETATION: Most of the alluvium on the adjacent *fundos* is being used to cultivate manioc, maize, plantains, cacao, and tomatoes, but there are low-lying areas with aquatic *estero* grasses and other fallow areas of tall *monte*, studded with palm trees (figs. 4.270, 4.271).

ARCHAEOLOGICAL REMAINS: On the north end of B69 on Fundo El Diamante, Florentino Roa led us to a remnant levee some 150 m southwest of his house at a

bearing of S 50°W to show us where he had unearthed a ground-stone mortar bowl and what he described as a ceramic candleholder (“*velero*”), probably a reference to a Gaván-complex ceramic support or special form. The stone mortar bowl was 9 cm tall and had a rim diameter of 15 cm (fig. 4.272). The area on the northern bank of a *bajo* or *caño* was overgrown, making it impossible to survey and assess the provenience of the finds. Sr. Roa said only that they were not too far below the ground surface (fig. 4.270).

On surveying the adjacent property of Sebastián Peña to the southeast, it became evident that site B69 extended southeast of the *bajo* or *caño* where Sr. Roa had recovered the ground-stone mortar (fig. 4.271). We recovered Gaván-complex ceramics and stick-impressed daub in Sr. Peña's fields (B69-0071). We also spotted sherds in the patio of the *fundo* house but chose not to collect them because there seemed to be a lot of recent ceramic material pres-



Fig. 4.270. Overgrown area of *vega* bordering a *bajo* or former *caño* on Fundo El Diamante (B69), where Florentino Roa unearthed a ground-stone mortar and a ceramic-vessel fragment, facing south.



Fig. 4.271. Site B69 extends south of the *bajo* or *caño* onto the property of Sebastián Peña, in whose fields we recovered Gaván-complex ceramics and some burned daub. This photograph is taken facing north-northwest.



Fig. 4.272. Ground-stone mortar bowl unearthed on a remnant levee at Fundo El Diamante (B69), along with a Gaván-complex, ceramic-vessel fragment. The mortar measures 9 cm tall and has a rim diameter of 15 cm.

ent, as well. The Gaván-complex site extends over an area of some 300 m by 125 m in a northwest–southeast orientation.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B69-0071 was made in Sebastián Peña's fields southeast of the *bajo* or *caño* (table 4.1).

SITE SIZE AND CLASSIFICATION: 4.4 ha; third-order Gaván-complex site.

ADDITIONAL INFORMATION: We stopped to ask a farmer about the tall, pointed digging stick he was using to sow maize in a field here (fig. 4.273). He told us that he was from the Andean state of Táchira and that the digging stick he was using to sow maize seeds was called a *puya*.

DATE RECORDED: July 24, 1985.

B70

SITE NAME: Campo Alegre.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B70 is situated atop a 2 m-tall *banco* in the broken low-lying alluvium of lower Chuponal 500 m east of



Fig. 4.273. Farmer from the Andean state of Táchira using a pointed digging stick (*puya*) to sow maize seeds on the Chuponal alluvium at B69.

the Canaguá River and flanked by a *bajo* or *caño* on its east side (figs. 4.2, 4.274). The deceased mother of Tomás Mora occupied the abandoned house on the highest point of the natural rise, on the southwestern side of the old road through Chuponal, only 20 m from a bend in the road, 0.9 km southwest of the secondary intersection in lower Chuponal and 1 km at a bearing of N 150°E from Fundo El Diamante (B69). Tomás Mora lives next door to the northwest.

VEGETATION: Manioc, plantains, cacao, and coffee are being cultivated in the plots that surround the house on all sides (fig. 4.274). A field of maize, manioc, and squash extends across the dirt road to the northeast.



Fig. 4.274. The 2 m-tall rise above low-lying ground at Campo Alegre (B70) was occupied by a small Gaván-complex settlement (B70), facing north.

ARCHAEOLOGICAL REMAINS: Our survey of the natural rise yielded a few Gaván-complex sherds from the courtyard on the north side of the house and in the road cut directly south of the house (B70-0072). This coincides with the highest ground. Tomás Mora reported finding two ground-stone artifacts in the pastures to the southeast.

Not finding material in any of the surrounding fields, we concluded that the site is limited to 0.5 ha on the *banco*.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B70-0072 is the sample of sparsely distributed ceramics recovered in the courtyard and road cut of the abandoned house (table 4.1).

SITE SIZE AND CLASSIFICATION: 0.5 ha; third-order Gaván-complex site?

DATE RECORDED: July 25, 1985.

B71

SITE NAME: Fundo Santa María.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B71 is on the lower Chuponal alluvium a little over 400 m northeast of the Canaguá River (fig. 4.2). Fundo Santa María, like its neighbor to the northwest, Campo Alegre (see B70), lies southwest of the old road through Chuponal, approximately 1.2 km southwest of the secondary intersection in lower Chuponal. From site B70, continue along the same turnoff from the *vía* Chuponal at the bend in the road toward the river and cross a red metal gate for a distance of 300 m. The blue *fundo* house lies at a bearing of N 45°E from Campo Alegre (B70).

VEGETATION: Small plots of manioc, plantains, and maize; the surrounding alluvium is covered by secondary growth. Evidence



Fig. 4.275. Site B72 lies on the 3 m-tall *banco* that extends across Fundo San Antonio (on the right side of the photograph) north onto Fundo Agua Linda (on the left side of the photograph).

of a Gaván-complex site came from a recently planted maize field.

ARCHAEOLOGICAL REMAINS: The inhabitants of Fundo Santa María had no information concerning archaeological remains, but they allowed us to survey the property. We surveyed the courtyard of the *fundo* house and along the road but did not spot any ceramics. One Gaván-complex sherd turned up in the recently planted maize field southeast across the road and beyond the corral, some 80 m southeast of the *fundo* house. We failed to recover more ceramics from the maize field. There are two possible interpretations for the nature of this site. Given its relative proximity and possible contemporaneity to site B70, site B71 may have formed part of site B70. An alternative possibility is that B71 represents another isolated household.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B71-0073 was assigned to the single Gaván-complex sherd (table 4.1).

SITE SIZE AND CLASSIFICATION: 0.5 ha; third-order Gaván-complex site?

DATE RECORDED: July 25, 1985.

B72

SITE NAME: Fundo San Antonio.

OTHER SITE DESIGNATION: Fundo Agua Linda.

SITE LOCATION: Fundo San Antonio lies on a *banco* about 200 m northeast of the Caño Mirí on the Chuponal alluvium east of the Canaguá River (fig. 4.2). Turn off the Panamerican highway east of the Canaguá River at the second dirt road along the highway's south side and proceed in a southerly direction through Chuponal for 4.3 km; at that point, turn west (right) through a red metal gate. Pass a small *fundo* on the left and traverse another red *portón*.



Fig. 4.276. View of site B72 on *banco* at Fundo San Antonio, facing north-northwest, with the *vega* and Caño Mirí visible at the left edge of the photograph.

A bridge over a small *caño* facilitates the final access on foot up the slope of the 3 m-tall *banco*, where the light-green *fundo* house and corral of Sr. Acevedo are situated (fig. 4.276). The site continues north onto Fundo Agua Linda, owned by Sr. Pérez (fig. 4.275), the entrance to which is a red metal gate directly north of a blue *bodega* along the *vía* Chuponal.

VEGETATION: The *banco* is largely covered by grassy pastures, dotted with palm trees and other trees (figs. 4.275, 4.276, 4.278). On the slope of the *banco* at Fundo Agua Linda lay a field of maize, manioc, and *ñame*. The *vega* below and to the west also has pastures, but we noted the presence of maize fields, plantain gardens, and an orange grove.

ARCHAEOLOGICAL REMAINS: We surveyed the courtyard of the *fundo* house on top of the *banco* at Fundo San Antonio and collected Gaván-complex ceramics and burned daub (B72-0074). We also noted the presence of a *metate* here.

We crossed the fence and entered the adjacent Fundo Agua Linda to the north (fig. 4.275). There we surveyed a maize, manioc, and *ñame* field on the *banco*'s western slope, where we photographed a *metate* fragment (fig. 4.277) but found no ceramics. The Pérez family members we spoke to at Fundo Agua Linda reported seeing ceramics all over the pasture northeast of the *fundo* house when they inserted fence posts at a depth of 50–60 cm. They guided us to the *saliente de agua* only 12–15 m north of the house. In this gully we recovered more Gaván-complex ceramics (B72-0075), which had probably washed down from the Gaván-complex site on top of the *banco* (fig. 4.278).

Given the proximity of the two properties where we recovered material, we think that site B72 extended along the top of the *banco* over an area some 400 m long and approximately 100 m wide.

SITE MAP: None.

DISTURBANCE: None.



Fig. 4.277. *Metate* fragment recovered from maize, manioc, and *ñame* field on the western slope of the *banco* at Fundo Agua Linda.

SURFACE-COLLECTION DATA: Surface collection B72-0074 is the sample of Gaván-complex ceramics collected in the courtyard at Fundo San Antonio. Surface collection B72-0075 is the sample of Gaván-

complex ceramics recovered in the gully at Fundo Agua Linda (fig. 4.278) (table 4.1).

SITE SIZE AND CLASSIFICATION: 3.12 ha; third-order Gaván-complex settlement.

DATE RECORDED: July 26, 1985.

B73

SITE NAME: Finca Villa Nueva.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B73 lies on a *banco* about 150 m east of the Caño Mirí on the Chuponal alluvium east of the Canaguá River (fig. 4.5). Turn off the Panamerican highway east of the Canaguá River at the second dirt road along the highway's south side and proceed in a southerly direction through Chuponal for 5.2 km. Finca Villa Nueva of the Quintero family is located on the west side of the *via* Chuponal, enclosed by a chicken-wire fence. Adjacent to the house is a silver-colored water tower and a fenced-in pump shelter.

VEGETATION: Pasture grassland and a maize field extend on the *banco*.



Fig. 4.278. Gaván-complex sherds can be found in the gully below the *fundo* house at Fundo Agua Linda. This photograph was taken facing east-northeast.



Fig. 4.279. At Fundo Las Delicias (B74), Gaván-phase remains turned up in the patio of this abandoned *bajareque* house at the edge of the *banco* and in the adjacent maize, ñame, and plantain field. This photograph was taken facing north.

ARCHAEOLOGICAL REMAINS: In a pasture and adjacent maize field on the edge of the *banco* some 100–150 m south of the *finca* house extend house foundations and the remains of two brick ovens. The artifactual remains include roof tiles, bricks, glass, and porcelain. We decided not to make a surface collection at this colonial-period, Chuponal-complex site. Members of the Quintero family recall having found fragments of metal artifacts, including fragments of a stirrup and a scythe. In the Quinteros' house we noted a flat ground-stone rectangular *metate*, which the family continues to use.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site-size estimate for this Chuponal-complex settlement.

DATE RECORDED: July 26, 1985.

B74

SITE NAME: Fundo Las Delicias.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B74 lies on the southern edge of a prominent *banco* overlooking a broad expanse of alluvium, directly west of the Caño Marquito, which drains into the Caño Mericacoy, and east of the Caño Mirí in the lower Chuponal area east of the Canaguá River (fig. 4.2). The site lies on Fundo Las Delicias, owned by Lauriano Crespo, which is situated along the *vía* Chuponal some 250 m south of the junction of several roads in Chuponal and approximately 5.5 km from the turnoff onto this second dirt road along the Panamerican highway's south side east of the Canaguá River. The turnoff onto Fundo Las Delicias is on the east side of of the *vía* Chuponal just before the *vía* drops 5–7 m off the *banco*. Pass through a barbed-



Fig. 4.280. María Andueza G. combs the patio surface at Fundo Las Delicias (B74) for Gaván-complex remains.

wire *falso* some 20 m east of the *vía* and a small maize field on the right before reaching the *fundo* house.

VEGETATION: Maize, *ñame*, and plantains are being grown on the *banco* here.

ARCHAEOLOGICAL REMAINS: We began by surveying the courtyard of the *fundo* house, without success. However, along the southern edge of the *banco* where an abandoned *bajareque* structure stands upslope from a field of maize, *ñame*, and plantains (fig. 4.279), we recovered surface remains of the Gaván phase. There was also debris from a former structure that had stood on the same spot, which had been destroyed to build the *bajareque* structure. Our surface collection from the patio of the abandoned structure (fig. 4.280) and the field on the *banco*'s slope (B74-0076) included Gaván-complex sherds, burned daub, a polished-stone pendant or net sinker (fig. 4.281), a fragment of a polished-stone tool, and ground stone. The distribution of

ceramics was sparse on top of the *banco*, where the topsoil is fast eroding; a fair-to-moderate distribution of ceramics appeared in the maize, *ñame*, and plantain field downslope. Lauriano Crespo reported finding material on the surface all over the top of the *banco* across his property, between the Caño Marquito west to the *vía* Chuponal. Accordingly, our estimate of the site's size was 1.3 ha.

After completing the survey of Fundo Las Delicias, we headed northward some 250 m and at the road junction took the turn east toward Hacienda Tanausú and the Caño Mericacoy. We crossed the Caño Marquito over the metal bridge and stopped at the house of the Malera family on the south side of the road. The house is surrounded by a maize field and is situated on the same *banco* as Fundo Las Delicias (B74), only on the east bank of the Caño Marquito. Sr. Malera showed us a Gaván-complex pedestal base, which the tractor



B74-0076 Fundo las Delicias

Fig. 4.281. Polished-slate pendant or net sinker from B74-0076. The slate derives from the Paleozoic Mucuchachí formation.

had brought to the surface in his maize field directly southwest of the house. We surveyed the maize field but did not recover any other sherds, only burned dirt, probably from the original clearing and burning (*barbecho*). If B74 extended east of Caño Marquito to Sr. Malera's maize field, the site-size estimate grows to a maximum of 4–5 ha.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B74-0076 from the abandoned structure and adjacent field along the edge of the *banco* at Fundo Las Delicias (table 4.1).

SITE SIZE AND CLASSIFICATION: 1–5 ha field estimate, but 1.25 ha drawn on aerial photograph for B74 west of Caño Marquito, and 1.87 ha added for possible extension of site east of Caño Marquito, making for an estimated site size ranging between 1.25–3.12 ha; third-order Gaván-complex settlement.

DATES RECORDED: July 26–29, 1985.

B75

SITE NAME: Fundo Campo Alegre.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B75 is located on the southern edge of a prominent *banco* overlooking a broad expanse of alluvium in the lower Chuponal area east of the Canaguá River and, specifically, east of the Caño Marquito and west of the Caño Mericacoy (figs. 4.2, 4.282, 4.283). It is the same *banco* as the one on which B74 lies, only east of the Caño Marquito. The site lies on Fundo Campo Alegre, owned by the Rondón family. Fundo Campo Alegre is situated on the east side of the *vía* Chuponal, about 1.3 km south of the junction of several roads in Chuponal and approximately 6.5 km from the turn off onto this second dirt road along the Panamerican highway's south side east of the Canaguá River. From the *fundo* house we walked along a trail through a grove of cacao and coffee, crossed the Caño Marquito over a bamboo-pole bridge, and walked north-eastward across a palm-dotted pasture and a field of maize and *ñame*.

VEGETATION: The rich alluvium at Fundo Campo Alegre is largely under cultivation; there are just a few pastures. We noted fields of maize, manioc, and *ñame* and a grove of cacao and coffee. On the top of the *banco* we saw a field of maize and manioc, surrounded by fallow fields, and a *mata* to the east (figs. 4.282, 4.283).

ARCHAEOLOGICAL REMAINS: The son of Sr. Rondón accompanied us to the *banco* overlooking the *vega* east of the Caño Marquito, where the Rondóns have seen ceramics eroding along the edge of the *banco*. We searched for ceramics in the fields on top of the *banco* and in the exposed tractor trail that climbs the *banco* (fig. 4.284). Our surface collection (B75-0077) from the tractor trail featured a diagnostic Gaván-complex ceramic vessel support among just a few sherds. In view of the Rondón family's report of finding ceramics elsewhere along the edge of the *banco* during the rainy season, as well as in a *mata* to the east that was impenetrable at the time of our visit, we must assume that the site covers at least 1 ha and may well extend over 2–3 ha.

SITE MAP: None.

DISTURBANCE: None.



Fig. 4.282. The site of Fundo Campo Alegre (B75) lies on a *banco* that rises some 5–7 m above the rich alluvium of the lower Chuponal area. In July 1985, maize and ñame were being cultivated on the alluvium (in the foreground), and maize and manioc were being cultivated on the *banco* in the distance of this view, taken facing north-northwest across the alluvium.

SURFACE-COLLECTION DATA: B75-0077 is the sample of Gaván-complex ceramics collected in the tractor trail that climbs the *banco* (see table 4.1).

SITE SIZE AND CLASSIFICATION: 1.87 ha drawn on aerial photograph, but the site may extend over some 2–3 ha; third-order Gaván-complex settlement.

DATE RECORDED: July 29, 1985.

B76

SITE NAME: Fundo Las Delicias.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B76 is on the lower Chuponal alluvium on the eastern bank of the Caño Marquito and approximately 125 m west of the metal bridge over the Caño Mericacoy (fig. 4.5). The site lies at the southern end of Fundo Las Delicias, owned by Emiliano Márquez. It is the first

fundo on the right side of the road after crossing the Caño Marquito and east of a major road junction in Chuponal. The site can be reached by continuing south on the *vía* Chuponal, which bends to the east and crosses the Caño Marquito again. A *bajareque* structure with a thatch roof stands 100 m east of the Caño Marquito, by a fence that encloses a newly planted pasture along the eastern bank of the Caño Marquito.

VEGETATION: Pasture.

ARCHAEOLOGICAL REMAINS: We recovered Chuponal-complex ceramics, burned daub, and bricks in the newly planted pasture on the eastern bank of the Caño Marquito, along the fence that encloses the pasture, and in the patio of the *bajareque* structure (B76-0078). We were told that the *metate* that was lying on the patio floor actually came from a *fundo* to the south at the bend in the road. This may be Fundo



Fig. 4.283. The site of B75 extends along the top of the *banco* where a field of maize and manioc stood in July 1985. This view across the *vega* was taken facing north-northeast.

Nueva Esperanza, which lies to the southeast and is owned by another Sr. Márquez (see B44). The Chuponal-complex material is sparsely distributed, but it extends over an area of approximately 400 m by 125 m.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B76-0078 is the sample of Chuponal-complex material from the patio of the structure, the adjacent fence line, and pasture at the southern end of Fundo Las Delicias, on the eastern bank of the Caño Marquito (see table 4.1). See chapter 2 for more detailed information about the European wares recovered in this Chuponal-complex surface collection.

SITE SIZE AND CLASSIFICATION: 3.75 ha drawn on aerial photograph, which is probably a minimum site-size estimate for a site that may extend over as many as 5 ha; Chuponal-complex habitation site.

DATE RECORDED: July 30, 1985.

B77

SITE NAME: Fundo Trota Mundo.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B77 is located on the western edge of a *banco* directly east and upslope of Caño Mitiao Hondo and approximately 0.04 km west of Caño Mitiao Seco (figs. 4.2, 4.285). It lies on a plowed field of Fundo Trota Mundo, owned by the Gómez family, on the *vía* that proceeds southwest of Curbatí. The *fundo* house is the first house along the *vía* after it crosses the Caño Mitiao Seco; surrounded by a plantain garden, we photographed a pet capuchin monkey (“*mono mico*”) at the *fundo* house.

VEGETATION: The recently plowed field on the *banco* was going to be planted with tomatoes (fig. 4.285). Both the adjacent Caño Mitiao Hondo to the west and the Caño Mitiao Seco to the east are lined with gallery forests.



Fig. 4.284. In the tractor trail that climbs the *banco*'s southern edge at Fundo Campo Alegre (B75) we were able to collect a few Gaván-complex sherds. This view from the field road across a pasture was taken facing north-northeast toward the *banco*.

ARCHAEOLOGICAL REMAINS: We recovered a sparse distribution of Gaván-complex ceramics in the recently plowed field that extends across the western slope of the *banco*. Most of the ceramics came from the crest of the *banco* (B77-0080), an area of 0.5 ha (fig. 4.285). There are also the remains of a former house on the site, and one sherd may not belong to the Gaván complex.

SITE MAP: None.

DISTURBANCE: There are remains of a house that stood on the *banco* on which site B77 extends, which a local passerby confirmed.

SURFACE-COLLECTION DATA: Surface collection B77-080 from the plowed field (table 4.1).

SITE SIZE AND CLASSIFICATION: 1.25 ha; third-order Gaván-complex site.

DATE RECORDED: July 31, 1985.

B78

SITE NAME: Fundo Santa Rosalía.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B78 is located on the edge of the prominent *banco* overlooking a large expanse of alluvium northeast of the Canaguá River, between the Caño Mericacoy to the west and the Caño Mitiao Hondo to the east (fig. 4.2). The site lies at the northern headwaters of a *desaguadero*, or unnamed *cañito*, that drains the southern edge of the *banco* here. The site lies on Fundo Santa Rosalía, owned by Sósimo Callejas. Fundo Santa Rosalía is directly east of and adjacent to Fundo Bello Monte, on which the second-order mound site of Buenos Aires (B21) lies (see B21). Fundo Santa Rosalía can be reached by taking the dirt road or *vía* Chuponal southwest from Curbatí that originally



Fig. 4.285. View of the *banco* on which B77 lies, facing northwest toward the forest-lined Caño Mitiao Hondo and the adjoining *vega*.

went to Pedraza (Ciudad Bolivia) for approximately 8 km. The dirt road crosses three *caños* (Caño Mitiao Seco, Caño Mitiao Hondo, and Caño Anime) en route to the Caño Mericacoy. At the point where the dirt road from Curbatí makes a sharp turn to the west just before it fords the Caño Mericacoy and the *fundo* house of Fundo Bello Monte is visible on the south side of the road, there is a road that heads to the east, through a *falso* (barbed-wire gate). The road circumvents the northernmost mound at B21 and a *mata* and continues on top of a prehistoric causeway that emanates from B21, which we designated Calzada C (fig. 4.2) (Spencer and Redmond, 1998: fig. 3, 101) and which leads off to the east-southeast at a bearing of E 12°S for 5 km in the direction of the Caño Mitiao Hondo (fig. 4.140). At 1 km from B21, site B78 lies in the *potrero* and the banks of the *cañito*, some 15–20 m south of the causeway.

VEGETATION: The *cañito* is lined by trees; the remainder of the area is savanna grassland.

ARCHAEOLOGICAL REMAINS: We had received reports from Pedro Alvarez of ceramics recovered in the corral by the *falso* along the prehistoric causeway that leads to Sósimo Callejas's *fundo*. Sr. Alvarez also accompanied us to the spot across from the corral and along the bank of the *cañito* where he had found a whole vessel in 1973. There is a recently abandoned house in the area, which raises the question of the date of the whole vessel found on the surface. In the process of searching for the vessel, we recovered a handful of Gaván-complex sherds in the eroding bank of the *cañito* at the ford (B78-0082), only 15–20 m south of the *calzada*.

SITE MAP: None.

DISTURBANCE: The *cañito* is a source of drainage and erosion along the southern edge of the *banco* on which B78 lies.



Fig. 4.286. View of the cultivated *banco* on which B79 lies, facing south-southwest toward the forested Caño Mitiao Hondo in the background and the fallow *vega* at the right side of the photograph.

SURFACE-COLLECTION DATA: Surface collection B78-0082 is the small sample of sherds collected in the bank of the *cañito* (table 4.1).

SITE SIZE AND CLASSIFICATION: 0.5 ha?; third-order, Gaván-complex habitation site.

DATE RECORDED: August 5, 1985.

B79

SITE NAME: Fundo Anime.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B79 is situated on a cultivated *banco* between the Caño Mitiao Seco to the east and the Caño Mitiao Hondo to the west, and just east of the modern community of Anime that extends along the Panamerican highway (figs. 4.2, 4.5). The site extends on top of the *banco* to its western edge, overlooking the *vega* of the Caño Mitiao Hondo. The site lies on Fundo Anime of Isabel Euzkátégui, located on the south side of the Panamerican highway opposite the 401 km marker. The *fundo*

can also be reached from the south by taking a fork to the northwest off the *vía* Chuponal en route to Curbatí just before the ford of the Caño Mitiao Seco, through two *falsos* and a red-and-white metal gate, which marks the southern boundary of Fundo Anime.

VEGETATION: Field of young maize plants on *banco*. Both *caños* flanking the *banco* are lined with gallery forests. The *vega* along the Caño Mitiao Hondo is fallow (fig. 4.286).

ARCHAEOLOGICAL REMAINS: Sra. Euzkátégui allowed us to survey the plowed fields 100 m south of the pink *fundo* house. We recovered ceramics in the plowed field bearing young maize plants west of the dirt road that leads up from the *vía* Chuponal (fig. 4.286). The sample of ceramics (B79-0083) consists principally of Gaván-complex ceramics, although some sherds had characteristics of ceramics of later time periods and may pertain to the Chuponal complex. The surface collection included



Fig. 4.287. Site B80 is situated on a piedmont spur at the base of the Cerro Sabaneta, overlooking the Caño Mitiao Hondo, in the distance of this view taken facing northwest across pasture where ceramics and ground-stone artifacts are reported to have turned up.

some burned daub. We estimated that the site extends over an area of roughly 125 m by 75 m on top of the *banco* to its western edge overlooking the *vega* of the Caño Mitiao Hondo (fig. 4.286).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B79-0083 from the plowed field west of the dirt road that leads to the southern boundary of Fundo Anime from the *vía* Chuponal.

SITE SIZE AND CLASSIFICATION: 1.25 ha; third-order, Gaván-complex (and Chuponal-complex?) habitation site.

DATE RECORDED: August 5, 1985.

B80

SITE NAME: Fundo Costa Rica.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B80 is located on a piedmont spur at some 240 masl directly east of the upper reaches of the Caño

Mitiao Hondo, which drains the Cerro Sabaneta (figs. 4.2, 4.287). The site is located on Fundo Costa Rica, owned by Sr. Márquez. Fundo Costa Rica lies north of the Panamerican highway; heading west toward Anime from Curbatí, the turnoff is the first road after passing over the Caño Mitiao Hondo. Continue northward for 2.6 km, past one house on the left just before a *falso*, and on to a wattle-and-daub structure with a porch and a corrugated tin roof, where the son of Sr. Márquez lives.

VEGETATION: Pasture and *monte*.

ARCHAEOLOGICAL REMAINS: Sr. Márquez led us west of the house to a pasture on a piedmont spur that overlooks the Caño Mitiao Hondo from the east (fig. 4.287). Sr. Márquez remembers finding ceramics and ground-stone artifacts when this 2 ha area was cleared with a *rastrillo*. We found no surface remains. We noted that the soil is noticeably red in color and that there has been a lot of runoff from higher in the

piedmont. In view of the occurrence of other Gaván-complex settlements in the area and in this topographical location (see B45, B86), there is a good possibility that this reported site pertains to the Gaván complex.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: 2 ha?; Gaván-complex habitation site?

DATE RECORDED: August 6, 1985.

B81

SITE NAME: Fundo Mata Verde.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B81 is located on the southern edge of a prominent *banco* that overlooks a broad expanse of alluvium northeast of the Canaguá River, between the Caño Mericacoy to the west and the Caño Caripito to the east (fig. 4.2). Caño Caripito is designated Caño de Piedra on the topographic map of the region, and we learned that the *caño* is notable for the gravelly rock in its bed. The site lies at the southern end of Fundo Mata Verde, owned by Oscar Callejas. Lying directly east of Fundo Santa Rosalía on which site B78 lies, the site can be reached by driving on the dirt road or *vía* Chuponal southwest from Curbatí that originally went to Pedraza (Ciudad Bolivia) for approximately 8 km. The dirt road crosses three *caños* (Caño Mitiao Seco, Caño Mitiao Hondo, and Caño Anime) en route to the Caño Mericacoy. At the point where the dirt road from Curbatí makes a sharp turn to the west just before it fords the Caño Mericacoy and the *fundo* house of Fundo Bello Monte (see B21) is visible on the south side of the road, there is a road that heads to the east, through a *falso* (barbed-wire gate). The road skirts the northernmost mound at B21, and a *mata*, and continues on top of a prehistoric causeway that emanates from B21, which we designated Calzada C (fig. 4.2) (Spencer and Redmond, 1998: fig. 3, 101), and which leads off to the east-southeast at a bearing of E 12°S for 5 km in the direction of the Caño

Mitiao Hondo (fig. 4.140). At a distance of 1.4 km from B21, after passing through another *falso*, one reaches a fork and turns left, crosses another *falso*, and continues northward toward the *fundo* house. To reach the site, continue 800 m farther east beyond the fork in the road, turn off the prehistoric *calzada* and head 300 m through a *falso* at a bearing of S 20°E to the tree-lined *desaguadero* where the site lies.

VEGETATION: Trees and shrubs line the *desaguadero* (fig. 4.288). Savanna grasslands extend in all directions.

ARCHAEOLOGICAL REMAINS: We surveyed the length of the *desaguadero* and recovered Gaván-complex ceramics, chipped stone, and polished-stone artifacts (B81-0084) in its banks (fig. 4.288). The material occurs from near the present-day ground surface to approximately 1 m in depth. We surveyed east across the *potrero* to a fence that marks the edge of the *banco*. There is a moderately dense distribution of material. We estimate that the site extends over an area measuring roughly 250 m by 125 m. Directly southwest of the site, a trail climbs the *banco* from the vicinity of site B41 down on the *vega* to the south. B41 is another Gaván-complex settlement linked by a causeway (designated Calzada E) to the regional center of Gaván (fig. 4.2) (Spencer and Redmond, 1998: 98, 101).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B81-0084 is the sample of ceramics, chipped stone, and polished stone that we collected from the banks of the *desaguadero* (table 4.1).

SITE SIZE AND CLASSIFICATION: 2.5 ha drawn on aerial photograph; third-order, Gaván-complex habitation site.

DATE RECORDED: August 8, 1985.

B82

SITE NAME: Fundo La Piedrota.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The petroglyph site lies on a broad piedmont spur at an elevation of 200 masl, on the Sabanas de Anime between the Caño Anime and the Caño Mitiao Hondo (fig. 4.4). The boulder bearing



Fig. 4.288. Collecting Gaván-complex remains in the southwestern bank of a *desaguadero* at Fundo Mata Verde (B81), facing southwest.

petroglyphs lies on Fundo La Piedrota, owned by Dolores Albornoz, 1 km south of the Panamerican highway and the community of Anime on the *vía* Anime. The whitewashed *fundo* house with blue posts and thatch and corrugated tin roof is on the west side of the road, at a bend in the road.

VEGETATION: Pasture grassland (fig. 4.289).

ARCHAEOLOGICAL REMAINS: The boulder lies in a pasture southwest of the *fundo* house and through a *falso* about 150 m at a bearing of S 20°W. It is largely buried, and much of the top surface is heavily eroded and devoid of petroglyphs. The petroglyphs that remain are located along the boulder's exposed sides. The Albornoz son who accompanied us to the boulder told us that a looter had come by car the previous year to dig a hole by the boulder's northwest corner; the sterile backfill from the looter's pit was a red-yellow clay depos-

it with some gravel. The Albornoz family had added cement to the hole to produce a well, although the water is of poor quality (fig. 4.289). We also learned that an ancient trail passes by the boulder, presumably en route to and from the Andes.

We recorded the petroglyphs visible on the boulder's exposed surfaces (figs. 4.290–4.293). The boulder's southwestern face displayed a recognizable quadruped in profile, with erect ears and a long, curled tail with a six-lobed motif directly in front, a saurian or spread-eagle anthropomorphic figure, and semicircles (fig. 4.290). The boulder's northwestern face had another saurian or spread-eagle anthropomorphic figure, a cruciform motif, and a free-form design that includes a circle with a center point (figs. 4.290, 4.291). Other petroglyphs on the boulder's northwestern face include a cluster of free-form designs above a humpbacked quadruped or turtle in profile with a short, straight tail, a possible anthropomorphic



Fig. 4.289. We were told that the boulder bearing petroglyphs at B82 (Fundo La Piedrota) lies along an ancient trail. A well exists alongside the boulder, evident in this photograph taken facing northwest toward the Caño Anime and the Cerro Mericacoy.

figure on a pedestal, and a bird or bat (fig. 4.292). A 42 cm-long quadruped with erect ears and a long, curling tail is carved on the boulder's northeastern face (fig. 4.293). María Andueza G. remarked that the motifs on this boulder are similar to some of the motifs carved on Piedras 1 and 2 at Las Lajitas (B5) to the southwest.

SITE MAP: None.

DISTURBANCE: The boulder has suffered from erosion and the collateral effects of the looter's pit and cement-lined well on its northwestern end.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATES RECORDED: August 8 and 13, 1985.

B83

SITE NAME: Pozo El Varical.

OTHER SITE DESIGNATION: Río Curbatí.

SITE LOCATION: The boulder with petroglyphs lies in the riverbed, approximately 15 m from the eastern bank of the Curbatí River and a little less than 3 km upstream from the highway bridge (figs. 4.4, 4.294). It can be reached by way of Fundo La Esmeralda on the eastern bank of the Curbatí River (see B8) or by way of the western bank of the Curbatí River on the *vía* from Curbatí to El Algarrobo. We visited the boulder with Victorino Quintero, whose Fundo Tampaquito lies on the east side of the *vía* El Algarrobo, some 700 m after taking a right at a fork in the road and 500 m north after crossing Caño La Puerta. We took a right turn just after Sr. Quintero's house and traversed two *falsos* to reach the *fundo* house of Nelson (Molina?), situated on the eastern edge of a piedmont ridge that overlooks the *vega* and Curbatí River. A trail leads down from the house, crosses a *falso*, and reaches the



Fig. 4.290. This view of the boulder at Fundo La Piedrota (B82) shows the petroglyphs carved on its southern, southwestern, and northwestern faces, including a quadruped in profile, saurian or spread-eagle anthropomorphic figures, and semicircles. The edge of the cement-lined well is visible in the upper left-hand corner of this photograph.

riverbank. We walked along the riverbank in a southerly direction for some 30 m and crossed the river eastward toward Fundo La Esmeralda.

VEGETATION: Gallery forest lines the banks of the Curbatí River (fig. 4.294).

ARCHAEOLOGICAL REMAINS: The boulder in the riverbed has what appears to be a scene of three bipedal anthropomorphic figures carved on its northeastern face (figs. 4.295, 4.296). The 1.52 m-long scene consists of three human figures with zoomorphic characteristics—most notably, the cloven hooves and the horns or antlers of male deer. The smallest of the three standing figures is rendered male, and all three are similar to the anthropomorphic figure carved on Piedra 1 at Fundo La Esmeralda (B8) (see fig. 4.74). Like that standing male human figure with cloven hooves and deer antlers, the three figures

carved on the boulder in the riverbed may also depict male humans wearing the mask, headdress, and other attributes of male deer. A smaller petroglyph in the form of a circle with 6–7 external radii or appendages is present, as well. Tukanoan Indians of the Vaupés territory of Northwest Amazonia are known to revere and portray supernatural deer men on rock faces—representations of the Master of Animals—as well as the animals they seek from him. Moreover, although the Tukanoans do not carve petroglyphs, they interpret the ancient petroglyphs found on boulders in the river courses of the Vaupés region as mythical commemorations. Reichel-Dolmatoff interpreted the petroglyphs carved on boulders by rapids and in pools as representing similar requests to the Master of Animals. Often, the boulders bearing petroglyphs mark rapids and pools, where certain spe-



Fig. 4.291. A close-up view of the petroglyphs carved on the northwestern face of the boulder at Fundo La Piedrota (B82) reveals the possible spread-eagle anthropomorphic figure together with a cruciform and a free-form element that includes a circle with a center point.

cies of fish are relatively abundant (Reichel-Dolmatoff, 1967: 109–111). In line with the possibility that the petroglyphs carved on the boulder in the Curbatí River may portray a shamanic appeal to the Master of Animals in his role as Master of Fish, it is worth noting that the local name for the segment of the Curbatí riverbed where the boulder lies is the name of a pool or *pozo* (see also B84).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATE RECORDED: August 8, 1985.

B84

SITE NAME: Caño La Puerta.

OTHER SITE DESIGNATION: Pozos de Las Piedronas.

SITE LOCATION: On the northeastern bank of Caño La Puerta, 150 m west of the Curbatí River (figs. 4.4, 4.298). Caño La Puerta drains the Cerro Sabaneta and the area in the piedmont designated Tampaquito where Victorino Quintero's Fundo Tampaquito is situated (see B83). Fundo Tampaquito neighbors Dr. (Nelson?) Molina's sizable Fundo La Madre del Monte (see B20, B83, B85). A trail leads from Sr. Quintero's *fundo* house southeast across a pasture and the Caño La Puerta before crossing the *vega* in an easterly direction to reach the lower course of the same Caño La Puerta before it joins the Curbatí River. An enormous *mijao* tree (*Anacardium rhinocarpus*) towers over a spot on the western bank of the Curbatí River called Pozos de Las Piedronas (fig. 4.297), some 150 m northeast of the bank of Caño La Puerta where the boulder lies.



Fig. 4.292. The petroglyphs on the northwestern face of Fundo La Piedrota (B82) feature a cluster of designs around a humpbacked quadruped shown in profile with a short, straight tail (perhaps a turtle), a possible anthropomorphic figure on a pedestal, and a bird or bat in flight.



Fig. 4.293. A quadruped in profile with erect ears and a long, curling tail is carved on the north-eastern face of the boulder at Fundo La Piedrota (B82).



Fig. 4.294. Kneeling atop the boulder, María Andueza G. outlines the petroglyphs carved on the boulder in the Curbatí River (B83) with chalk. This photograph is taken facing downstream in a southeasterly direction. The *vega* of Fundo La Esmeralda (see B8) is visible in the background.

VEGETATION: The banks of Caño La Puerta and the adjoining *vega* are forested (figs. 4.297, 4.298).

ARCHAEOLOGICAL REMAINS: Victorino Quintero led us to Caño La Puerta from the boulder in the Curbatí River (B83) to the northeast. We passed a spot near the junction of Caño La Puerta with the Curbatí River that is referred to as Pozos de Las Piedronas. The boulder in Caño La Puerta displays at least two petroglyphs on its southeastern face (fig. 4.299). One design consists of concentric circles with a scroll-like appendage. The second has zoomorphic characteristics of what may be a composite figure. There is a very good possibility that other boulders in the Pozos de Las Piedronas and Caño La Puerta have petroglyphs, but we were not able to examine each boulder systematically.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATE RECORDED: August 8, 1985.

B85

SITE NAME: Fundo La Madre del Monte.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B85 is situated on a low piedmont spur at approximately 240 masl that overlooks the *vega* on the western bank of the Curbatí River. The site lies on Fundo La Madre del Monte, owned by Dr. (Nelson?) Molina. Fundo La Madre del Monte can be reached by driving on the *via* to El Algarrobo from Curbatí. The *fundo* house lies on the east side of the *via* El Algarrobo, some 700 m after taking a right at a fork in the road and 500 m north after crossing Caño La Puerta. Continue eastward and traverse two *falsos* to reach the *fundo* house, situated on the



Fig. 4.295. Carved on the northeastern face of the boulder (B83) are three bipedal anthropomorphic figures and a circle with external radii. This photograph is taken facing downstream and southwest.

eastern edge of a piedmont ridge that overlooks the *vega* and Curbatí River. The site lies north of the *fundo* house and some 300–400 m west of the Curbatí River.

VEGETATION: Cattle pastures and gallery forest predominate.

ARCHAEOLOGICAL REMAINS: We learned about site B85 from Luis Mora Neumann, who lives across the Curbatí River to the northeast, just beyond Caño El Arenoso, roughly 2.7 km north of Caño Azul (see B103). On the day we returned to visit the reported site with him, the previous night's rain prevented us from fording the river. We saved the single thick-walled body sherd that Sr. Mora's son had found on the piedmont spur overlooking the *vega* on the west side of the river, at a depth of approximately 25 cm below the ground surface (B85-0085). We took a bearing of S 35°W from Sr. Mora's whitewashed concrete-block house with a corrugated tin roof that is situated on the northeast bank

of the Curbatí River (fig. 4.326) across the river to the piedmont spur where the sherd was recovered, approximately 300–400 m west of the river.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: The single body sherd given us by Sr. Mora was designated sample B85-0085 (table 4.1). We intended to return on another day when the river was low enough to cross and survey the piedmont spur and make our own collection but never did.

SITE SIZE AND CLASSIFICATION: Given its location on the piedmont spur, the site is probably on the order of 1–2 ha in size and smaller than the neighboring Caño Seco habitation site at B20. The body sherd was difficult to classify, but it probably belongs to the Caño Seco complex (or the Gaván complex). In the lab, the sherd was actually attributed to the Gaván complex. In view of the site's location, we will

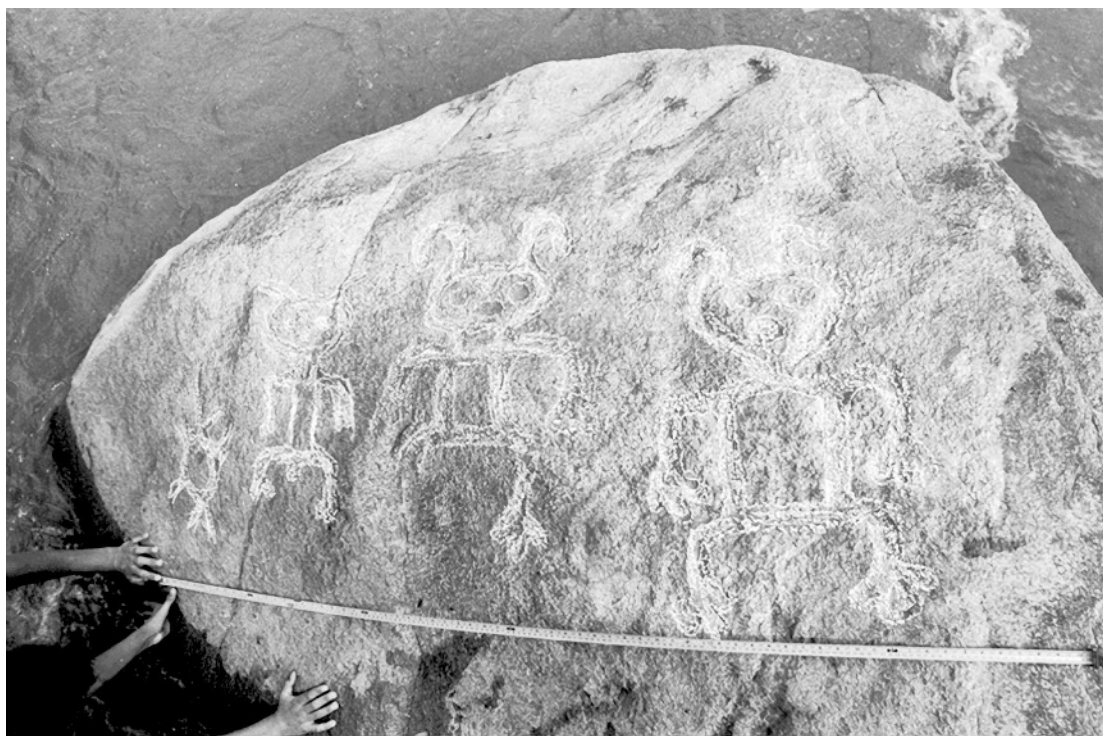


Fig. 4.296. A close-up view of the boulder (B83) reveals the deer-man attributes of the three bipedal figures and the geometric element to the left.

for now consider B85 a small Caño Seco-complex habitation site.

DATE RECORDED: August 9, 1985.

B86

SITE NAME: Fundo Agua Clara.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B86 is located where the Sabanas de Los Mitiaos of the high llanos meet the piedmont of Cerro Sabaneta at an elevation of some 240 masl, directly east of Caño Anime (fig. 4.2). It is located on Fundo Agua Clara, owned by Juan Antonio Ocaña. Fundo Agua Clara is located on the *vía* from Anime on the Panamerican highway and opposite the school northwest toward Hato Las Lomas and Anime Alto. At the fork in the dirt road, take the right and proceed northward. After passing a *mata de burros*, Fundo Agua Clara is the second *fundo*, entered by a metal *portón*. The *fundo* house is 400 m upslope on a terrace (fig. 4.300), approximately 1.5 km

northwest of the turnoff from the Panamerican highway.

VEGETATION: Pasture and *monte* predominate; Caño Anime and the unnamed *cañito* to the east feature forest.

ARCHAEOLOGICAL REMAINS: We had received information from Luis Mora Neumann, who lives on the east bank of the Curbatí River just after Caño El Arenoso (see B85, B103), about a petroglyph on Fundo Agua Clara, which he used to own. Specifically, Sr. Mora knew of a boulder with petroglyphs on the slope to the east of the *cañito*. The *encargado* at Fundo Agua Clara is Matías Márquez, who lives on the west side of the upper Canaguá River at his Fundo Buenos Aires up the Quebrada San Francisco after crossing the Caño San Francisco. Sr. Márquez guided us from Fundo Agua Clara along the fence at the base of the piedmont ridge east of the *fundo* house to the *cañito*. We crossed the *cañito* and surveyed the piedmont slope to the northeast in search of the reported boulder with



Fig. 4.297. A giant *mijao* tree (*Anacardium rhinocarpus*) marks the spot on the Curbatí River known as Pozos de Las Piedronas 150 m east of the boulder with petroglyphs in Caño La Puerta (B84).



Fig. 4.298. A boulder in the bank of Caño La Puerta (B84) features petroglyphs on its surface. This photograph is taken facing downstream, to the northeast.



Fig. 4.299. The petroglyphs carved on the boulder in Caño La Puerta (B84) include concentric circles with a scrolling appendage and a composite zoomorphic figure.



Fig. 4.300. María Andueza G. bends down to recover fragments of two whole vessels eroding out of the road cut up at Fundo Agua Clara (B86). This photograph was taken facing north-northwest.

possible petroglyphs on its surface but failed to see any such boulder.

On our return to the *fundo* house, we noted large fragments of what appeared to be two whole ceramic vessels eroding out of the road cut on the slope of the terrace on which the *fundo* house lies (fig. 4.300). The large vessel fragments were eroding from a stratigraphic layer that underlies the gravelly road surface up to the house, some 40 cm below the surface of the piedmont terrace. The vessels represented by the large sherds are reminiscent of the whole vessels recovered at B18 (fig. 4.124), one of which is in the care of the Centro Arqueológico “Kuayú”. Among the vessel fragments in the road cut at B86 were fragments of charcoal (B86-0086). These remains may represent a burial or an isolated household of the Gaván complex (or the Caño Seco complex?).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: The vessel fragments recovered in the road cut were designated B86-0086 (table 4.1).

SITE SIZE AND CLASSIFICATION: 0.5 ha?; a burial or an isolated household of the Gaván complex (or Caño Seco complex?).

DATE RECORDED: August 9, 1985.

B87

SITE NAME: Fundo El Valle.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B87 is located on the edge of a *banco* on the Sabanas de Anime, directly east of Caño Anime (fig. 4.2). On the west bank of Caño Anime extends an expanse of *vega*. The site lies on Fundo El Valle, which can be reached by turning west off the *vía* Anime at an *encrucijada* about 1.5 km south of the Panamerican highway and continuing south of the *fundo* owned by José Sensión Odriozola, at a distance of some 2.5 km south of the Pan-

american highway. The entrance to Fundo El Valle is west of the road, through a blue-and-white *portón*. The *fundo* house is a small, plastered wattle-and-daub structure.

VEGETATION: Savanna grassland predominates on the *banco*. Caño Anime is lined with gallery forest. The *vega* west of Caño Anime was being used to cultivate plantains.

ARCHAEOLOGICAL REMAINS: We recovered a few highly eroded sherds (B87-0087) in the courtyard of the *fundo* house and along the eastern bank of Caño Anime. The sandy matrix in which the sherds occur raises doubts about the nature of the site.

SITE MAP: None.

DISTURBANCE: None, although the sandy deposit in which the highly eroded sherds were found makes us wonder the degree to which any archaeological deposits along the bank of Caño Anime have been subjected to flooding, erosion, and alluviation.

SURFACE-COLLECTION DATA: The small, highly eroded Gaván-complex sherds from the courtyard and eastern bank of the Caño Anime fit in a coin envelope (B87-0087) (table 4.1).

SITE SIZE AND CLASSIFICATION: 0.5 ha?; an isolated household of the Gaván complex?

DATE RECORDED: August 14, 1985.

B88

SITE NAME: El Topochal Viejo.

OTHER SITE DESIGNATION: Fundo de Los Follones.

SITE LOCATION: B88 is located on a 3 m-tall *banco* directly west of the Caño Mitiao Hondo and less than 200 m southeast of the junction of the Caño Mitiao Seco and the Caño Mitiao Hondo (fig. 4.2). The site lies in gallery forest on the property of Eduardo Follones (Foggione?), an Italian man whose *fundo* extends between Caño Anime and Caño Mitiao Hondo. The father of Antonio Contreras, who currently lives north of Curbatí on the west side of the *vía* El Algarrobo (but also has a house east of the Caño Mitiao Hondo), had a home on this *banco* until 1970. We reached the site by traveling southwest of Curbatí on a road

past El Banquito that runs parallel to and directly east of Caño Mitiao Seco. Although this road becomes little more than a trail south of the *fundo* of Sr. García, we think it is a pre-Hispanic causeway (Calzada A) that linked the regional center of El Gaván to the south with lower-order settlements (fig. 4.2) (Spencer and Redmond, 1998: 101). Where the causeway traverses a *mata*, we headed west across the *caño* and through a barbed-wire fence that traverses the *caño*. We walked in the gallery forest for some 20 m in a northwesterly direction before ascending the *banco* on which the site lies.

VEGETATION: The stumps of Sr. Contreras's former *topochal* were still evident in otherwise thick gallery forest cover.

ARCHAEOLOGICAL REMAINS: Sr. Contreras reported seeing ceramics on this *banco* during the years that he and his family lived here. His son, Antonio Contreras, guided us to the *banco*, and we surveyed the *banco* surface and along its eastern edge as best we could in the thick forest cover. The Contreras' house had been surrounded by a *topochal*. Some of the stumps of the old *topocho* (*Musa paradisiaca sapientum*) plants were still standing, and there was debris associated with the Contreras' former dwelling strewn on the ground surface, but we saw no ceramics on the surface of the *banco*. We did retrieve a Gaván-complex ceramic hollow foot from a gully eroding the eastern edge of the *banco*, at approximately 60–80 cm below the ground surface (B88-0088). From Antonio Contreras we learned that the *topochal* on the *banco* extended over approximately 3 ha, a figure that we decided to use as an estimate of the site's maximum size.

As we retraced our path east of the Caño Mitiao Hondo toward the causeway, Antonio Contreras led us south of the *mata*, through a fence, and into a pasture to the southwest. In a small *mata* in the middle of the *potrero* on the *banco* east of the Caño Mitiao Hondo lay the ruins of a concrete-block house. Sr. Contreras remembered seeing ceramics in the courtyard of the house and in the *potrero*. We surveyed the eastern bank of the *caño*, the ruins of the

house, and the *mata* on the *banco* but did not see any ceramics. We dotted the *potrero* in on the aerial photograph; the reported site lies 110 m west of the causeway and roughly 180 m southeast of B88. If it can be determined someday that the reported site east of the *caño* is part of B88, the site's size estimate would have to be revised upward. We decided against giving this reported site along the *calzada* a separate site designation.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: The highly diagnostic Gaván-complex ceramic hollow foot from the eroding edge of the *banco* at El Topochal Viejo was assigned surface collection B88-0088) (table 4.1).

SITE SIZE AND CLASSIFICATION: 2.5 ha drawn on the aerial photograph and an informant's estimate of 3 ha; third-order, Gaván-complex habitation site.

DATE RECORDED: August 19, 1985.

B89

SITE NAME: Mata Los Limones.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B89 is located on a *banco* directly west of Caño Mitiao Seco, approximately 700 m north of its junction with Caño Mitiao Hondo (fig. 4.2). According to Antonio Contreras, a house had stood on this *banco*, but only a lime tree marked the former house site. We reached it from the *fundo* house belonging to Eduardo Follones, west of the Caño Mitiao Hondo (see B88). After crossing Caño Mitiao Hondo, we continued on a road east to an intersection of three to four roads between fences. After traversing a *falso*, we continued east across a pasture toward Caño Mitiao Seco. Before reaching the *caño* bank we turned to the southeast and entered the gallery forest that flanks Caño Mitiao Seco.

VEGETATION: Gallery forest.

ARCHAEOLOGICAL REMAINS: Sr. Contreras, who currently lives north of Curbatí on the west side of the road to El Algarrobo (and has a house east of Caño Mitiao Hondo), reported seeing ceramics at the

former house site when he lived and farmed the *banco* to the south (see B88). We surveyed the *banco*, the edge of the *banco* east of the lime tree, and the bank of Caño Mitiao Seco, but we saw no ceramics. On the basis of Sr. Contreras's substantiated assessment of a site in the case of B88 (see B88), we decided to assign a number to this reported site and to locate it on the aerial photograph and topographic map. In view of the absence of mounded surface remains, we suspect that it is probably a third-order, Gaván-complex habitation site.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site-size estimate for this possible Gaván-complex habitation site.

DATE RECORDED: August 19, 1985.

B90

SITE NAME: Potrero Los Platos.

OTHER SITE DESIGNATION: Piedra Los Platos.

SITE LOCATION: The boulder with petroglyphs is located on the northeastern bank of Caño Los Platos, some 500 m west of the Curbaticito River (fig. 4.4). It is in a pasture designated the Potrero de Los Platos of the *fundo* owned by the Callejas family, which extends on the west side of Curbaticito River. Access to the *fundo* is by way of the *vía* El Algarrobo (from Curbatí). Just before the *caserío* of El Algarrobo, but after passing the Centro de Recría de Ovinos Tropicales, we took the turnoff to the west and across the Curbaticito River, past Fundo El Pionillo on the ridgetop to a big *cedro* tree (*Cedrela mexicana*) that marks the *fundo* of the Callejas family. The boulder with petroglyphs is located some 700 m (and across two pastures) at a bearing of S 70°W from the *fundo* house. From El Algarrobo, the boulder lies at a bearing of S 45°W.

VEGETATION: The carefully tended cattle pastures are dotted with trees. Secondary-growth lines the banks of Caño Los Platos



Fig. 4.301. Javier Fernández stands alongside the boulder bearing petroglyphs on its western face at B90 (Potrero Los Platos). This photograph is taken facing east.

(fig. 4.301). Maize is being cultivated in a field on the banks of the *caño*.

ARCHAEOLOGICAL REMAINS: Although Santana Parra of El Algarrobo had been recommended to us as a *baquiano* with whom to visit petroglyph sites on the west side of the Curbaticito River, he was not at his house in El Algarrobo, across the road from the *bodega*. A Sr. Chuy at the Callejas *fundo* accompanied us to the large boulder along Caño Los Platos. Caño Los Platos is named for the six sets of concentric circles carved on the western face of the boulder, also named the Piedra Los Platos (figs. 4.301, 4.302). Two other motifs are carved on the western surface of the boulder, alongside and north of the sets of concentric circles. One consists of rectangular spirals, and the other is a geometric element consisting of a pair of semicircles tipped at one end and containing two dots.

Sr. Chuy told us that the previous owners of the *fundo*, who own the *bodega* in El Algarrobo, reported finding ceramics in these

pastures when they were first cleared. We surveyed along the banks of Caño Los Platos and in the maize field but we saw no ceramics.

There may be other boulders with petroglyphs in this area, since another informant in El Algarrobo told us that Sr. Parra could take us to a “*piedra herrada*” beyond a manioc garden on the Caño Indio. Since Sr. Parra was not at home, we were unable to follow that lead.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: None.

SITE SIZE AND CLASSIFICATION: No site size; petroglyph site.

DATE RECORDED: August 20, 1985.

B91

SITE NAME: Fundo El Samán.

OTHER SITE DESIGNATIONS: Fundo El Mijao?; El Progreso.



Fig. 4.302. Close-up view of the petroglyphs carved on Piedra Los Platos (B90).

SITE LOCATION: The boulder with petroglyphs is located on the western bank of the upper Curbatí River to the northeast of El Algarrobo and adjacent to the *vega* of Fundo El Samán in El Progreso (fig. 4.4). We reached the *vega* of Fundo El Samán by a narrow mountain trail that links the Curbaticito and upper Curbatí drainages. The trail flanks a *caño* some 0.2 km north of El Algarrobo toward Pozo Negro in the Curbaticito River drainage, heading N 50°E and traversing two parallel mountain ridges, a *cañito*, and a third mountain ridge before dropping down onto the western *vega* in the upper Curbatí River (fig. 4.303). The hike took 45 minutes. This mountainous area is called El Progreso. The *vega* adjacent to the boulder on the western bank of the upper Curbatí River is part of Fundo El Samán, owned by Melesio Cuevas. We learned that El Progreso can also be reached by the *vía* east of the Curbatí River past Caño Azul, which crosses the upper

Curbatí River and hence is not feasible during the rainy season. Also, we were warned that the road is not in good shape, and that there are many *falsos* to deal with.

VEGETATION: This mountainous region is forested, but slash-and-burn agriculture is practiced on even the steepest slopes, as is some cattle ranching (fig. 4.303). The *vega* on the western bank of the upper Curbatí River had shoulder-high *monte*.

ARCHAEOLOGICAL REMAINS: Filomeno Avendaña, who lives in a house made of wooden boards with a thatch roof on a broad mesa after crossing a *caño* north of El Algarrobo on the Curbaticito River side of the road to Pozo Negro, guided us along the mountain trail to Fundo El Samán (B91). The boulder is one of the largest boulders lining the western side of the upper Curbatí River (fig. 4.304). On the boulder's northwestern face are carved a cluster of birds or bats in flight together with some clusters of coupled points and



Fig. 4.303. On the mountain trail that links the Curbaticito and upper Curbatí rivers we passed *conucos* of maize, manioc, and plantains on the steepest of slopes.

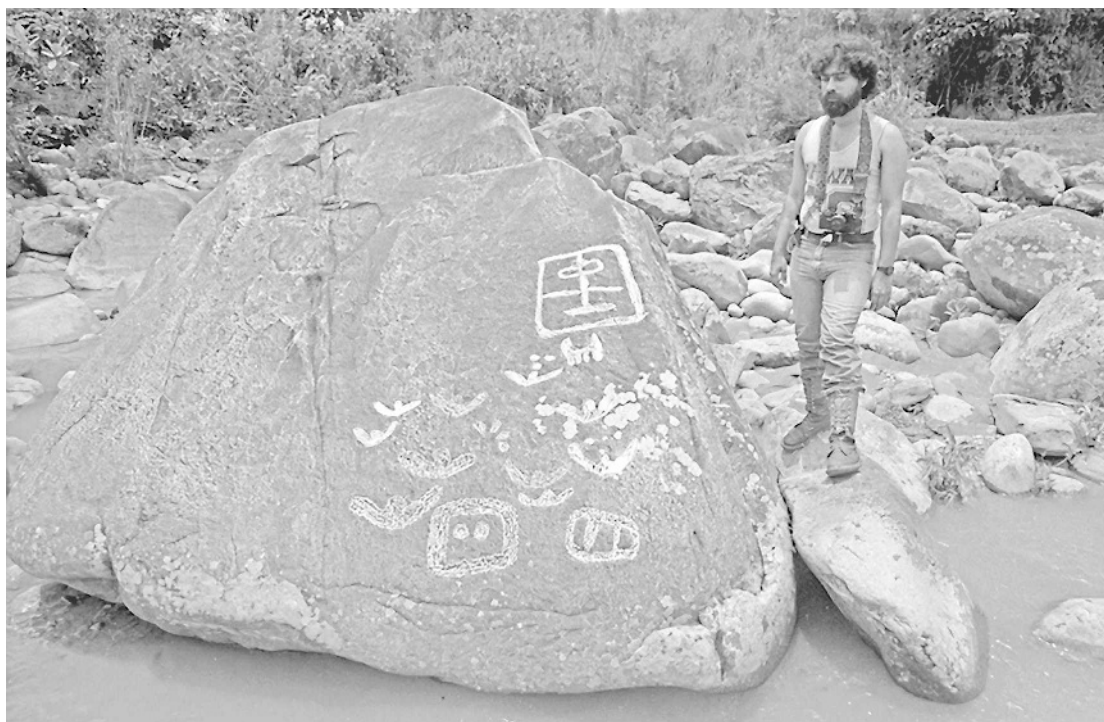


Fig. 4.304. Rafael Gassón stands next to the boulder with petroglyphs (B91) on the western bank of the upper Curbatí River, facing southeast.

three cartouches. The largest motif is a rectangular anthropomorphic face or mask carved above the other figures (figs. 4.304, 4.305). Below it is a possible zoomorphic quadruped shown in profile. At the bottom are two cartouches; the oval-shaped cartouche on the right contains two vertical lines; the nearly square-shaped cartouche on the left contains two coupled points (figs. 4.304, 4.305). These cartouches and the numerous birds or bats in flight show stylistic similarities with some of the petroglyphs carved on the large boulder downstream at B20, where our test excavations yielded evidence of Curbatí-complex and Caño Seco-complex occupations (see B20).

We learned from Melesio Cuevas that, when trees were cleared or fence posts were inserted on the adjacent *vega* west of the boulder, ceramics were recovered at a depth of approximately 20 cm below the ground surface. Unfortunately, the *monte* on the *vega* was shoulder high, making it difficult to search for any surface remains on its

2 ha. When we returned to the *fundo* house, the Cuevas family gave us some thick-walled (Caño Seco-complex?) ceramics that they recovered in their “*solar*”, a term that is generally used to designate the lot on which a house is constructed, the patio, or the backyard. The ceramics were retrieved from the surface or from subterranean deposits as deep as 40 cm below the ground surface.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: The ceramics from the *fundo* house at Fundo El Samán were assigned B91-0089, even though the house is about 0.5 km from the Curbatí River where the boulder lies.

SITE SIZE AND CLASSIFICATION: A possible 2 ha habitation (Caño Seco-complex?) site on the *vega* adjacent to the boulder with petroglyphs, and a smaller habitation site (0.5 ha?) on the terrace where the *fundo* house is situated.

DATE RECORDED: August 20, 1985.



Fig. 4.305. Close-up view of the northwest face of the boulder with petroglyphs at B91.

B92

SITE NAME: Fundo El Milagro.

OTHER SITE DESIGNATION: None.

SITE LOCATION: Site B92 is located on a *banco* on the east bank of Caño Mitiao Seco, in the modern-day settlement known as El Banquito, roughly 0.75 km southwest of Curbatí (fig. 4.2). The site extends across the fields of manioc and plantains on Fundo El Milagro, owned by Elio Rojas.

Fundo El Milagro is accessible by way of the *vía* that heads south from Curbatí along the eastern bank of the Caño Mitiao Seco and after the Caño Mitiao Seco's junction with the Caño Mitiao Hondo, along the eastern bank of the Caño Mitiao Hondo. We have proposed that this *vía* follows an ancient causeway (Calzada A) emanating from the Gaván-phase regional center of El Gaván (B12) (fig. 4.2) (Spencer and Redmond, 1998: 101).



Fig. 4.306. Surveying the *banco* at Fundo El Milagro (B92), facing northwest, toward the *platanal* along the western edge of the *banco* where we recovered Gaván-complex ceramics. Gallery forest flanks the Caño Mitiao Seco in the background.

VEGETATION: Most of the *banco* owned by Fundo El Milagro is under the cultivation of plantains, manioc, and cacao. There is some pasture, and the Caño Mitiao Seco is lined with gallery forest (figs. 4.306, 4.307).

ARCHAEOLOGICAL REMAINS: We visited Fundo El Milagro on various occasions in August 1985 during our survey of Caño Mitiao Hondo and Caño Mitiao Seco. The son of Elio Rojas had accompanied us to the Caño Mitiao Hondo to examine some rises or “*mesetas de los indios*”, which did consist of rises of sandy soil and old watercourses, but we saw no artifactual remains. On further inspection, these rises may prove to be ancient drained fields (see Spencer et al., 1994), although we did not recognize them as such in the field. On a later visit, we learned from Sr. Rojas that when a drainage ditch was being dug for a cacao grove on the edge of a *laguna*, one of the oxbow formations east of the present-day *caño* (Caño Mitiao Hondo or

Caño Mitiao Seco?), a polished-stone ax and a ceramic vessel (*olla*) were encountered at about 1.5 m below the ground surface. He reported that ceramics had been seen on the surface down to roughly 1 m below the ground surface along the banks of the *caño*, but we saw nothing on the surface during our survey.

We surveyed the *banco* east of the Caño Mitiao Seco and recovered Gaván-complex sherds in the holes of harvested manioc plants in the *platanal* south of his house (fig. 4.307), on the ground surface to a depth of 20 cm (B92-0091). Sr. Rojas told us about two other places along the edge of the *banco* to the south where he had seen ceramics, but we would have to return another day for him to accompany us. We returned three days later to continue the survey of Fundo El Milagro and returned to the southern end of the *platanal*. There we recovered more sherds from a recently harvested 1 ha manioc garden, which we



Fig. 4.307. Searching for ceramics in the holes of recently harvested manioc plants in the *platanal* south of Elio Rojas's house at Fundo El Milagro (B92). This photograph was taken facing north.

added to the existing surface collection (B92-0091). Sr. Rojas told us that he found sherds all along the edge of the *banco*, from his house to the north, and south of the *platanal* where the ceramics had been collected into an adjacent pasture, from the surface to a depth of 20 cm. We surveyed the entire *banco* (fig. 4.306) but recovered a few more sherds only from the recently uprooted manioc plants in the *platanal*. In the field we considered the ceramics to be of the Chuponal complex, but in the lab they were determined to be Gaván-complex ceramics (table 4.1). Although the extent of Sr. Rojas's reports of ceramics could make for a maximum possible site size of < 20 ha, we drew 3.125 ha of occupation on the aerial photograph. We also indicated the 1 ha area where the sherds were recovered. While the site's full extent is not yet known, we do know that this non-mound settlement lay along the causeway that connected the regional center of El Gaván with

lower-order settlements to the northwest (fig. 4.2).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: Surface collection B92-0091 is the sample of Gaván-complex ceramics recovered in the holes of the recently harvested manioc plants in the *platanal* (table 4.1).

SITE SIZE AND CLASSIFICATION: 3.125 ha drawn on aerial photograph, but site may extend over < 20 ha; third-order, Gaván-complex habitation site. There is also the possibility that drained fields remain to be verified here.

DATES RECORDED: August 15, 19, and 22, 1985.

B93

SITE NAME: Fundo La Defensa.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site is located on a *banco* some 300 m west of the Caño



Fig. 4.308. María Andueza G. and Rafael Gassón recover burned daub in the trail that ascends the edge of the *banco* at B93. This photograph is taken facing southeast from the *banco* across the lower *vega* to the bamboo-lined Caño Mericacoy in the distance.

Mericacoy that overlooks an expanse of *vega* that is broken by numerous former courses of the *caño* (fig. 4.5). It lies on Fundo La Defensa that is owned by Comisario Juan Rivas of the *caserío* of Anime Dos. Sr. Rivas lives next door to the school in Anime Dos, on the west side of the *vía* Chuponal from the Panamerican highway south to Anime Dos that flanks the Caño Mericacoy, some 2.75 km south of the highway. But his Fundo La Defensa lies to the east across the *vía* from his present house.

VEGETATION: The *banco* is being cleared for the cultivation of cacao and plantains. The *vega* below is largely covered with *monte*, and bamboo trees line the Caño Mericacoy (fig. 4.308).

ARCHAEOLOGICAL REMAINS: Comisario Rivas reported seeing sherds on his Fundo La Defensa, and he showed us a whole *metate* in the patio of his present house

(fig. 4.309), which he had recovered in his property east across the *vía* and painted blue. The *metate* measures 58 cm long, 41 cm wide, and 11 cm thick. We crossed the *vía* and surveyed the *banco* on Fundo La Defensa, the *banco* edge, and the cacao grove. In a trail that ascends the eastern edge of the *banco* we recovered some burned daub or burned adobe less than 20 cm below the ground surface (fig. 4.308). We planned to resurvey the *banco* in the dry season, after Sr. Rivas cleared more of the *banco* for cultivation.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: The burned daub or adobe collected along the trail at the edge of the *banco* was designated (B93-0092).

SITE SIZE AND CLASSIFICATION: 1.87 ha drawn on aerial photograph; Chuponal-complex site?



Fig. 4.309. The whole *metate* that we photographed in Sr. Rivas's house came from his Fundo La Defensa across the *via* to the east (B93). The *metate* measured 58 cm long, 41 cm wide, and 11 cm thick.

DATE RECORDED: August 22, 1985.

B94

SITE NAME: Fundo La Florida.

OTHER SITE DESIGNATION: None.

SITE LOCATION: The site is located on the *banco* overlooking the *vega* west of the Caño Mericacoy (fig. 4.5). The site lies on the eastern edge of Fundo La Florida, owned by Sr. Paredes. Fundo La Florida extends on the west side of the Caño Mericacoy and east of the *caserío* Anime Dos. It is directly southeast of Fundo La Defensa of Juan Rivas (see B93) and is the final house on this *via* Chuponal along the western bank of the Caño Mericacoy.

VEGETATION: A pasture dotted with palm trees.

ARCHAEOLOGICAL REMAINS: From the *fundo* house we headed southeast to the edge of the *banco* overlooking the expanse of *vega* west of the Caño Mericacoy. We



Fig. 4.310. The site of B95 lies on a remnant river terrace east of the Caño Mericacoy that is surrounded by oxbow channels and that is currently under the cultivation of plantains, manioc, maize, and *ñame*. This photograph is taken from the terrace facing west toward the Caño Mericacoy.



Fig. 4.311. *Metates* at B95 (La Vega del Caño Mericacoy). The whole *metate* on the right of this photograph measures 42 cm long and 35 cm wide; the fragment on the left side measures 25 cm wide.

collected a sherd, a fragment of adobe, and some metal fragments that belong to the colonial-period Chuponal complex (B94-0093). We estimate the site's size at ≤ 1 ha and interpret the site as an isolated household.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B94-0093.

SITE SIZE AND CLASSIFICATION: ≤ 1 ha; isolated household of the Chuponal complex.

DATE RECORDED: August 23, 1985.

B95

SITE NAME: La Vega del Caño Mericacoy.

OTHER SITE DESIGNATION: Fundo La Florida.

SITE LOCATION: Site B95 is located on a remnant river terrace on the *vega* east of the Caño Mericacoy, which is surrounded by oxbow courses of the Caño Mericacoy. It forms part of Fundo La Florida that is owned by Sr. Paredes, whose *fundo* house lies on the *banco* west of the Caño Mericacoy on the *vía* Chuponal past the *caserío* Anime Dos (see B94).

VEGETATION: The *vega* is planted in plantains, manioc, maize, and *ñame* (*Dioscorea alata*) (fig. 4.310).

ARCHAEOLOGICAL REMAINS: We were shown the fragments of what may be a single Caño Seco-complex ceramic vessel lying just below the ground surface on the river terrace (B95-0094). We also photographed two *metates* here (fig. 4.311). The whole *metate* measured 42 cm long and 35 cm wide and had a shallow grinding basin; the *metate* fragment measured 25 cm wide.

SITE MAP: None.

DISTURBANCE: The site sits on a remnant river terrace surrounded by oxbow channels on its northern, eastern, and southern sides that are subject to flooding and erosion.

SURFACE-COLLECTION DATA: B95-0094.

SITE SIZE AND CLASSIFICATION: 0.62 ha drawn on aerial photograph; Caño Seco-complex habitation site.

DATE RECORDED: August 23, 1985.

B96

SITE NAME: Fundo Los Cerritos.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B96 is located on the western edge of a *banco* that overlooks the broad *vega* east of the Canaguá River and lies west of the Caño Guabinas on the Sabanas El Cerrito (fig. 4.2). A household compound designated Fundo Los Cerritos occupies the site today. Fundo Los Cerritos is home to the Morán family and belongs to the larger Fundo El Gaván owned by Lucio Laviano of Maracay. During our seasons of excavation at El Gaván (B12) in 1986 and 1988, we left our tools at Fundo Los Cerritos. This is also where we processed our flotation samples. B96 lies 0.75 km southeast of the regional center of El Gaván (B12) and on the southwestern side of the pre-Hispanic causeway (Calzada G) that heads in a southeasterly direction from B12 (figs. 4.312, 4.313).

VEGETATION: Savanna grassland.

ARCHAEOLOGICAL REMAINS: When we brought in our tools to store at Fundo Los Cerritos at the end of one of our first days of excavation at El Gaván in January 1986, we noticed a few Gaván-complex sherds and chipped stone in the *solar* of the *fundo* house (B96-0095). We surveyed



Fig. 4.312. The site of B96 sits on a *banco* occupied by Fundo Los Cerritos. The pre-Hispanic causeway to El Gaván (B12), 0.75 km to the northwest, is evident behind the *fundo* house.



Fig. 4.313. The site of B96 is overlaid by the modern-day household compound of Fundo Los Cerritos. This photograph of Fundo Los Cerritos is taken facing east.

the *banco* and along the edge of the *banco* but did not find further surface remains in the pastures north, south, and west of the house (figs. 4.312, 4.313). We estimated that the Gaván-complex settlement ranged in size between 1–3 ha. The site is situated directly southwest and along a causeway (Calzada G) that emanates from the regional center of El Gaván (B12) in a southeasterly direction over a distance of 5.75 km to site B25 (figs. 4.2, 4.312, 4.313) (Spencer and Redmond, 1998: 101).

SITE MAP: None.

DISTURBANCE: The modern-day occupation of the *banco* is evidently exposing sub-surface deposits in places.

SURFACE-COLLECTION DATA: The little material recovered from the *solar* at Fundo Los Cerritos was designated B96-0095 (table 4.1).

SITE SIZE AND CLASSIFICATION: 1.25 ha drawn on aerial photograph, but site may extend over 3 ha; third-order, Gaván-complex habitation site.

DATE RECORDED: January 27, 1986.

B97

SITE NAME: Potrero de Elías.

OTHER SITE DESIGNATION: Fundo El Gaván.

SITE LOCATION: B97 is located along the westernmost edge of a *banco* on the Sabanas El Cerrito overlooking the eastern *vega* of Caño Mitiao Hondo and some 0.22 km southwest of the regional center of El Gaván (B12) (figs. 4.2, 4.317). The site is approximately 0.37 km northeast of Caño Mitiao Hondo and a little over 1.5 km northeast of the Canaguá River. The same oxbow course (*madrevieja*) of the Caño Mitiao Hondo that has damaged the northwestern quadrant of El Gaván (see B12) delimits the northern and eastern borders of B97 (figs. 4.314, 4.318). Like B12 (El Gaván), site B97 (Potrero de Elías) is on Fundo El Gaván, owned by Lucio Laviño O. of Maracay. One can reach B97 from the western leg of B12's oval causeway by walking on a causeway (designated Calzada F) that heads in a southwesterly direction to B97 (fig. 4.2) (Spencer and Redmond,

1998: fig. 4, 100). On reaching a fence that traverses the causeway, follow the fence line south to the southern corner of the *potrero* where a *falso* permits entry to the Potrero de Elías. This *potrero* is named for Elías Gutiérrez, whose property abuts it north of the *madrevieja* and northwest.

VEGETATION: The Potrero de Elías is on savanna grassland. In 1986, the *potrero* was overgrown with tall, thick clusters of *estoraque*. One of our workmen remarked that if left in this condition, the *potrero* would be nearly impenetrable in two years' time.

ARCHAEOLOGICAL REMAINS: In January 1984, we surveyed west of B12 to the edge of the *banco* occupied by B97 (fig. 4.315). In the tractor or bulldozer road cut that leads from the northwestern corner of the Potrero de Elías down to the *madrevieja*, we made a surface collection (B97-0022) (fig. 4.314). This disturbed area yielded abundant Gaván-complex ceramics and chipped stone on the ground surface.

On initiating the program of test excavations at B12 in January 1986, we learned that site B12 was contained within its oval causeway. This meant that the material recovered in the road cut in the Potrero de Elías in 1984 belonged to a separate settlement, linked by causeway with B12. We spent several weeks in February 1986 carrying out a program of mapping and test excavations at Potrero de Elías. The results of the test excavations will appear in a future volume (Spencer and Redmond, n.d.).

Potrero de Elías (B97) is a second-order site with mounded architecture, linked by causeway to the regional center of El Gaván (B12). Mound A is the largest mound, oval in shape, with basal dimensions of 50 m long and 35 m wide (fig. 4.314). A ramp or causeway measuring 7–10 m wide and 50 m long projects from Mound A's eastern base. Mound A is 2.5 m tall, and its top surface measures roughly 12 m long and 6.5 m wide (fig. 4.316).

Mound B lies 100 m northwest of Mound A (fig. 4.318). Mound B is circular in shape and has a basal diameter of 30 m. Mound B is 0.85–1.00 m tall and its top surface measures 5 m long by 5 m wide.

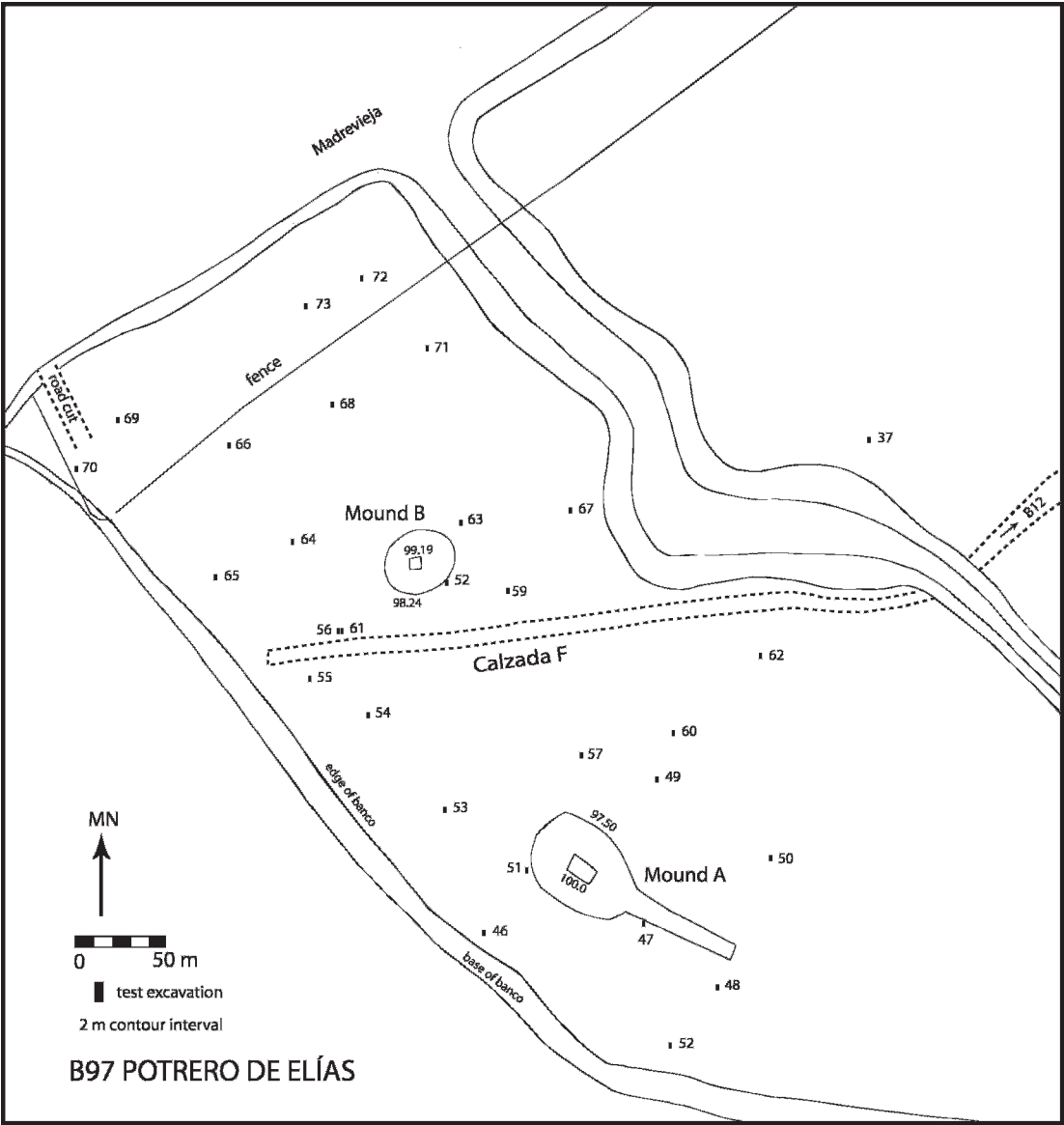


Fig. 4.314. Topographic map of El Potrero de Elías (B97) at 1:1,000 scale, showing the site’s major mounds, earthworks, and the numbered test pits.

Between Mound A and Mound B runs a causeway (Calzada F) that leads from the western *calzada* at B12 at a bearing of S 45°W for a distance of 400 m. The 7 m-wide *calzada* heads past Mound A and Mound B and continues in a westerly direction to about 10 m from the edge of the *banco* (figs. 4.314, 4.319).

Additional mounds and earthworks may appear when the Potrero de Elías is cleared of its tall overgrowth and stands of *estoraque*. During our program of mapping and test excavations we noted ceramics and chipped stone eroding from the western edge of the *banco*, but we did not make any additional surface collections.



Fig. 4.315. View from the northwestern edge of *banco* at B97 east toward El Gaván (B12) in the distance in January 1984. Mound B at B97 is visible in the right middle ground of this photograph. Mound A at B12 is visible in the distant right.

The program of test excavations, the results of which will be reported on in a future volume (Spencer and Redmond, n.d.), revealed that the occupation at B97 extended along the edge of the *banco* and south and west of the *madrevieja*. T.037 was placed on the northeast side of the 2–3 m-deep *madrevieja* that we thought defined the settlement's northeastern limit and proved to be sterile (fig. 4.314).

SITE MAP: Figure 4.314. Topographic map at 1:1,000 scale that shows B97's mounds, earthworks, and the locations of our test excavations.

DISTURBANCE: The northern edge of the *banco* by the road cut has been modified with a tractor or bulldozer. The disturbance here may have been part of the bulldozing operation by a previous landowner by the name of Gavilán (see B98).

SURFACE-COLLECTION DATA: B97-0022 was made in the area of the road cut, where the disturbance produced by a tractor or bulldozer yielded an unusually heavy distribution of surface remains (table 4.1). A figurine fragment recovered from here was designated B97-0023.

SITE SIZE AND CLASSIFICATION: 5 ha drawn on aerial photograph; second-order, Gaván-complex habitation site.

DATES RECORDED: January 5, 1984; February 6–7, 1986.

B98

SITE NAME: Carretera de Gavilán.

OTHER SITE DESIGNATION: Fundo La Fijanza.

SITE LOCATION: B98 is located on an elongated *banco* northwest of the former



Fig. 4.316. Program of mapping and test excavations at B97 in February 1986. Spencer is at the plane table on top of Mound A while T. 047 is excavated at the southern base of the mound's south-eastern projection. This photograph is taken facing northwest.

course (*madrevieja*) of the Caño Mitiao Hondo that has partially destroyed the northwestern quadrant and a section of the outer *calzada* of B12 (El Gaván) (fig. 4.2). The site lies south and southwest of the road that a previous landowner in the area by the name of Gavilán had built, which passes between Fundo La Fianza of Renato Gudiño and the *fundo* of Elías Gutiérrez (fig. 4.320). Sr. Gutiérrez's house is the next entry south of Gavilán's road after passing to the west of the red metal gate (*portón*) south of Renato Gudiño's house.

VEGETATION: The *banco* had recently been cleared of its *monte* and was being used for pasture. Many palm and hardwood trees are present, including a giant *ceiba* tree on the eastern side of the *banco* (fig. 4.321).

ARCHAEOLOGICAL REMAINS: When we visited Renato Gudiño in January 1984, we had collected sherds from the southern

slope of the road built by Sr. Gavilán, some 25 m west of the *falso* at Renato Gudiño's house (B98-0029). At the time, we thought this might just be the northern end of site B12 (El Gaván). The material along the road seemed to be a secondary deposit that had originated from a *préstamo* to the south (figs. 4.320, 4.321).

While carrying out the test excavations at Potrero de Elías (B97) in February 1986, Elías Gutiérrez's son had told us that he had recovered ceramics in a pasture on their *fundo*, south of Gavilán's road. When we returned to Gavilán's road to survey the area south of it, we once again located Gaván-complex ceramics and chipped stone on the south slope of Gavilán's road, up to 100 m west of the red metal gate at Renato Gudiño's house. We also recovered material on the eastern slope of a *préstamo* south of the road, which had been created by the road-building operation. We pro-



Fig. 4.317. View from the top of Mound A at Potrero de Elías (B97) facing toward El Gaván (B12) at a bearing of N 60°E. Mound A at El Gaván is prominent in the distant right.



Fig. 4.318. View from the top of Mound A at Potrero de Elías (B97) facing northwest toward forested *madrevieja* that delimits the site on the north. A workman is standing on the causeway (Calzada F) that runs between Mound A and Mound B to the northwest. The latter, 0.85–1.00 m-tall Mound B is obscured by stands of *estoraque*. T. 051 is under way at the northwestern base of Mound A in the left foreground of the photograph.



Fig. 4.319. View from the top of Mound A at Potrero de Elías (B97) facing west toward the forested Caño Mitiao Hondo. T. 051 is under way at the base of Mound A in the foreground of this photograph.

ceeded to the *fundo* house of Elías Gutiérrez, some 250 m southwest of Gavilán's road, and surveyed the *banco* (fig. 4.321) south of the road. It became clear that the material recovered along the southern slope of Gavilán's road had been bulldozed from the western slope of this *banco*. The site extends across the *potrero* south of the disturbed area, on the top and the western slope of the elongated *banco*, northwest of the former course (*madrevieja*) of Caño Mitiao Hondo. The recently cleared surface of the *banco* and its western slope yielded a moderately dense distribution of Gaván-complex ceramics, chipped stone, and burned daub (B98-0096).

SITE MAP: None.

DISTURBANCE: Sr. Gavilán's road-building operation with a bulldozer has damaged the western slope of the *banco* on which B98 lies.

SURFACE-COLLECTION DATA: B98-0029 was the surface collection made along the

southern slope of Gavilán's road in 1984. B98-0096 is the surface collection made in 1986 along the southern slope of Gavilán's road and from the top and western slope of the *banco* after it had been cleared of secondary growth (table 4.1).

SITE SIZE AND CLASSIFICATION: 1.25 ha; third-order, Gaván-complex habitation site.

DATES RECORDED: January 6, 1984; February 27, 1986.

B99

SITE NAME: Fundo Bello Monte.

OTHER SITE DESIGNATION: Fundo Buenos Aires.

SITE LOCATION: The site of Fundo Bello Monte is situated on a *banco* that forms the eastern bank of the Caño Mericacoy in the area of Chuponal between Curbatí and Chuponal Alto (figs. 4.2, 4.3, 4.5). The site can be reached by taking the dirt road or *via* Chuponal southwest from Curbatí



Fig. 4.320. The site of B98 lies on the *banco* south and southwest of the road built by Sr. Gavilán. In this photograph taken from the top of the road facing east, the site lies to the right (south) and across the road from Renato Gudiño's house, which is visible on the left side of the road.



Fig. 4.321. The site of B98 extends on top of the *banco* south of Gavilán's road. In the photograph of the western edge of the *banco*, taken facing east, Redmond can be seen standing on top of the *banco*, which had been recently cleared of its overgrowth, but its many palm and hardwood trees, including a giant *ceiba* on the eastern side of the *banco* still stand.



Fig. 4.322. Test excavation T. 119 at Fundo Bello Monte (B99) yielded Chuponal-complex ceramics. The Andrade family's cattle corral and orchard are visible in this photograph taken facing west toward the edge of the *banco* and the Caño Mericacoy.

that originally went to Pedraza (Ciudad Bolivia) for a distance of approximately 8 km. The dirt road crosses three *caños* (Caño Mitiao Seco, Caño Mitiao Hondo, and Caño Anime) en route to the Caño Mericacoy. The site is on the property of Fundo Bello Monte, which prior to 1985 was designated Fundo Buenos Aires (see B21). The renaming of Fundo Buenos Aires followed the death of its owner, Gervasio Andrade, and the inheritance of the *fundo* by his four sons and daughter. One of Gervasio Andrade's sons, Mauro Andrade, lives in the *fundo* house, which is located on the eastern bank of the Caño Mericacoy and on the south side of the *vía* Chuponal, directly adjacent to the pastures across which the mound site extends. At the point where the dirt road from Curbatí makes a sharp turn to the west to reach the Caño Mericacoy, the *fundo* house is visible on the south side of the road.

VEGETATION: The site underlies the *solar*, *platanal*, and orchard adjacent to the *fundo* house and extends into the pasture directly south of the house (fig. 4.322).

ARCHAEOLOGICAL REMAINS: In the process of carrying out the program of test excavations at the nearby Gaván-complex site of Buenos Aires (B21), we determined that the Gaván-phase mound site B21 does not extend as far west as the edge of the *banco*, where the *fundo* house lies (see B21). Our original surface collection at Fundo Buenos Aires (B21/B99-0079) consisted largely of Caño Seco and Chuponal-complex ceramics recovered in the courtyard of the *fundo* house and along the edge of the *banco* to the west and south of the *fundo* house, but it also included a few Gaván-complex sherds recovered from a tractor trail across the pasture east of the *fundo* house, and hence represents a mixed provenience of some Gaván-com-



Fig. 4.323. Site B100 lies along the *caño* that passes north and east of the *fundo* house at Fundo Mata Verde. The photograph was taken facing southwest toward the *fundo* house of Oscar Callejas.

plex ceramics, many Caño Seco-complex ceramics, and some Chuponal-complex ceramics (table 4.1). This mixed surface collection included some chipped stone and polished-stone artifacts. Moreover, one of our test excavations in the pasture south of the *fundo* house (T. 098) yielded a few Gaván-complex ceramics and many Caño Seco-complex ceramics in the second level of excavation (B21/B99-0286) (Spencer and Redmond, n.d.; Redmond and Spencer, n.d.). In view of the uninhabited area revealed by our test excavations between B21 and the edge of the *banco*, we are not sure exactly what the Gaván-complex ceramics in the second level of T.098 represent in terms of a Gaván-phase occupation on the edge of the *banco*. The remaining three test excavations (T. 119, T. 120, and T. 121) located closer to the *fundo* house to the north yielded two—and in one case, three—levels of Chuponal-complex deposits (fig. 4.322) (Spencer and Redmond, n.d.). We propose that there might have

been a small, third-order, Gaván-complex habitation site on the edge of the *banco* and a 2.5-ha Chuponal-complex site.

SITE MAP: Figure 4.134. The topographic map of Buenos Aires (B21) at 1:1,000 scale, shows the locations of the numbered test excavations associated with B99.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B21/B99-0079 (table 4.1).

SITE SIZE AND CLASSIFICATION: 2.5 ha; a third-order, Gaván-complex habitation site of 0.5–1.0 ha, and a 2.5 ha Caño Seco- and Chuponal-complex habitation site.

DATES RECORDED: August 23, 1983; July 30, 1985; March 13, 1986.

B100

SITE NAME: Fundo Callejas.

OTHER SITE DESIGNATION: Fundo Mata Verde (see B81).

SITE LOCATION: The site of B100 lies on a prominent *banco* that overlooks a broad



Fig. 4.324. View of a trench being excavated along the northern bank of the *caño* to reroute the *caño* away from the corral, facing west. Gaván-complex ceramics were being brought up by the excavation of the trench from a deposit 10–40 cm below the present-day ground surface.

expanse of alluvium northeast of the Canagüá River, between the Caño Mericacoy to the west and the Caño Caripito to the east (fig. 4.2). Caño Caripito is designated Caño de Piedra on the topographic map of the region, and we learned that the *caño* is notable for the gravelly rock in its bed. The site lies on the grounds of the *fundo* house of Fundo Mata Verde, owned by Oscar Callejas. Lying directly east of Fundo Santa Rosalía, on which site B78 lies, site B100 can be reached by way of the dirt road or *via* Chuponal southwest from Curbatí that originally went to Pedraza (Ciudad Bolivia) for a distance of approximately 8 km. The dirt road crosses three *caños* (Caño Mitiao Seco, Caño Mitiao Hondo, and Caño Anime) en route to the Caño Mericacoy. At the point where the dirt road from Curbatí makes a sharp turn to the west just before it fords the Caño Mericacoy and the *fundo* house of Fundo

Bello Monte (see B21 and B99) is visible on the south side of the road, there is a road that heads to the east, through a *falso* (barbed-wire gate). The road circumvents the northernmost mound at B21 and a *mata*, and continues on top of a prehistoric causeway that emanates from B21, which we designated Calzada C (fig. 4.2) (Spencer and Redmond, 1998: fig. 3, 101) and which leads off to the east-southeast at a bearing of E 12°S for 5 km in the direction of the Caño Mitiao Hondo (fig. 4.140). At a distance of 1.4 km from B21, after passing through another *falso*, one reaches a fork. Turn left, cross another *falso*, and continue northward toward the *fundo* house of Oscar Callejas.

VEGETATION: The area is pasture grassland, although a plantain garden lies west of the *fundo* house.

ARCHAEOLOGICAL REMAINS: When we surveyed the *banco* in August 1985 and

visited Sr. Callejas's Fundo Mata Verde for the first time, he told us that a ranch hand had encountered two whole ceramic vessels at a depth of about 40 cm below the ground surface along the fence about 50 m southwest of the *fundo* house (fig. 4.323). We surveyed the patio of the *fundo* house, along the fence to the southwest, and along the banks of the *caño* (an unnamed tributary of the Caño Caripito or Caño de Piedra?) directly north of the corral but recovered only two minute, unrecognizable sherds, too questionable to assign a surface-collection designation. From the patio we picked up mainly fragments of brick.

During the program of test excavations at B21 (Buenos Aires) and B99 (Fundo Bello Monte), we returned to Oscar Callejas's property, which extends as far west and south and abuts the Andrade family's Fundo Bello Monte. We wanted to follow up on Sr. Callejas's previous report of a site northeast of his *fundo* house along the Caño Mitiao Hondo, a site that he recommended we should visit in the dry season. Sr. Callejas was not there, but Pedro Alvarez was there. Sr. Alvarez had accompanied us on our original forays across the Callejas properties on the *banco* in August 1985, when we had located sites B78 and B81. Sr. Alvarez and the *encargado* of Fundo Mata Verde were on the north side of the *fundo* house, excavating a trench to reroute the unnamed *caño* that passes directly north and east of the corral (figs. 4.323, 4.324). In the process of excavating the trench, they were shoveling deposits containing Gaván-complex ceramics, a figurine fragment, and chipped stone and flinging them into the existing *caño* bed, whose southern bank was approaching the corral fence (fig. 4.324). The material derived from a brown-gray layer about 10–40 cm below the ground surface, and above a sterile layer that was tan-yellow in color. The material we collected from their trench constitutes surface collection B100-0097, to which we planned to add the two sherds collected southwest of the *fundo* house along the fence that runs parallel to the entry road from the gate to the *fundo* house in August 1985.

We estimated that this third-order habitation site extended over some 2 ha. Site B100 is located on the same *banco* as B81, only to the northwest.

SITE MAP: None.

DISTURBANCE: The *caño* that is being rerouted evidently cuts through the Gaván-phase settlement.

SURFACE-COLLECTION DATA: B100-0097 is the material collected from the trench along the *caño* that passes directly north and east of the *fundo* house. Two small sherds were collected on a previous visit along the fence southwest of the *fundo* house, and were going to be added to this surface collection (table 4.1).

SITE SIZE AND CLASSIFICATION: 1.25 ha; third-order, Gaván-complex habitation site.

DATES RECORDED: August 8, 1985; March 19, 1986.

B101

SITE NAME: Fundo La Esperanza.

OTHER SITE DESIGNATION: None.

SITE LOCATION: B101 is located on a *banco* overlooking an expanse of *vega* west of the Caño Anime (fig. 4.2). It lies on Fundo La Esperanza, owned by Enevina Molina, who lives in Pedraza (Ciudad Bolivia). Fundo La Esperanza is accessible by a dirt road leading south of the Panamerican highway; traveling west, the entrance to the *fundo* is the first turnoff after the bridge over the Caño Anime. Pass a metal gate and proceed southeast to the *fundo* house and associated corral with a corrugated tin roof, which are perched on the edge of the *banco* approximately 2.25 km southeast of the highway.

VEGETATION: The *banco* is a fallow pasture, and there are some hardwood trees along the eastern edge of the *banco* (fig. 4.325).

ARCHAEOLOGICAL REMAINS: José Sensión Odriozola, who lives on the east bank of Caño Anime (see B87), had reported seeing an area of burned daub, measuring roughly 1 m by 1 m, some 100 m north of the *fundo* house at Fundo La Esperanza in 1979. He accompanied us to Fundo La Esperanza and showed us the area on top



Fig. 4.325. The road leading to Fundo La Esperanza (B101) from the northwest was the only area on the *banco* where we recovered Gaván-complex ceramics. The photograph is taken facing east toward the *vega* and Caño Anime. Moments after the photograph was taken, a swarm of African “killer” bees passed overhead, making us dash to take cover in our field vehicle.

of the *banco* where he had seen the burned daub feature. He did not mention having seen any ceramics. We surveyed the top of the *banco*, the edge of the *banco*, and in the patio of the *fundo* house but did not see any ceramics. The current *encargado* and his family had not encountered any ceramics, either. Only in the road leading to the *fundo* house from the northwest did we collect two Gaván-complex body sherds (fig. 4.325). They were assigned surface collection B101-0099 (table 4.1).

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B101-0099 represents the small sample of sherds collected in the road north of the *fundo* (table 4.1).

SITE SIZE AND CLASSIFICATION: 1.25 ha; third-order, Gaván-complex habitation site.

DATE RECORDED: April 28, 1986.

B102

SITE NAME: Fundo Valle Verde.

OTHER SITE DESIGNATION: Caño El Quebradón.

SITE LOCATION: B102 is situated on an alluvial terrace some 300 m east of the upper Curbatí River and west of Caño El Quebradón. The 15 m-high terrace overlooks a patch of *vega* along the east bank of the river (fig. 4.3). The site lies on Fundo Valle Verde, owned by Rafael Clarencio González. We reached Fundo Valle Verde by taking the road along the east side of the upper Curbatí River to approximately 1 km past Fundo El Sanare (B103) of Luis Mora Neumann, who lives just beyond Caño El Arenoso, roughly 2.7 km north of Caño Azul. We left the car at Pablino Quintero's house, which is located on the east side of the road, and crossed the



Fig. 4.326. View of alluvial terrace northwest toward *vega* and Curbatí River below on which Fundo Valle Verde (B102) is located. The *fundo* house is immediately north of one of the large boulders on the terrace, none of which bear petroglyphs on their surfaces.

road west toward the Curbatí River. We descended the piedmont ridge, crossed the Caño El Quebradón, and passed through a *falso* before ascending a 15 m-tall terrace. We headed in a northwesterly direction and passed through another *falso* on top of this broad alluvial terrace to enter Fundo Valle Verde. The site lies on this terrace dotted with a number of large boulders. The *encargado* of Fundo Valle Verde is Antonio Moreno. Sr. Moreno lives in the *fundo* house built of concrete blocks, located directly north of one of the boulders.

VEGETATION: The alluvial terrace is covered with pasture grass (fig. 4.326). Luis Mora Neumann, who used to own this property, told us that he had planted rice and maize on the terrace.

ARCHAEOLOGICAL REMAINS: Accompanied by Luis Mora Neumann and Pablino Quintero, we reached the terrace and began

by examining the large boulders. We saw no petroglyphs on any of the boulders. Sr. Mora told us that when he cleared the terrace to plant rice, maize, and *pasto*, he had exposed ceramics. While we were checking all the boulders, Sr. Quintero and Sr. Mora began probing with a *barretón* and a machete in several places on the *pasto*-covered terrace and turned up Caño Seco-complex ceramics at about 30 cm below the ground surface (B102-0450) (figs. 4.326, 4.327). In the courtyard of the *fundo* house to the north we also collected some sherds, which we added to the sample of ceramics from the probes in the pasture to the south. We estimated that the site extended over a minimal area of 3 ha.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B102-0450 is the sample of Caño Seco-complex ceram-



Fig. 4.327. Luis Mora Neumann uses a *barretón* to probe beneath the *pasto*-covered surface of the terrace at Fundo Valle Verde (B102) and unearth a sample of Caño Seco-complex ceramics from about 30 cm below the ground surface.



Fig. 4.328. The site of Fundo El Sanare (B103) lies on this broad alluvial terrace overlooking the eastern bank of the upper Curbatí River. The photograph was taken facing south-southeast.

ics from the probes made in various parts of the terrace and from the courtyard of the *fundo* house (table 4.1).

SITE SIZE AND CLASSIFICATION: 3 ha; Caño Seco-complex habitation site.

DATE RECORDED: May 1, 1986.

B103

SITE NAME: Fundo El Sanare.

OTHER SITE DESIGNATION: El Quebradón.

SITE LOCATION: Site B103 is located on a broad alluvial terrace that overlooks the eastern bank of the Curbatí River (fig. 4.3). There is no *vega* to speak of below the terrace and along the riverbank. On this terrace lies Fundo El Sanare, owned by Luis Mora Neumann. Fundo El Sanare can be reached by taking the dirt road that flanks the east side of the Curbatí River past Caño El Arenoso, roughly 2.7 km north of Caño Azul. One will cross two *caños* en route before traversing Caño El Arenoso. After Caño El Arenoso, the road climbs a steep incline. On reaching the top, the *fundo* house lies on the west side of the road (fig. 4.328).

VEGETATION: The terrace is partly forested and partly pasture. Sr. Mora has a *topochal* on the east side of the road.

ARCHAEOLOGICAL REMAINS: We visited Sr. Mora Neumann several times during the regional survey, because he was knowledgeable about archaeological sites in the upper Curbatí River and Caño Anime areas. When we returned from locating site B102, we stopped at Fundo El Sanare (fig. 4.328). Since our previous visit, Sra. Mora had found some sherds in the corral, located between the *fundo* house and the road, and had saved them for us (B103-0451). We surveyed the patio of the *fundo* house, the corral, and the entire terrace but failed to recover additional surface remains. Sr. Mora remembered finding sherds in his *topochal* east of the road, but we did not see any. Sr. Mora said he would note where on the terrace any material turned up in the future. For the time being, we estimate that the site was ≤ 1 ha in area.

SITE MAP: None.

DISTURBANCE: None.

SURFACE-COLLECTION DATA: B103-451 is the sample of Caño Seco-complex sherds Sra. Mora had found in the corral and saved for us (table 4.1).

SITE SIZE AND CLASSIFICATION: ≤ 1 ha; Caño Seco-complex habitation site.

DATE RECORDED: May 1, 1986.

CHAPTER 5. CONCLUSIONS

INTRODUCTION

The aim of this monograph has been to introduce the research design that guided our 1983–1988 archaeological field investigations in Barinas, Venezuela, and to present the regional survey data in their entirety. Although the volume's emphasis is on the presentation of the data collected in the field, we have made passing references to our interpretations of the survey's findings and have cited all the publications that have ensued from this field project over the years. In this concluding chapter we will attempt to summarize and interpret the survey data in light of the question of chiefdom development in the western Venezuelan llanos.

CHIEFDOM DEVELOPMENT IN THE WESTERN VENEZUELAN LLANOS

Our survey located 103 archaeological sites, each of which is described in chapter 4. The settlements in the piedmont and llanos sectors of our study region centered on the Canaguá River belonged to two broad chronological phases. The earliest phase consisted of site occupations associated with the Curbatí and Gaván ceramic complexes (ca. A.D. 300–1000), followed in time by site occupations associated with the Caño Seco and Chuponal ceramic complexes (ca. A.D. 1000–1850) (table 2.1).

CURBATÍ-COMPLEX SITES

In the piedmont sector of our study region, we recovered surface evidence of four Curbatí-complex sites (fig. 4.1), which date to A.D. 300–1000 (table 2.1). Outside the study region, two additional Curbatí-complex sites lay in the upper Acequia River valley (B15, B16). Site B7 in Capitanejo, Distrito Zamora, where we first found Curbatí-complex ceramics in 1982, also lay well outside our study region. Curbatí sites were generally located on remnant river terraces overlooking stretches of farmable alluvium. Our survey revealed evidence of a two-level settlement-size hierarchy for Curbatí-

TABLE 5.1
Curbatí-Complex Site Sizes

Site	Size (ha)
B8	8.0
B20	2.0
B36	3.0
B40	2.0

complex sites (table 5.1). The majority of Curbatí-complex sites were in the 2–4 ha size range, but the sites B8 and B16 were considerably larger in estimated area (figs. 4.1, 5.1).

While Curbatí-complex sites never have earthworks, some Curbatí-complex sites in the Curbatí River valley are associated with petroglyphs (fig. 4.4). One of these sites is La Esmeralda (B8), the largest Curbatí-complex settlement, which extended over 8 ha of an alluvial terrace on which stands a large boulder bearing petroglyphs. The carving shows a standing male human figure with cloven hooves and the frontal horns or antlers of male deer. Over 1 m in height, it is the largest representational petroglyph in our study region (fig. 4.73) and may depict a supernatural deer-man analogous to the “Master of Animals” revered and portrayed on rock faces by Tukanoan Indians of Northwest Amazonia (Reichel-Dolmatoff, 1967: 109–111). Similar anthropomorphic figures are rendered at a much smaller scale upstream at B83 (figs. 4.4, 4.296) and southwest of the Acequia River at B5 (figs. 4.39, 4.43). The settlement-size hierarchy and petroglyph associations support the possibility that centralized regional leadership emerged in the piedmont during the Curbatí phase.

A related hypothesis we have considered is that the petroglyphs carved on boulders along watercourses in the upper Curbatí River valley marked communication routes or were a byproduct of travel between the high llanos and the high Andes (Spencer, 1991: 159–160). The Venezuelan Andes rise steeply and offer few natural corridors for travel, a fact learned the hard way by

Alonso Pérez de Tolosa, who in 1547 set out from Tocuyo to ascend the Andes but ended up following the Guanare River and traveling across the high llanos to the Apure River before ascending the Andes (Aguado, 1950: 298–299, 307–309). We learned that the upper Curbatí River valley happens to be the most accessible route through the piedmont favored by inhabitants of the area when they travel by foot or horseback up to Mucuchíes in the neighboring state of Mérida and at 3,000 masl in the high Andes (fig. 1.1). Support for the view that petroglyphs marked trails comes from the Mesa de San Isidro at 1,500 masl in the *quebrada* Mejías south of Santa Cruz de Mora in the Distrito Tovar of Mérida, along another natural route from the high llanos to the high Andes. On both sides of the old road that ascends the Andean Cordillera from the high llanos of the Distrito Zamora, Andrés Puig and José Luis Quintero (1987) located a cluster of boulders bearing petroglyphs; they proposed that the petroglyphs marked a way station for prehistoric travelers transiting the Andean Cordillera.

The high Venezuelan Andes are an important source for stone known to have been exploited by prehistoric groups in the western Venezuelan llanos. Moreover, Wagner's excavations near Mucuchíes (fig. 1.1) at the site of El Mocado Alto yielded evidence of a stone workshop where bat-wing pendants were being cut, ground, and polished from serpentinite and steatite. Associated with a series of radiocarbon dates having midpoints ranging from A.D. 830 to A.D. 1500, the workshop at El Mocado Alto would overlap with the latter half of the Curbatí phase (Wagner and Schubert, 1972; Wagner, 1973). Our systematic test excavations at the large Curbatí-complex site of La Esmeralda (B8) yielded tangible evidence of long-distance exchange with the high Andes and specifically with the Mucuchíes area (Redmond and Spencer, 1994: fig. 20), which helps us to understand the distribution of petroglyphs and associates long-distance-trade functions with the regional leadership at B8.

Our test excavations at three Curbatí-complex habitation sites (B8, B20, and

B40) yielded some stratigraphically deeper deposits and a series of radiocarbon and thermoluminescence dates, which have allowed us to subdivide the Curbatí complex's chronological time span of A.D. 300–1000. The results of the excavations conducted at Curbatí-complex sites and a finer assessment of the Curbatí complex's chronology will appear in a future monograph (Redmond and Spencer, n.d.).

GAVÁN-COMPLEX SITES

Across the high llanos portion of our study region there are 38 habitation sites and two drained-fields sites (B27, B52) that can be assigned to the Gaván ceramic complex. The majority of the sites of the Gaván complex are located on *bancos* that remain above inundated terrain for most of the year; 27 of the 34 unmistakable Late Gaván-phase habitation sites in the study region (or 79.4 percent) were situated in non-inundating locations (table 5.2). The site areas that appear in table 5.2 pertain to occupation during the Late Gaván phase (A.D. 550–1000) (table 2.1). Our test excavations at five Gaván-complex sites (B12, B17, B21, B26, B97) revealed some stratigraphically deeper deposits at certain sites, together with a series of radiocarbon and thermoluminescence dates. Early Gaván-phase (A.D. 300–550) occupations were detected at only three sites: B12, B21, and B97. B12 extended over about 5 ha during the Early Gaván phase; both B21 and B97 were 3 ha in size during the Early Gaván phase. The larger size of B12 may reflect its early regional ascendancy, yet the available site-size data show no evidence of a regional settlement hierarchy of two or more levels that is generally associated with chiefdom organization (Spencer, 1998: 116). The findings of the excavations conducted at the Gaván-complex sites and a finer assessment of the Gaván complex's chronology will be presented in a companion monograph (Spencer and Redmond, n.d.).

A bar graph of the Late Gaván phase (A.D. 550–1000) site sizes shows a bimodal distribution (fig. 5.2). If one takes into account the presence of mounded architecture

TABLE 5.2
Late Gaván-Complex Site Sizes, High Llanos

Site	Size (ha)	Classification
B12	33.0	first order
B17	7.5	second order
B21	4.56	second order
B25	8.28	second order
B26	3.12	third order
B30	9.4	second order
B38	3.75	third order
B41	4.37	third order
B45	2.5	third order
B53	2.5	third order
B60	3.75	third order
B64	5.0	third order
B67	1.0	third order
B69	4.4	third order
B70	0.5	third order
B71	0.5	third order
B72	3.12	third order
B74	2.18	third order
B75	1.87	third order
B77	1.25	third order
B78	0.5	third order
B79	1.25	third order
B80	2.0	third order
B81	2.5	third order
B86	0.5	third order
B87	0.5	third order
B88	2.75	third order
B92	3.12	third order
B96	1.25	third order
B97	5.0	second order
B98	1.25	third order
B99	0.75	third order
B100	1.25	third order
B101	1.25	third order
B46	n/a ^a	third order?
B62	n/a ^a	third order?
B66	n/a ^a	third order?
B89	n/a ^a	third order?
B27	35.0	drained fields
B52	> 1.25	drained fields?

^aSite size is not available. This site is probably a third-order Gaván-complex site, although it remains to be verified.

along with site size, it is possible to infer three hierarchical levels of settlement. The third, or lowest, level consists of 28 habitation sites, 1–5 ha in size, that lack mounded architecture detectable on survey. The second level is composed of five sites (B17, B21, B25, B30, and B97) that cover 5–

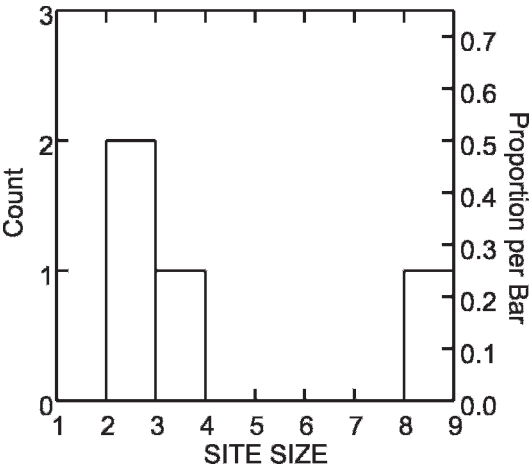


Fig. 5.1. Bar graph of site sizes, Curbatí-complex sites.

10 ha and have 2–4 earthen mounds reaching 2–6 m in height. The top level of the Late Gaván regional settlement hierarchy is occupied by the eponymous Gaván site (B12).

The B12 site extends over 33 ha and has numerous impressive earthworks that were detectable on survey (fig. 4.88). Two conical earthen mounds 10–12 m in elevation stand at either end of a 500 m-long plaza flanked by four other mounds that reach heights of 2–4 m, several elongated earthworks, and over 130 small mounds 1 m or less in height. At the plaza’s southeastern end lay Mound A, which reaches a height

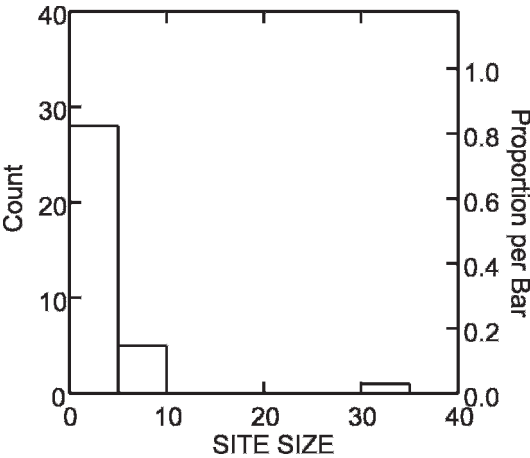


Fig. 5.2. Bar graph of site sizes, Late Gaván-phase sites.

of 12 m. Mound A has a maximum basal diameter of 90 m and was ascended by a ramp that extends 80 m into the plaza. Our program of test excavations included T. 183 at the base of this principal mound (Mound A). T. 183 sampled the mound's earliest construction level, and yielded a radiocarbon date of A.D. 650 ± 100 and a thermoluminescence date of A.D. 410 ± 90 , making the time span of A.D. 500–600, a reasonable estimate of Mound A's initial construction. Like Mound A, Mound B at the plaza's northwestern end also has a conical shape with a surface area that seems too small to have supported a residence. By contrast, the other 134 lower mounds we mapped at the site could have served as residences, and our test excavations and horizontal excavations of two such mounds have verified their residential function (Spencer and Redmond, 1992: 146–149; Spencer, 1998: 119–121). The regional settlement hierarchy, the layout, and the ratio of two public buildings to 134 residences at the regional center in Late Gaván times would be in keeping with the emergence of a chiefly form of regional political organization, one that was highly centralized but nonbureaucratic, around A.D. 550. The linear community plan at the regional center (B12) also agrees with sixteenth-century descriptions of major Caquetío settlements, 0.8 km long and 1–2 streets wide (Federman, 1958: 109; see also Castellanos, 1962: 99).

The regional center of Gaván (B12) is circumscribed by an earthen causeway that is roughly oval in shape, over 1 m in height, and 6–8 m wide on top. Three intersite causeways radiate in three directions from the oval causeway, making the Gaván site the hub of a regional causeway network (figs. 4.88, 4.2). In addition to easing pedestrian travel across the seasonally inundated terrain, we think the causeway network emanating from the B12 regional center played an important role in the regional political integration of subordinate villages (Spencer and Redmond, 1998). Linked by causeway to the regional center were four (and maybe all five) secondary centers, whose linear plan of mounded architecture replicated

the regional center's layout on a smaller scale (figs. 4.119, 4.134, 4.153, 4.174, 4.314). By taking into account the additional Late Gaván-phase sites having causeway connections, we have estimated that the causeway network linked two-thirds of the regional population (Spencer and Redmond, 1998: table 1, 107).

The regional causeway network would have facilitated the alliances between the paramount chief at B12 and the local village chiefs that are established and maintained through feasting and exchange, among other strategies of chiefly control. One expression of those alliances on the local level might have been the mobilization of labor for the construction of monumental earthworks at the regional center. Another strategy might have involved the production and mobilization of agricultural surpluses from subordinate villages to chiefly granaries at the regional center of the sort observed inside a sixteenth-century Caquetío chief's *bohío* (Federman, 1958: 112–113). One of the causeways radiating from B12 leads to the southeast past B96 and B26 and skirts a 35 ha area of drained fields on the *vega* of the Canaguá River called La Tigra (B27) (fig. 5.3). In the process of mapping the drained-fields facility in 1988, we learned from local farmers that the network of canals and fields were probably built in antiquity and that they allowed two harvests of maize to be reaped consistently each year by facilitating drainage in the rainy season and maximizing water flow in the dry season. Our test excavations at B27 recovered only soil samples, but the pollen count of a soil sample from T.186 at B27 and from T. 78 at the nearest village site of B26 revealed high frequencies of maize pollen (Spencer et al., 1994: table 2, 130–133). Maize must have been the major crop here in Late Gaván times, as it was among the Caquetío in the sixteenth century (Carvajal, 1956: 147). We have calculated that the drained fields at La Tigra had the capacity to produce maize yields that far exceeded the subsistence needs of the inhabitants of the nearest village site (B26), and hence generated considerable surpluses, which were probably sent to the regional center by

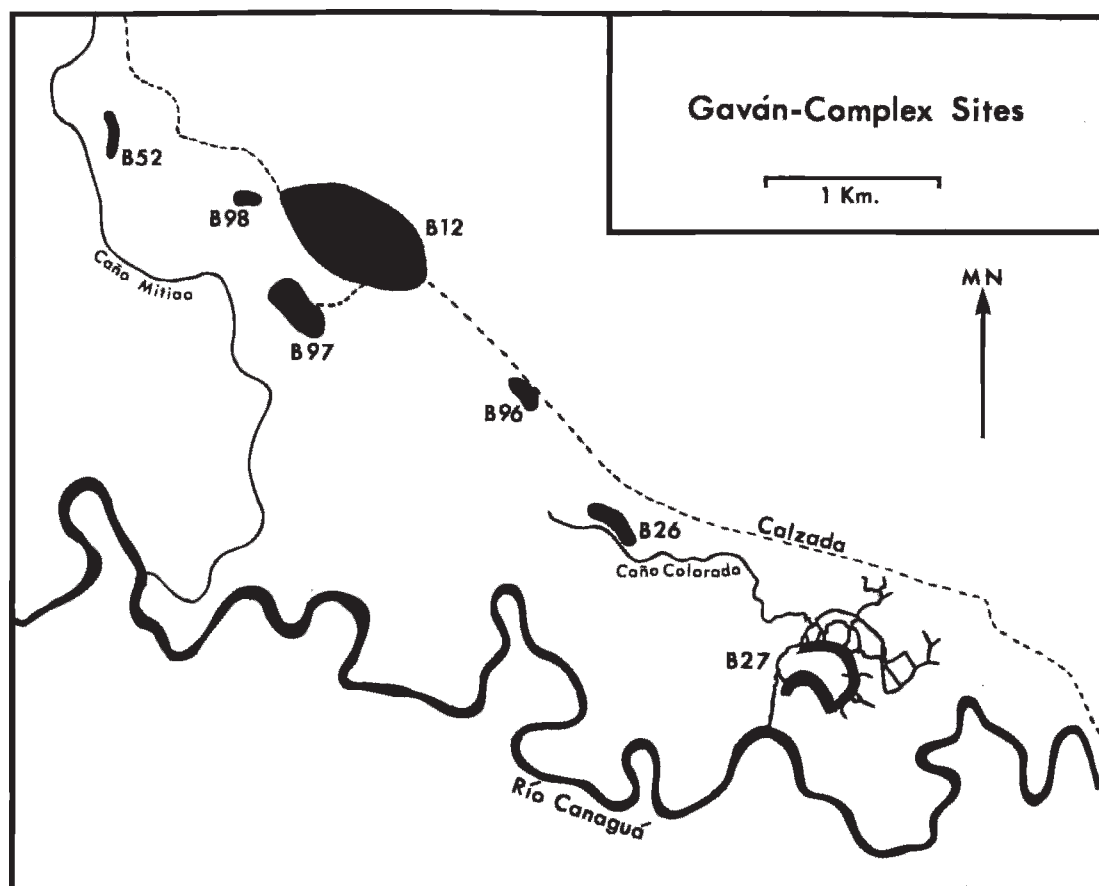


Fig. 5.3. The Gaván locality, showing the first-order regional center (B12), a second-order site (B97), the third-order village sites of B98, B96, and B26, and the drained fields mapped at B27 and reported at B52.

way of the causeway (Spencer et al., 1994: 137–138). The very real possibility that another expanse of drained fields existed on the *vega* at B52, also connected to B12 by a causeway approaching from the northwest (fig. 5.3), adds to the considerable agricultural surplus reaped by local villagers in the Gaván locality and probably delivered to the regional center.

The regional causeway network that linked the regional center with its allies would have helped to mobilize fighting forces expeditiously. The fact that the causeways were 6–8 m wide, much wider than would have been necessary for a single file of pedestrians to travel on, supports their possible use by large fighting forces, several warriors advancing abreast (Hassig, 1991:

23; Spencer and Redmond, 1998: 107). Based on our population estimates for the entire Late Gaván regional polity of 2,517–3,757 persons or 503–751 households (Spencer et al., 1994: 134), we estimate that the paramount chief at B12 could have mustered fighting forces of 1,000 or more warriors, like the war parties raised on short notice by Caquetío paramounts in the sixteenth century from nearby villages (Federman, 1958: 81, 108–109). That warfare was pursued by the chiefly polity centered at B12 is indicated by the defensive measures taken by the regional leadership, including the construction of the oval earthwork that encloses the regional center and that served in part as a causeway. Our Area B excavation of a 12 m-long stretch of the causeway

(fig. 4.91) exposed an alignment of large carbonized postmolds from a wooden palisade built on top of the earthen causeway, much like the tall palisade consisting of tree trunks and earth that fortified an Achagua settlement in the early seventeenth century; from such bastions the defenders could guard and hurl missiles against the enemy (Cey, 1995: 78; Rivero, 1956: 46; Spencer and Redmond, 1992: fig. 5). The test excavations and horizontal excavations at the Gaván site exposed additional evidence of the regional center's predominant involvement in both defensive and offensive warfare, which we have good reason to think became more frequent in the Late Gaván phase (Spencer, 1998: 127; Spencer and Redmond, 1998: 106–107). A future report with the results of the excavations (Spencer and Redmond, n.d.) will present detailed evidence of the Gaván chiefdom's pursuit of warfare under the regional center's military leadership, culminating in a final attack by enemy forces sometime after A.D. 760–900, when the regional center was destroyed by fire and abandoned (Redmond et al., 1999: 120). Accompanying the destruction and abandonment of the regional center was the widespread abandonment of all the secondary centers and villages that made up the Gaván chiefdom.

Prior to its dissolution around A.D. 1000, the Gaván chiefdom may have been in the process of extending its territory into the upper Canaguá River area. This possibility is raised by the discovery of Gaván-complex ceramics at a number of third-order settlements in the piedmont (fig. 4.2, table 5.3). Although exchange may have been the vehicle for the occurrence of Gaván-complex ceramics at Curbatí-phase sites such as B36, we recovered only Gaván-complex ceramics at B47, a 1.5 ha site situated on an alluvial terrace overlooking the eastern bank of the upper Canaguá River. Such locations offered direct access to well-drained and fertile stretches of alluvium along the river. We should note that we recovered Gaván-complex ceramics at two habitation sites (B15, B16) in the upper Acequia River, as well (fig. 3.1). We will be addressing the chronological relation-

TABLE 5.3
Sites in the Piedmont with
Gaván-Complex Ceramics

Site	Size (ha)	Comments
B18	n/a ^a	single whole vessel
B36	n/a ^a	single Gaván-complex sherd at Curbatí-complex site
B39	6	multicomponent habitation site
B47	1.5	
B48	4	multicomponent habitation site
B49	5	multicomponent habitation site

^aSite size is not available.

ship of these sites in the piedmont having Gaván-complex ceramics with sites of the Curbatí and Caño Seco complexes in more detail in a future monograph (Redmond and Spencer, n.d.).

The evidence of chiefdom development around A.D. 550 in our study region in the western llanos of Barinas, where sedentary villages appeared by 200 B.C., presents an interesting contrast with the sequence of development along the middle Orinoco River. Sedentary villages appeared on the rich alluvial levees of the middle Orinoco River by 2100 B.C., but evidence of chiefly organization on the regional level does not appear until around A.D. 1100, several hundred years later than in the western llanos (Roosevelt, 1980: tables 15, 18, 221; Rouse, 1978; Spencer, 1998: 110–112). To account for this developmental contrast, and to understand the precocious emergence of chiefdoms in the western Venezuelan llanos, we can apply Robert Carneiro's (1970, 1981) circumscription theory, which argues that conditions of growing population in an environmentally (and socially) circumscribed area—in our case, where the llanos meet the Andes—would lead to increasing warfare and ultimately to the emergence of powerful and permanent regional chiefdoms. By the Late Gaván phase (A.D. 550–1000) there is evidence of considerable population growth on the high llanos. Although it did not reach the region's overall carrying capacity, it might have fostered an increasingly competitive climate in the high llanos (Spencer, 1998: 128–129). As we have seen, the appearance of chiefdom organization

centered at the site of Gaván (B12) in our study region is indeed associated with evidence of increasing warfare in the high llanos.

CAÑO SECO-COMPLEX SITES

A total of 27 sites in our study region were assigned to the Caño Seco ceramic complex. We have dated the Caño Seco ceramic complex to A.D. 1000–1550 on the basis of the radiocarbon and thermoluminescence dates obtained from our test excavations at the Caño Seco-complex site B20, and the cross-dating of certain ceramic attributes with the Caño Caroní ceramic complex dating to A.D. 1200–1400 known from sites in the lower llanos of Barinas (fig. 1.1) (table 2.1) (Spencer and Redmond, 1992: table 2; Zucchi, 1975; Garson, 1980). At B20, where some of our test excavations recovered deposits containing Caño Seco- and Curbatí-complex ceramics, the excavated deposits with Caño Seco-complex ceramics overlay those levels with ceramics of the Curbatí ceramic complex, dated to A.D. 300–1000, and therefore clearly postdate the Curbatí occupation. Moreover, Garson’s discovery of historic-period artifacts associated with Caño Caroní-complex ceramics at one of his Caño Caroní-complex sites along Caño del Oso extends the ceramic complex into the protohistoric, or early colonial, period after A.D. 1500 (Garson, 1980: 234).

We recorded 19 Caño Seco-complex sites in the piedmont sector of our study region and eight Caño Seco-complex sites across the high llanos (fig. 4.3). The Caño Seco-complex sites lack earthworks and range in size from 0.1 ha to an estimated 25 ha (table 5.4). A bar graph of Caño Seco-complex site sizes shows a bimodal distribution (fig. 5.4), which is evidence of a two-level settlement-size hierarchy. The majority of Caño Seco-complex settlements are smaller than 4 ha, but there are four sites that are 10 ha or larger in size. Three of these large settlements occur on the *vega* along the upper Canaguá River; sites B37, B39, and B50 occupy alluvial fans where tributary *caños* meet the upper Canaguá River. The large

TABLE 5.4
Caño Seco-Complex Site Sizes

Site	Size (ha)	Location
B18 ^a	n/a ^b	piedmont
B20	3.12	piedmont
B29	5.50	piedmont
B31	0.10?	piedmont
B37	25.00	piedmont
B39	18.50	piedmont
B48	6.50	piedmont
B49	5.00	piedmont
B50	10.00	piedmont
B54 ^c	0.20?	piedmont
B55 ^c	0.10?	piedmont
B56	8.00	piedmont
B58	3.50	piedmont
B85	1.50	piedmont
B91a	2.00	piedmont
B91b	0.50	piedmont
B102	3.00	piedmont
B103	1.00	piedmont
B43	20.00	llanos
B59	2.50	llanos
B60	3.75	llanos
B63	3.00	llanos
B65	4.40	llanos
B68	3.75	llanos
B95	0.62	llanos
B99	2.50	llanos

^a Single whole vessel.
^b Site size is not available.
^c Metates only.

site of B43 on the high llanos occupies prime alluvium between the Caño Mitiao Hondo and the Caño Mericacoy. Indeed, the majority of Caño Seco-complex settlements are located on *vega* land along the banks of rivers or *caños*, or on alluvial terraces directly adjacent to the *vega*. There is a clear association of Caño Seco-complex sites with the best available farmland, especially in the piedmont where the *vega* is not subject to the seasonal inundations experienced on the llanos. Moreover, the two large Caño Seco-complex settlements B37 and B39 in the upper Canaguá River valley lay on the *vega* directly adjacent to and below the Curbatí-complex settlements B36 and B40 that predate them; these two Caño Seco-complex settlements represented more than an eight- to tenfold increase in settlement size, respectively. A

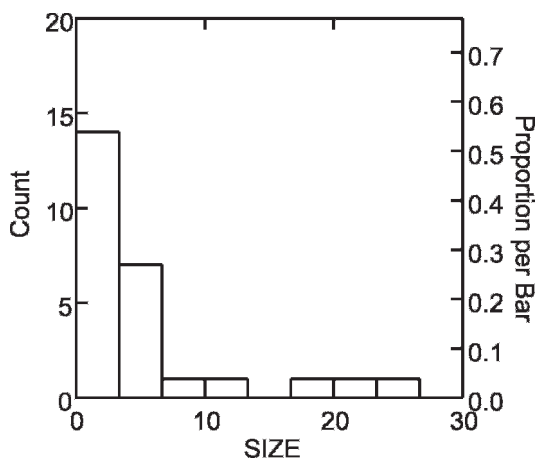


Fig. 5.4. Bar graph of site sizes, Caño Seco-complex sites.

similar sequence of prehistoric settlement may have occurred in the upper Acequia River valley at B15, where we first obtained Caño Seco-complex ceramics (fig. 3.1). The increase in number and size of Caño Seco-complex settlements in the piedmont represents considerable population growth here during the final pre-Hispanic period. Despite the number and size of Caño Seco-complex settlements occupying the prime farmland, this growing population must have remained below the available alluvium's productive capacity. As we await the analysis of the macrobotanical and pollen samples from our excavations at B20, we can rely on the ceramic *budare* (griddle) rims and ground-stone *metates* in our Caño Seco proveniences, which, like those recovered at Caño Caroní settlements, attest to the cultivation of maize and manioc (Garson, 1980: 286–287; Zucchi, 1975: 28, 45–46, fig. VII, lam. 7). Unlike the Caño Caroní settlements of the lower llanos, which Garson (1980: 327–328) characterized as largely dry-season occupations due to their location along watercourses subject to inundations, the Caño Seco-complex settlements in the piedmont were free of seasonal inundations. Hence, their inhabitants were probably capable of reaping more than one harvest of maize each year.

Another manifestation of the growing population in the piedmont during the

Caño Seco phase may be the larger sizes (rim diameters) of Caño Seco-complex ceramic vessels, specifically of convex-wall bowls, outleaned-wall bowls, and vertical-wall bowls, compared to those of the Curbatí complex (see chap. 2). The larger sizes of Caño Seco-complex serving vessels may reflect an increase in the size of social groups or households. Another possibility may be the occurrence of more feasting during the Caño Seco phase (Blitz, 1993a; Blitz, 1993b: 92–97), which will be assessed with the systematic samples of ceramics recovered from our test excavations at Curbatí and Caño Seco-complex sites in the piedmont (Redmond and Spencer, n.d.).

In addition to access to farmland, some Caño Seco-complex sites in the upper Canaguá River valley were situated in the vicinity of other potential resources. Directly upstream from the large Caño Seco-complex site B50 lies a natural source of asphalt (figs. 4.3, 4.229–4.231). The sixteenth-century chronicler Galeotto Cey reported the use of asphalt among the region's inhabitants as a sealant in the making of turtle-shell drums (Cey, 1995: 112). The use of asphalt can be traced farther back in prehistoric time, since asphalt was used as an adhesive in the production of marine-shell ornaments that have been recovered in funerary contexts at sites in the Quíbor Valley, Lara state, of the Boulevard Tradition, associated with radiocarbon dates that range between A.D. 145 and 575 (Vargas Arenas et al., 1997: 324–327). Hence, it is possible that the prehistoric inhabitants of the piedmont exploited this asphalt source. Across the river from B50 are some thermal springs, whose use by the prehistoric inhabitants also remains to be demonstrated (fig. 4.3).

Two Caño Seco-complex sites in the upper Curbatí River valley featured large boulders with petroglyphs carved on their surfaces (fig. 4.4). At B20, the Caño Seco-phase settlement extended on the *vega* along the riverbank, and a large boulder bearing petroglyphs on all its sides stood near the southwestern edge of the settlement. We have reason to think that upstream, at B91, a Caño Seco-complex set-

tlement extended on the riverbank, west of a boulder that features carved petroglyphs similar to those recorded at B20. The depiction of zoomorphic quadrupeds at both Caño Seco-complex settlements may reflect an increasing reliance on the hunting of mammals, a trend revealed in the faunal samples from contemporaneous Caño Caroní-complex settlements in the lower llanos (Garson, 1980: 273–274; Zucchi, 1975: 51). In view of the fact that these and other boulders having petroglyphs were concentrated along the upper Curbatí River, and were absent from the Canaguá River valley (fig. 4.4), they may have marked a major trail between the high llanos and the high Andes (Puig and Quintero, 1987; Spencer, 1991: 159–160). We learned from the region's inhabitants that the best route for travel by foot or horseback from the high llanos through the piedmont to the high Andes is by way of the upper Curbatí River valley, to a point at some 600 masl, where the upper Curbatí River is within 1 km of the upper Canaguá River, north of our study region. From here, travelers cross over and ascend along the upper Canaguá River to Mucuchíes at 3,000 masl in the neighboring state of Mérida (fig. 1.1). The serpentinite and steatite workshop excavated by Wagner near Mucuchíes at El Mocoa Alto would have been in use at this time, according to its Mucuchíes-phase date (from A.D. 1000 to after A.D. 1500) (Wagner and Schubert, 1972; Wagner, 1973: 202). The possibility that the inhabitants of Caño Seco-complex settlements were participating in long-distance exchange with groups up in the Mucuchíes area who controlled and worked stone sources is supported by the recovery in our test excavations at the Caño Seco-complex site B20 of four polished stone ornaments made of phyllite, derived from the Formación Mucuchachí source in the Mucuchíes area of the Venezuelan Andes (Ramón Sifontes, personal commun., 1988). Moreover, the polished stone ornaments—and a single *tumbaba* (gold-copper alloy) ornament—recovered in funerary and related contexts at the contemporaneous site of Caño Caroní in the lower llanos also originated from sources

in the Venezuelan Andes or beyond (fig. 1.1) (Zucchi, 1975: 43–45, 50). A cast *tumbaga* pendant recovered by Wagner in her excavations at the habitation site of La Era Nueva, also near Mucuchíes and associated with radiocarbon dates of around A.D. 1000, is considered to have been imported from the Colombian Andes (Lechtman, 1973: 482; Wagner, 1973: 202, table 1). The importance of long-distance exchange with Mucuchíes and other areas of the high Andes may help to explain the distribution of petroglyph sites along the upper Curbatí River valley. A more detailed assessment of the sources of stone artifacts recovered at Caño Seco-complex sites will appear in a future monograph (Redmond and Spencer, n.d.), where we will present a more complete discussion of the participation by the inhabitants of Caño Seco-complex settlements in interregional networks of exchange.

It is difficult to assess the degree of centralized regional organization achieved by the settlements of the Caño Seco complex with the survey data alone. The survey data do show a regional settlement hierarchy of two levels for Caño Seco-complex sites, the pattern generally associated with chiefdoms. The regional settlement hierarchy would support the possibility that a regional leadership was centered at the larger settlements of the Caño Seco complex, much like the Jirajara villages that inhabited the piedmont at the time of European contact and maintained intervillage alliances. The elongated configuration of many Caño Seco-complex sites does match the descriptions we have of Jirajara villages as being composed of rectangular communal dwellings, reported to have measured some 30 feet wide and almost 200 feet long (Mercado, 1966: 28). Jirajara village chiefs established and maintained intervillage alliances by hosting lengthy feasts, mainly for the purpose of waging allied warfare, but they also participated in extensive trade networks with allies to the north across the Andes and south and east as far as the mouth of Orinoco River (Carvajal, 1956; Cey, 1995; Mercado, 1966: 46–47). To identify possible feasting activities at Caño Seco-complex

sites, we will be assessing the distribution of ceramic serving-vessel sizes, along with other evidence of distinct, or large-scale food consumption (Blitz, 1993a).

On the basis of the available data, we propose that the Caño Seco-complex sites in our study region postdate the chiefdom centered at El Gaván (B12), which collapsed around A.D. 1000. Accompanying the destruction and abandonment of the regional center was the widespread abandonment of all the secondary centers and villages in the Canaguá River drainage that made up the Gaván chiefdom. The dissolution of the Gaván polity on the Canaguá River left a political and geographic vacuum that was eventually filled by the establishment of Caño Seco-complex villages in the high llanos and adjacent piedmont. These Caño Seco-phase villages evidently grew and persisted well into the protohistoric period. What is known from documentary sources is that the Jirajara who inhabited the mountains bordering the northernmost llanos, where they were first encountered in the first half of the sixteenth century, were abandoning their villages in a response to European demands for provisions and labor, but they were also succumbing to smallpox and other diseases introduced by the Europeans, so that their populations were rapidly disappearing in the seventeenth century (Aguado, 1963: 200–201, 217, 245; Cey, 1995: 60–61; Morey, 1975: 35, 313–314; Relación geográfica de la ciudad del Espíritu Santo de Guan Guanare, 1964: 318).

CHUPONAL-COMPLEX SITES

During our regional survey we located 11 sites of the Chuponal complex on the high llanos (fig. 4.5). These sites featured artifacts that clearly postdated the pre-Hispanic period, including fired bricks, glazed pottery, porcelain, glass, and metal artifacts. We assigned these occupations to the Chuponal complex, which we would tentatively date to A.D. 1550–1850 (table 2.1), on the basis of Rafael Gassón's preliminary classification of some of the Chuponal ceramics (see chap. 2). Most of these sites were con-

TABLE 5.5
Chuponal-Complex Site Sizes

Site	Size (ha)
B32	n/a ^a
B35	7.19
B42	78.74
B44	25.63
B64	6.50
B73	n/a ^a
B76	4.38
B79	1.25
B93	1.87
B94	1.00
B99	2.50

^aSite size is not available.

centrated in the area north of the Canaguá River known as El Chuponal, traversed by the Caño Mericacoy and the Caño Mitiao Hondo. For its geographic location, we named this historic complex in the high llanos the Chuponal complex.

The Chuponal-complex sites ranged in size from 1 ha to 80 ha (table 5.5). Our size estimates for the Chuponal-complex sites should be regarded as preliminary. The historic period was not emphasized in our investigations and we did not return to intensively map, surface collect, and intentionally excavate any Chuponal-complex sites. The test excavations at B99 formed part of the overall program of systematic test excavations carried out at the adjacent Gaván-complex site B21.

The specific location of all the Chuponal-complex sites was directly on the alluvium—or on *bancos* adjacent to it, either in the Chuponal area or along the Canaguá River itself. The two largest Chuponal-complex sites (B42, B44) lay northeast across the Canaguá River from Ciudad Bolivia (the former Pedraza). Historical sources report that Pedraza was founded by Gonzalo Lidueña in 1591 near its present location (Alcedo, 1967: III: 153; Morey, 1975: 347). Because the major route favored by the earliest expeditions and founding European settlers was precisely along the foothills of the Andes across the high llanos (Cey, 1995: 76; Federman, 1958: 104), the impact of European expedi-

tions and early settlements on the native populations in the high llanos and adjacent piedmont was fast and furious (see Aguado, 1950: 243, 315). Already by the middle of the sixteenth century, warfare and slave raiding had taken their toll on the region's native populations (Relación geográfica de la Nueva Segovia de Barquisimeto, 1964: 185–186). The Caquetío had long abandoned the northern llanos by the time of Pedraza's founding, and the region's remaining native populations were being reduced in number by diseases (especially smallpox), slave raids, and forced labor (Aguado, 1950: 318–322; Morey, 1975: 318; Relación geográfica de la Nueva Segovia de Barquisimeto, 1964: 185–186, 192). One source indicates that native chiefly leaders were no longer recognized, a sign that the region's chiefdoms no longer existed (Relación geográfica de la Nueva Segovia de Barquisimeto, 1964: 189). Nevertheless, on November 1, 1614, the region's inhabitants, led by the Jirajara, mounted an allied war party of more than 1,000 warriors that attacked and destroyed the settlement of Pedraza, which was rebuilt the following year by Diego de Luna (Alcedo, 1967: III: 153; Zamora, 1962: 379–380). Capuchin and Jesuit missionaries were resettling native populations at their mission settlements in the high llanos, near Spanish settlements, in a process of settlement consolidation and religious conversion (*reducciones*) initiated in the high llanos prior to 1629 (Morey, 1975: 320–321; Rivero, 1956: 60–61, 79). It may be that the Chuponal-complex sites concentrated on the Chuponal alluvium in the vicinity of Ciudad Bolivia reflect the process of settlement consolidation centered on historic Pedraza. Our surface collections from these settlements included both local ceramic wares and imported British and Spanish ceramic wares (see chap. 2), along with glass and metal artifacts. Two Chuponal-complex sites (B35, B73) had a cluster of brick ovens or kilns associated with rectangular stone house foundations. These are archaeological indicators of the new political economy introduced to the high llanos in the early colonial period. In response to the forced

resettlement and labor demanded by their new overlords, and rampant diseases and unrest, the region's native populations dwindled through the seventeenth century. The process of large-scale depopulation culminated in the eighteenth century with the virtual extinction of the region's native populations (Morey, 1975: 317–318, 322–323; Oviedo, 1962: 419).

SUGGESTIONS FOR FUTURE RESEARCH

In the process of reviewing the notebooks in which we recorded our survey data in the field, we have come to appreciate the open-endedness of an informant-based survey. Our notebooks and the separate sheets of lined paper that we also used to record information about sites from informants are full of references to mound sites, causeways, and sherd scatters that lie beyond the limits of our study region. We have added some of these references in the site descriptions (chap. 4), especially for some of the sites we visited during the initial reconnaissance and the first season of survey, before we limited our survey to the study region as we defined it. Recording basic information about sites from the region's inhabitants and then visiting the *fundo* in question and verifying and locating the site on a map and aerial photograph requires little more than a four-wheel-drive vehicle, topographic maps and aerial photographs, and persistence. We have demonstrated that a survey project that takes a natural drainage unit and proceeds to stop at all *fundos* and ask about mound sites and sherd scatters is a promising way to initiate systematic regional survey. As portions of the llanos are increasingly being cleared with mechanized equipment, many mound sites and causeways are being destroyed, making such basic survey invaluable for creating an inventory of sites in a region. When combined with a program of test excavations to recover controlled ceramic samples, the chronology and contemporaneity of settlements can be established, and the chronological trajectories of regional chiefly polities can begin to be traced. When survey

and limited test excavations are conducted over a broader, macroregional scale of analysis, dynamic questions relating to cycling chiefdoms can be addressed (Redmond et al., 1999). We think the western Venezuelan llanos, like the floodplains of the Mississippi River valley and American Bottom, are an ideal area in which to investigate the cycles of growth, political prominence, and decline among neighboring complex chiefdoms and to seek explanations for the sequential trajectories of prehistoric chiefdoms.

Of key importance to a chiefdom's survival is its effective management of the political economy, which, in the case of the complex chiefdoms that arose in both the western Venezuelan llanos and the Mississippi River valley, was based on maize agriculture (Scarry, 1996: 22; Welch, 1991: 114–115). For the prehistoric chiefdom centered at El Gaván (B12), we have argued that central to El Gaván's persistence for nearly 500 years was its mobilization of labor and agricultural surplus from lower-order villages. We have proposed that the drained fields at La Tigra (B27) were constructed during the Late Gaván phase (A.D. 550–1000) to harvest two crops of maize each year on the seasonally inundated alluvium, thereby producing a considerable agricultural surplus far beyond the subsistence needs of the villagers at Potrero Urpianero (B26) who farmed them (Spencer et al., 1994: 135–137). Moreover, because both the drained fields (B27) and the village (B26) lay just south of a causeway leading to the El Gaván (B12) center, we have suggested that this surplus was sent by causeway for storage at the regional center. We maintain that the drained fields, but also the network of causeways radiating from El Gaván, served an important role in the El Gaván chiefdom's effective management of its political economy (Spencer and Redmond, 1998). Our findings highlight the importance of identifying additional areas of drained fields, beginning with the ground verification of the possible drained fields we located at B52 along Caño Pica Pico on the last day of our short field season in January 1985. Another area of

drained fields might, on further inspection, be identified at Fundo El Milagro (B92), on a stretch of the eastern bank of Caño Mitiao Hondo where we had reports of "*mesetas de los indios*", consisting of rises of sandy soil and old watercourses devoid of artifactual remains. Both sites happen to be linked by causeway to the regional center at El Gaván. Should the existence of drained fields be verified at these two localities, and documented elsewhere on the Canaguá River alluvium (Spencer et al., 1994: 133), the amount of agricultural surplus that would have been available to the chiefly leadership at El Gaván would only increase.

Furthermore, our survey results underscore the crucial function that the region's causeways served in the political economy of the El Gaván chiefdom, above and beyond their usefulness for traveling across the seasonally inundated llanos (Spencer and Redmond, 1998; Redmond and Spencer, 1995). In addition to tracing causeways between settlements (or intersite causeways), we have discovered and mapped causeways within centers (intrasite causeways) and causeways that encircle the periphery of certain centers, such as those at B12 (and B13 and B33 mapped by Rafael Gassón). Since these earthen causeways are being obliterated at the same rate as other pre-Hispanic earthworks due to continuing deforestation and subsequent erosion, the use of heavy machinery, and their enduring use as roadways (Rey, 2003: 61), it is important that causeways be recognized, located, and carefully recorded on topographic maps and aerial photographs, along with their associated mounded and non-mounded settlements.

Since 1995, Rafael Gassón, archaeologist with the IVIC, has been leading regional-scale investigations in the Acequia–Anaro River drainage. Having intensively surveyed a 60 km² area around the mounded center of El Cedral (B33), he has also carried out informant-based surveys of other mound sites, connected by causeways, in the greater Acequia–Anaro region (fig. 3.1) (Gassón, 1998: 57–60). In 1996, Gassón's team mapped and test excavated the 150 ha regional center of El Cedral; two charcoal samples obtained from a test pit

(operation 2) directly southeast of the center's major mound have yielded radiocarbon dates of 1290 ± 50 years B.P., with the midpoint of A.D. 660, and 1260 ± 50 years B.P., with the midpoint of A.D. 690, contemporaneous with our Late Gaván phase and with Zucchi's La Betania phase on the llanos (Gassón, 2002: 260–261; Rey, 2003: 37–39). Gassón's project also determined the extent of the more than 416 ha of drained fields directly associated with the El Cedral center (Gassón, 1998: 61–64, 66). The eight causeways that converge at the regional center were also traced, including one leading 9.76 km northwest across the dry savanna to Cerro Mijaguas (B1) and another one leading 9.86 km southeast across the forested Montaña de Concha and wet savanna landscape of the Sabana de Merecure to Las Lomitas Florideñas (B13) (Gassón, 1998: 59–60, 64; Rey, 2003: 50–55, mapa 10). In more recent seasons, Gassón, Ana María Gómez, Juan Carlos Rey, Johan Rodríguez, and Rona Villalba have turned their attention to mapping and testing the mounded centers of Cerro Mijaguas (B1) and Las Lomitas Florideñas (B13), which, because of their size and mounded architecture, ceramic associations, and causeway linkage to the regional center of El Cedral, are hypothesized to have served as secondary centers of the El Cedral polity in the Late Gaván phase (A.D. 550–1000) (Gassón, personal commun., 2002; Rey, 2003: 27, 40–45). Juan Carlos Rey (2003) has completed a detailed investigation of the network of causeways radiating from El Cedral. Using digitalized versions of 1:25,000 aerial orthophotos of the greater Cedral region to map the causeways, he carried out two field seasons of detailed ground verification and measurement in 2001 and 2002. All of these data have been entered into a GIS database and analyzed with IDRISI 32 software. Among the important insights gained from Rey's macroregional study has been the detection of additional areas of drained fields, some located 10 km or more west of El Cedral along the Anaro River with evidence of a causeway linkage to El Cedral (B33), and

others along the Caño Guacharaca, more than 7 km east of Las Lomitas Florideñas (B13) (Rey, 2003: 64). These findings have broadened our understanding of the larger-scale polity centered at El Cedral, whose associated radiocarbon dates indicate that, although this regional center in the neighboring Acequia–Anaro River valley may have emerged a few centuries later than the polity centered at El Gaván in the Canaguá River valley, the El Cedral center was contemporaneous with El Gaván for at least a century or two during the Late Gaván phase (Gassón, 2002: 260–261; Redmond et al., 1999: 123–124). The very questions being raised by Gassón and his students about the political economy, political integration, and historical trajectory of the chiefdom centered at El Cedral guarantee that we are making progress in monitoring and understanding the evolution of chiefdoms—with their characteristic cycles of growth and dissolution—on a macroregional scale across the western Venezuelan llanos.

We hope the same can be said some day about the pre-Hispanic societies that inhabited the forested piedmont of the Andean Cordillera. As modern-day settlement in the piedmont grows and more land is cleared for cultivation and cattle ranching, evidence of additional habitation sites should appear. The chance to monitor the emergence of centralized leadership among villages that may have consisted of large communal dwellings presents a striking comparison to that seen on the llanos. The role such leaders may have played in the long-distance exchange of resources and prestige goods between the llanos and the high Andes and beyond is a question that future investigations at settlements in the piedmont will be able to address. Finally, the discovery of additional petroglyph sites should help to support or refute the hypothesis that they were distributed along major trails from the llanos to the high Andes.

GLOSSARY OF SPANISH TERMS

The informant-based regional survey we carried out in Barinas included palavering with the inhabitants of this cattle-ranching and farming area of western Venezuela. Over time, we adopted terms that *llaneros* use not only to describe archaeological sites, their mounds, their causeways, and their artifacts, but also to refer to their location in the broader savanna or forested piedmont habitat. Below we list each term and its meaning. For most terms, we also refer the reader to one of its uses in this survey report or provide a further reference.

Aguas calientes: thermal springs (see site B50).

Alcornoque (*Bowdichia virgilioides*): tree of low stature on the llanos whose trunk is characteristically twisted, and whose durable wood is used for house construction (De Armas Chitty, 1991: 25; Pittier, 1970: 121).

Bajareque (also *Bahareque*): the wattle-and-daub construction used for houses (De Armas Chitty, 1991: 33–34; Collins Spanish–English Dictionary, 1983: 65) (figs. 4.160, 4.279).

Bajío, *Bajo*: low-lying ground subject to seasonal inundations (Medina, 1980: 312; Silva et al., 1971: 66) (figs. 4.270, 4.274).

Banco: higher ground of alluvial origin that is not subject to seasonal inundations and a prime location for human settlement on the llanos (fig. 4.254) (Medina, 1980: 312).

Baquiano: guide, scout.

Barbecho: the first clearing, burning, and plowing of an agricultural field (see site B74).

Batata: sweet potato or yam (*Ipomoea batatas*) (Pittier, 1970: 147) (see site B27).

Bodega: general store (see site B49).

Bohío: residence of a sixteenth-century chief or *cacique* (Federman, 1958: 112–113).

Bongo: large dugout canoe made by hollowing out a large log and used for river trade (De Armas Chitty, 1991: 42) (see site B65).

Budare: griddle made of pottery in pre-Hispanic times. Metal griddles are still used to toast the flat corn cakes (*arepas*) or cassava (manioc) cakes (see site B31).

Cafecito: tiny cup of coffee offered to visitors and consumed at any time of the day.

Calzada: earthen causeway erected by pre-Hispanic (and specifically, Gaván-phase) inhabitants of the llanos (figs. 4.86, 4.198).

Camellones: drained fields composed of parallel ridges (Zucchi and Denevan, 1979: 26) (see site B33).

Caño: seasonal stream and tributary of one of the region's rivers. *Cañizo* and *cañito* are diminutives.

Caraotas: beans (*Phaseolus*) (Pittier, 1970: 252) (see site B27).

Caserío: a group of houses or hamlet.

Cedro (*Cedrela mexicana*): tree (Pittier, 1970: 198–199).

Ceiba (*Ceiba pentandra*): tree (Pittier, 1970: 199) (see site B98).

Cerrito: term for a small hill that is used to refer to an earthen mound erected by pre-Hispanic (and specifically, Gaván-phase) inhabitants of the llanos (see site B1).

Conuco: slash-and-burn garden cultivated in the gallery forest along rivers and streams or in isolated *matas* on the savanna (Zucchi and Denevan, 1979: 9) (figs. 4.150, 4.151).

Corozo: palm (*Acrocomia sclerocarpa*) (Pittier, 1970: 214).

Cuarta: a unit of measurement that refers to the span of the hand (see site B63).

Curandera: healer (see site B17).

Curare: plant poison (*Strychnos guianensis*).

Chaparro: common name for the low, twisted tree of the llanos known as *Curatella americana* (Pittier, 1970: 224, 226–227), whose leaves, bark, and fruit are used by inhabitants of the llanos (De Armas Chitty, 1991: 80).

Desaguadero: Pedro Alvarez at Fundo Mata Verde (see site B81) in 1985 defined *desaguadero* for us as “*un caño*

que nace en la sabana y que no tiene nombre (a stream that originates in the savanna and has no name)" (see also site B21).

Desagüe: a natural outlet or drainage channel (see site B8).

Distrito: district.

Encargado: a manager of a farm or ranch.

Encrucijada: an intersection or crossroads.

Estero: low-lying ground that contains water for most months of the year (Tamayo, 1961: 113). Sarmiento (1990: 38) characterizes *esteros* as "*cubetas que recogen las aguas de escorrentía o de desborde fluvial* (pails that collect the fluvial runoff)" (see site B41). *Esteros* "*veraneros*" retain water during the dry season (Silva et al., 1971: 65).

Estoraque (*Styrax* sp.): plant that grows in stands as secondary growth on the llanos (see fig. 4.158) (Pittier, 1970: 243) (see site B26).

Falso: barbed-wire gate (see site B21).

Finca: small farm with farm house (see site B1).

Fundo: farm or ranch.

Gabán: wood ibis or stork (*Mycteria americana*) (De Armas Chitty, 1991: 109; López de Ceballos, 1974: 34–35; Tamayo, 1961: 96).

Hato: large cattle ranch (see site B4).

Jagüey: a tank or pool of water (see site B66) (fig. 4.265).

Jobo (*Spondias lutea*): tree (fig. 4.254) (Pittier, 1970: 285) (see site B61).

Laguna: lagoon that forms in an oxbow channel or as a result of bulldozing a *préstamo*. According to Tamayo (1961: 31), *lagunas* are deeper than *esteros*, and most *lagunas* retain water throughout the year (see sites B27, B65).

Legua: a unit of distance measuring 5.5 km (see site B51).

Madrevieja: an oxbow course of a stream (*caño*) or river (Tamayo, 1961: 30) (see sites B12, B27). De Armas Chitty (1991:138) notes that a *madrevieja* retains water during the dry season.

Mano: stone pestle used with a *metate* (fig. 4.132) (De Armas Chitty, 1991: 176).

Mata: an isolated clump of forest on the savanna (Tamayo, 1961: 127, 130) (see sites B17, B63).

Mata de burros: term used to characterize a clump of forest that is impenetrable (see site B86).

Matadero: slaughterhouse (see site B18).

Meseta: flat-topped ridge (see site B31).

Metate: trough-shaped grinding stone (fig. 4.215) This is an introduced Nahuatl term for a *piedra de moler* (De Armas Chitty, 1991: 176).

Mijao (*Anacardium rhinocarpus*): giant tree (fig. 4.297). (Pittier, 1970: 185).

Molino: mill (see site B24).

Montaña: term for forest (Sarmiento, 1984: 6). In our study region, the extensive gallery forest known as Montaña El Chuponal extends northeast of the Canaguá River (see sites B25, B27).

Monte: secondary growth (figs. 4.162, 4.257).

Morocota: the term for a \$20 gold coin from North America (De Armas Chitty, 1991: 153) that is used to refer to a precious item (see site B17).

Morrito: term for small hill that can be used to refer to an earthen mound built by pre-Hispanic (and specifically, Gaván-phase) inhabitants of the llanos (see site B2).

Municipio: municipality.

Ñame: yam (*Dioscorea alata*) (Pittier, 1970: 330) (see site B27).

Ocumo: American taro or yautia (*Xanthosoma sagittifolium*) (Pittier, 1970: 331) (see site B27).

Olla: the term for a ceramic necked jar that is used widely to refer to a whole vessel or pot (see site B92).

Parroquia: parish.

Pasto: pasture, grass cover (see site B26).

Platanal: garden of plantains (*Musa paradisiacal normalis*) (Pittier, 1970: 366).

Portón: metal gate.

Potrero: pasture or paddock (see site B26).

Pozo: term used to refer to a pool in a river (see sites B83, B84).

Préstamo: sunken, artificially modified ground, often filled with water, that is the result of road building (see sites B1, B17).

Puya: pointed digging stick for sowing (see site B69) (fig. 4.273).

Quebrada: ravine, generally drained by a stream.

Quiripa: freshwater-shell disks produced and traded by sixteenth-century groups on the llanos (Gassón, 2000a; Mercado, 1966: 46–47; Morey, 1975: 257–260).

Rancho: small farmstead.

Rastrillo: harrow (see site B26).

Saliente de agua: natural outlet and gully (see site B72).

Samán (*Pithecellobium saman*): tree (Sarmiento et al., 1971: tabla 2), also designated (*Samanea saman*) (Pittier, 1970: 387).

Solar: backyard or house lot (see B99).

Tecomate: neckless ceramic jar.

Terraplén: leveled earthwork or causeway constructed by pre-Hispanic (and spe-

cifically, Gaván-phase) inhabitants of the llanos (see site B24).

Tiesto: fragment of a ceramic vessel, potsherd.

Topochal: garden of bananas (*Musa paradisiaca sapientum*) (Pittier, 1970: 367) (see site B88).

Topocho: variety of banana (*Musa paradisiacal sapientum*) (Pittier, 1970: 367).

Vega: alluvium (fig. 4.58) (see site B37).

Vía: dirt (and gravel) road (fig. 4.118) (see site B17).

Yopo: hallucinogenic plant (*Piptadenia peregrina*) that was traded and consumed by sixteenth-century groups on the llanos (Morey, 1975: 268–269; Pittier, 1970: 207).

Yuca: manioc (*Manihot*) (figs. 4.56, 4.66).

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