

THESIS

CERAMIC ANALYSIS OF THE TABUCHILA COMPLEX
OF THE JAMA RIVER VALLEY, MANABÍ, ECUADOR

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ABSTRACT

CERAMIC ANALYSIS OF THE TABUCHILA COMPLEX OF THE JAMA RIVER VALLEY, MANABÍ, ECUADOR

Archaeological excavations by the Proyecto Arqueológico-Paleoetnobotánico Río Jama (PAPRJ) in the Jama River Valley of northern Manabí, Ecuador, have established a cultural chronology spanning over three millennia of prehispanic occupation. One of these occupations, the Tabuchila Complex of the Late Formative Period (1000 – 500 BCE), remains poorly understood. Excavations at three sites in the Jama Valley in the 1990s recovered ceramic, lithic, obsidian, paleobotanical, archaeofaunal, and human skeletal remains from Late Formative Tabuchila contexts, with the goal of orienting Late Formative occupation of the northern Manabí region to its contemporaries in western lowland Ecuador.

This study employs modal ceramic analysis to recognize and catalogue formal and stylistic variation within the recovered Tabuchila ceramic assemblage. Through this analysis the Tabuchila assemblage is compared to other studies of Late Formative Chorrera assemblages to understand how Tabuchila represented a regional variant of and contributor to the formation of the Chorrera ceramic tradition. In addition, a sovereignty-based theoretical approach explores how this ceramic assemblage reflects deeper processes of emergent social complexity and early attempts at establishing inequality in northern Manabí's regional mound center of San Isidro. Results and discussions of the analysis examine a community connected with its Middle and Late Formative contemporaries across the western lowlands and engaged in feasting activity in the vicinity of the central mound of San Isidro.

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CHAPTER 1: INTRODUCTION

The Formative Period of Ecuador (ca. 3400 BCE – 300 BCE) is poorly understood by archaeologists. Covering a broad swath of Andean prehistory, the Formative began with early agricultural sedentism and small communities and ended with several culturally diverse polities controlling this region of the north central Andes. Artisanal material expressions, trade with regional neighbors, and impressive built environments all flourished within these cultures. Archaeologists and art historians have uncovered remarkable artifacts from the Formative Period that attest to this historical trajectory, as well as this region's unique contributions to Andean prehistory. Since 1988, the Proyecto Arqueológico-Paleoetnobotánico Río Jama (PAPRJ), directed by James Zeidler and Deborah Pearsall, has been exploring the Jama River Valley of northern Manabí in an effort to understand the region's prehistoric occupations and full cultural sequence. As a direct continuation of the PAPRJ, the ceramic assemblage from project excavations of three Late Formative sites are the primary focus of the present study. This thesis presents a modal analysis of the assemblage in order to address two queries. First, in what ways is this assemblage representative of the Tabuchila regional variant of the Chorrera ceramic tradition? Second, how can this study and future research contribute to archaeological interpretations of the nascent social complexity taking place during the Late Formative? This study contributes to archaeology's understanding of the Chorrera ceramic culture in two ways: first, by filling in geographic and temporal holes in the chronology of Late Formative Ecuador; and second, by suggesting practice-based approaches to future research in this exciting yet understudied period of north central Andean prehistory.

The extensive looting of archaeological sites and uneven academic interest in Ecuador has resulted in a highly fragmentary understanding of the nation's prehistoric heritage. Perhaps no culture is more exemplary of this incomplete record than the Chorrera tradition of the Late Formative (1300 – 300 BCE). This ceramic tradition was independently identified by Bushnell (1951) on the coast and Meggers and Evans (1957) in the Guayas Basin. Subsequent excavations have found Chorrera “regional variants” from Esmeraldas and Manabí in the north to the upper lowlands of Los Ríos, and throughout the Santa Elena Peninsula and the Guayas Basin (*Figure 1.1*). Most of these excavations have focused on the impressive ceramic vessels of Chorrera, which faithfully depict animals, agricultural products, people and even places (Lathrap et al. 1975). Innovations such as the strap-handle spout, incredibly accurate naturalistic representation, and ceramic musical instruments were produced and diffused from ceramic workshops (Cummins 2003; Pérez de Arce 2015). Some of the best examples of these ceramics grace the museums of the Banco Central in Quito and the Museo Antropológico y de Arte Contemporáneo (MAAC) in Guayaquil and are rightly considered some of the most finely produced ceramics in all New World prehistory.

The Late Formative Period of Ecuadorian prehistory is bracketed on both ends by stronger archaeological understanding. The period is preceded by the Valdivia culture of the Early Formative (3400 – 1500 BCE), which developed some of the first ceramics on the Pacific coast, established a broad agricultural base, and lived in substantial village communities at sites like Real Alto (Lathrap et al. 1977; Marcos 1978; Zeidler 1984). Valdivia culture seems to have balkanized sometime around the start of the Middle Formative (1500 – 1000 BCE); the smaller settlements of the Machalilla culture seem to represent at least one of these fragments of subsequent Regional Developmental Period (300 BCE – 500 CE) are strongly characterized by

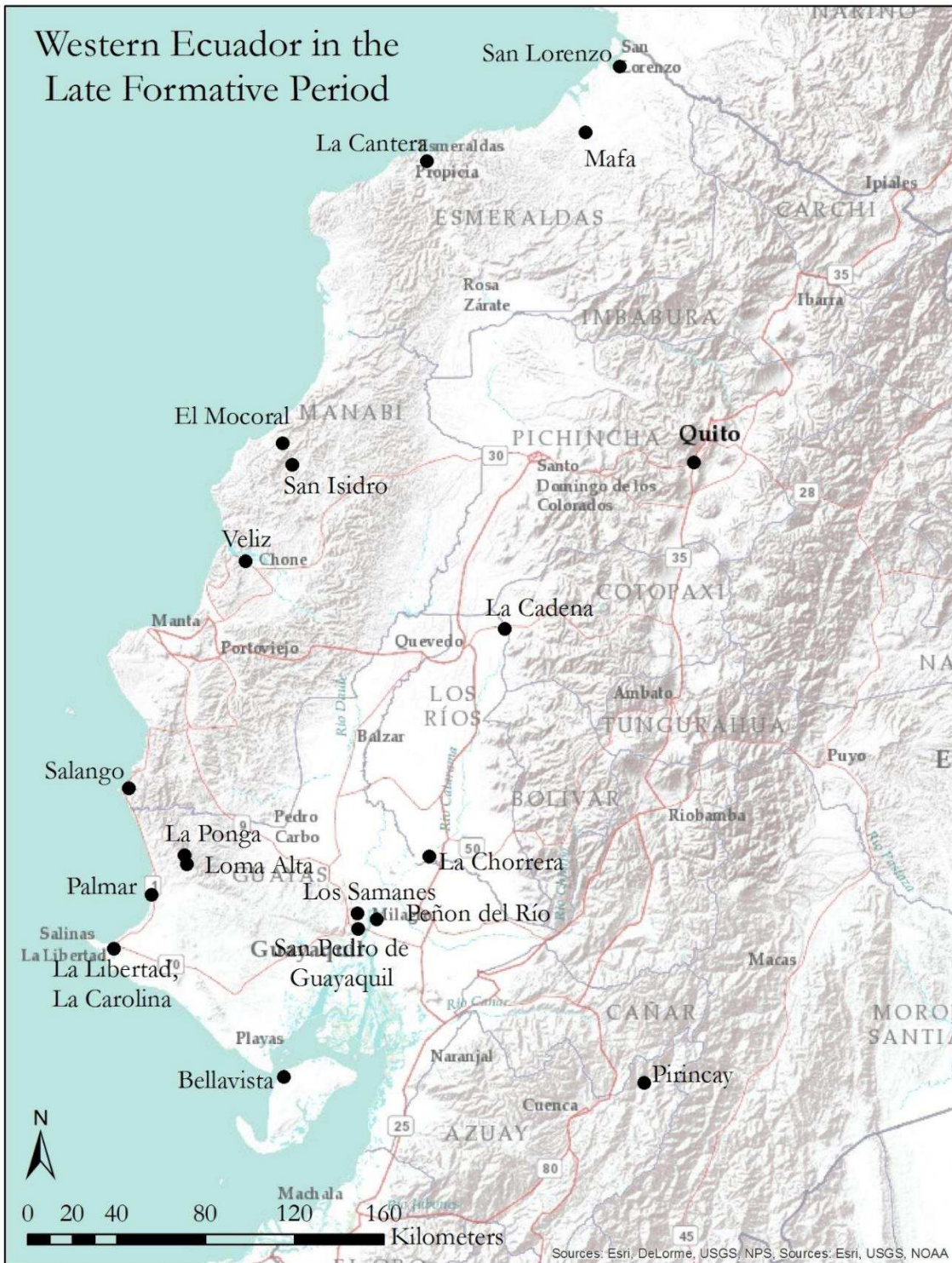


Figure 1.1. Map of Ecuador, with sites discussed in text labeled.

mound-building activity and entrenched warfare by competing peer-polities (Masucci 2008).

Valdivia culture. Skipping over the Late Formative’s half-millennium, the cultures of the Over

the course of the Late Formative (1300 – 300 BCE) it is likely that great shifts occurred in the communities and cultures of coastal Ecuador. During this time mound-building activity has been shown at expansive sites like San Isidro (Zeidler 1994), along with trade in obsidian to the Quito highlands (Zeidler et al. 1994). What processes drove these impressive achievements? What changes took place in community organization, ideological expression, or social stratification? How did these developments impact their descendant regional Ecuadorian polities?

Archaeological explorations of Chorrera culture have been frustratingly inadequate in answering these questions, given the high quality of the ceramics Late Formative people produced, and their broad geographic and temporal extent. To date no elite burials have been excavated by archaeologists, and settlement patterns are almost completely unknown. With one exception (Lunniss 2008) even the layouts of Chorrera homes and ritual spaces can only be inferred – from ceramic depictions of them. Instead, archaeological excavations have been overwhelmingly vertical in nature, seeking out Chorrera components (or accidentally finding them) and contextualizing them within broader chronologies of provincial prehistory.

Archaeologists who have worked in Ecuador have done admirable work in recent decades, assembling an understanding of Chorrera as much more than a uniform tradition of ceramic production and exchange. Underneath the monolithic moniker of “Chorrera” many archaeologically described regional variants bubble just under the surface. The archaeology of the Late Formative is thus at a research crossroads. The culture of Chorrera is broadly defined and bounded, yet many of the practices that characterize a culture for modern anthropologists – built environments, ritual interactions, trade networks, and the *experience* of a culture – are only somewhat understood.

One recent project in northern Manabí was designed and largely carried out in search of one of these regional variants of Chorrera, designated Tabuchila by Emilio Estrada (1957). Beginning in 1988, James Zeidler and Deborah Pearsall secured three NSF grants to investigate the Jama River Valley of northern Manabí under the Proyecto Arqueológico-Paleoetnobotánico Río Jama (PAPRJ), a four-year project. The goals of this project were to “explore the variability of chiefdom societies in the archaeological record” with a particular focus on the “interplay of settlement dynamics and agricultural productivity” and how those affected the generation and maintenance of political power and social inequality (Zeidler and Pearsall 1994:1-3). Detailed survey and targeted excavations throughout the valley allowed for the project to address the western lowland environment, cultural (especially ceramic) chronology, and prehistoric subsistence and ethnobiological analyses. Within this project, a PhD student named Evan Engwall (then at the University of Illinois at Urbana-Champaign) excavated three sites in the Jama River Valley during the 1991 and 1994 field seasons. Engwall was successful in recovering several large features containing Chorrera ceramics, but due to extenuating circumstances he was never able to complete his dissertation and analysis of these materials. However, Engwall was able to retain custodianship of the ceramic, bone, shell, and lithic components that he brought to the United States. The present study’s data set consists of this diagnostic ceramic assemblage which was selected by Engwall for his study. James Zeidler, the director of the Proyecto Arqueológico-Paleoetnobotánico Río Jama, convinced Engwall to send the materials to Colorado State University in 2014 for this project. While the recovered materials represent several types of materials, the ceramics are the primary focus of this thesis.

There are two questions at hand in this study. First, how does the Jama Valley Chorrera assemblage relate to the larger corpus of the Chorrera ceramic tradition? This is a concern because the assemblage has been previously assumed to represent the Tabuchila regional variant of Chorrera (Zeidler and Sutliff 1994: 115). Tabuchila was first identified from some materials that Ecuadorian businessman and antiquarian Victor Emilio Estrada encountered in the town of Tabuchila, immediately south of the Jama Valley (1957). However, subsequent identification of this sub-style has come from looted pieces almost exclusively. The primary contribution of this thesis is the delineation of the Tabuchila regional variant with archaeologically controlled materials. This question will be tested primarily by a qualitative modal analysis of the ceramics excavated by Evan Engwall with comparison of results to other modal analyses undertaken by archaeologists in the Guayas Basin. The results of this analysis show that Tabuchila began as a transitional Machalilla-Chorrera ceramic style, with further development into a fully Chorrera style in subsequent centuries.

This primary analysis, and interpretation of the features Engwall excavated, will inform the study's second question: how has the discussion of "regional variants" illuminated and obscured archaeological work on social complexity in the Late Formative? As I have mentioned, Ecuadorian archaeology is at an important crossroads where archaeological inquiry into the Late Formative has defined the people that lived across western Ecuador in broad strokes but still lacks many details. During the Late Formative western lowlanders engaged in rich exchange networks with the highlands and their Peruvian and Colombian coastal neighbors, held large feasting events, built monumental architecture, and asserted cultural sovereignty over this region. In short, archaeologists have circumstantial evidence of emerging and expanding social complexity in the Late Formative, but most research has not extensively addressed these issues.

Incorporating practice-based theoretical approaches into future research on Chorrera peoples can build on the work that has been done on regional variation while also addressing the interactions and networks that propelled Chorrera ceramic culture across the western lowlands.

The present study is organized into seven chapters to present and understand the questions posed in this thesis. Chapter 2 is made up of a brief discussion of recent theoretical perspectives in state archaeology, known as the “archaeology of sovereignty” (Routledge 2014). Sovereignty is a theory concerned with the composition and continued maintenance of power by all participants in a society. While the concept of sovereignty has been utilized to understand state societies, in Chapter 2 I argue that many of the motives and methods proto-elites used to gain power in early complex societies are similar to those methods used in more complex states. This means that material culture (such as ceramics) can reflect the practices and messages of power that legitimized ideological and later political authority in the communities of the Late Formative. This discussion of theory will help in understanding the ceramic assemblage recovered from the Jama River Valley and provide new questions that future research can explore.

With theoretical underpinnings established, Chapter 3 is a review of past explorations in Formative Ecuador. This chapter is broken into roughly two sections. The first portion is a historical overview of the two major interpretive frameworks concerning Chorrera: the hyper-diffusionist explanations of Betty Meggers and Clifford Evans, and the culture-historical interpretations of Donald Lathrap. These opposing titans of South American archaeology have made their influence felt long after they both passed, and both perspectives are often present in any project concerning Late Formative Ecuador. The second section of this chapter will focus on

the various explorations of Chorrera that have taken place across the western lowlands over the last forty years, with each one presenting a new regional variant of Chorrera ceramic culture, synthesizing recent research, or addressing questions of ideology and artistic expression.

Chapter 4, then, will detail the excavations that Evan Engwall undertook in 1991 and 1994, at three sites located in the Jama River Valley. The first site, El Mocoral, was identified in a random quadrat (II/N/25) during the course of systematic archaeological survey for the PAPRJ. This site is located well away from the main alluvial areas of the valley, in the hilly upland region of the valley known as Stratum II. The second and third sites, Finca Cueva and Dos Caminos, are located near the modern town of San Isidro; this town overlays large Valdivia, Chorrera, and Jama-Coaque occupations, including an impressive earthen mound just behind the main thoroughfare of the town (Zeidler and Pearsall 1994). This chapter is in a sense a salvage archaeology; it will focus on Evan Engwall's excavations, and illustrate where the "trail of breadcrumbs" stopped so that this study can pick up at that point.

Chapter 5 explains the methods employed in qualitative ceramic analysis, known as "modal analysis" by Donald Lathrap (1962) and his students. The goal of modal analysis is to reconstruct and re-contextualize ceramic vessels, by determining the dimensions of variability that are reflected in the choices ceramicists made in conceptualizing, producing, and using the ceramic vessel or object. Identifying these dimensions and tracking them through time and space in the archaeological record allows for local sequences and occupations to be better understood and presented. The selection of modal analysis over other techniques such as type-variety will also be discussed. This chapter will conclude with an enumeration of the various dimensions of variability that have been examined in the ceramic assemblage.

With the methodology established Chapter 6 presents the vessel forms observed in the ceramic assemblage recovered from the Jama River Valley. Dimensions of variability that have been determined to be significant in understanding what practices took place in the Late Formative will also be compared. This chapter will include comparisons to other modal analyses undertaken by several of the archaeologists discussed in Chapter 3. María Nieves Zedeño's work at Peñon del Río (1990), Laurie Beckwith's dissertation on sites in the Guayas Basin and the Santa Elena Peninsula (1996), Katherine Ramírez's work from La Cadena (1999) and Rosalba Chacón's thesis from Los Samanes near Guayaquil (2004) will all be compared to results found in the Jama River Valley. This is to determine and understand similarities and differences between Chorrera ceramics in northern Manabí and their contemporaries elsewhere in western lowland Ecuador. These comparisons are argued reflect interactions between the people of the Jama River Valley and their Ecuadorian contemporaries.

Chapter 7 discusses the results of analysis described in Chapter 6, and provides some interpretations of the ceramics in their archaeological context. This chapter argues that the assemblage can be called a regional variant of the Chorrera style. Based on carbon dates recovered from features at Dos Caminos, Tabuchila ceramics represent one of the earliest manifestations of Chorrera in the archaeological record. The implications of this result will have some bearing on a discussion of the second question of this thesis: how to proceed best in addressing broader questions of interaction and social complexity. Chapter 7 will conclude with brief suggestions for future research in western lowland Ecuador. Multiple directions can be pursued in Ecuadorian archaeology that incorporate both the regional variants already understood by archaeologists as well as newer perspectives on social complexity proposed by archaeologies of sovereignty.

Of the two questions this thesis proposes, only the first one will be fully answered. The second question is much broader than the scope of this thesis, but the theoretical perspective and results of the modal analysis begin a dialogue about how to frame new questions about social complexity in the Late Formative. This is rooted in the desire that future research can continue exploring western Ecuador and shedding light on the people of the Late Formative Period. The work that follows will contribute to archaeologists' understandings of Ecuadorian prehistory, and will begin new conversations about the unique expressions of social complexity in the Andes.

CHAPTER 2: A SOVEREIGN ARCHAEOLOGY OF LATE FORMATIVE ECUADOR

The Chorrera ceramic “phenomenon” is still poorly understood archaeologically. What is known is that it was a creative proliferation across a millennium of western Ecuadorian prehistory. Despite archaeologists’ meager grasp of how Chorrera society was constructed, the material culture that has been excavated and looted from Chorrera contexts attests to a remarkably consistent aesthetic and material logic being asserted in ceramics, shell, bone, and stone artifacts. While archaeological contexts excavated across the western lowlands will provide some grounding to interpretations of the data, the primary focus of this study is the Chorrera ceramic assemblage from the Jama River Valley in northern Manabí. The theories discussed in this chapter have been selected to make material cultural messages sensible for archaeological interpretation. They also facilitate examinations of the creation and maintenance of social capital and power in early complex societies as they existed in the Late Formative of Ecuador.

This chapter proposes the use of Smith’s (2011) and Routledge’s (2014) concept of the “archaeology of sovereignty” as a flexible middle-ground that incorporates the recent material and ontological turns in archaeological theory. This theory centers on the composition and reproduction of power in premodern contexts, and argues that authority is a historically situated behavior with an important goal: the assertion of sovereignty over aspects of the fabric of life. This requires the knowledge, memory-habits, and symbolic representation to make the imposition of political authority, in visible spectacle and invisible routine, sensible to all its participants. Given that the concept of sovereignty is relatively new in archaeology, its goals and elements will be discussed at some length, followed by an elaboration of how it informs the study of ceramic material culture. As will be discussed in future chapters, the Chorrera ceramic

assemblage from the Jama River Valley is heavily weighted toward cooking and eating activities, more so than most others recovered from Late Formative Ecuador. This means that recent literature on feasting and commensality will also be consulted in this chapter. This chapter will conclude with a brief synthesis explaining how sovereignty and commensality specifically motivate the questions this thesis seeks to answer.

Hegemony and sovereignty in premodern contexts

Bruce Routledge (2014) and Adam Smith (2011) have articulated Gramsci's discussions of hegemony into general principles that help archaeologists understand performance, agency, and power asymmetries in premodern contexts. Routledge contends that power and hegemony are not passively accepted but actively and continuously expressed and supported by actors working on behalf of the state – which is itself invented, implied, and interpreted by its constituents. It should be noted that Routledge's principles are applied in his work to polities long argued to be states or state-like in the archaeological literature such as the Inca, classical Athens, and Mesopotamian Ur. This contrasts strongly with Late Formative Ecuador's polities, which few archaeologists would argue are states. At this point in Ecuadorian prehistory, no society had established the political authority and administration that have characterized the state for archaeologists. Early social complexity lies at a crossroads of human history, where actors making the case for additional power could not rely on past institutions to legitimize their argument.

On the surface it may appear an odd choice to utilize Smith's and Routledge's sovereignty concept in theorizing this analysis. However, sovereignty is a practice-based approach which highlights the behaviors that justify and reinforce power inequalities. Like other archaeologists of recent decades (Yoffee 2005), I am unsatisfied with the typological approaches

to understanding social complexity – it is no longer possible (nor rewarding) to neatly slot Chorrera culture into the “tribe” or “chiefdom” moniker. Discussing social complexity using a practice-based approach like sovereignty requires historically situated considerations of the composition and reinforcement of group identity, the strengthening of ritual and routine, and the justification for political and religious authority – what an entire society *does*, not merely its constituent parts. As will be discussed in more detail, Routledge’s conversations regarding sovereignty in practice emphasize the ubiquity of all of these justifications in every moment of social performance. I argue that several of the key concepts in an archaeology of sovereignty are as valid in early complexity as they are in entrenched states, though there are principal differences in aspects like the scale of execution and the increased cost of “non-compliance”. The following sections will discuss sovereignty and frame it in a way that is useful for non-state social complexity.

Hegemony and sovereignty

The concept of the state has long been couched in the analysis and comparison of its constituent institutions, like interlocking gears in a timepiece. It is easy for people, and especially archaeologists, to deal with the state in such tangible, material terms. However, as Routledge (2014) suggests at the outset of his discussion, the lectures of Michel Foucault introduce a more thoughtful – and daunting – perspective:

We cannot speak of the State-thing as if it was a being developing on the basis of itself and imposing itself on individuals as if by a spontaneous, automatic mechanism. The State is a practice. The State is inseparable from the set of practices by which the State actually became a way of governing, a way of doing things, and a way of relating to government. (Foucault 2007: 276-7).

Considering the actions of the state not just as processes, but as practices and relationships that bound and enable its participants, has a profound impact on the way archaeologists conceive of complex societies. Recent studies in this vein of archaeology and state theory have focused on “practices instead of object, strategies instead of function, and technologies instead of institution” (Routledge 2014: 5, after Lemke 2007: 58). In these studies the state is not discussed as a monolithic institution, but is de-centered into the techniques of political authority that are constantly asserted and produced by particular individuals – in brief, “forget the state; focus on state-formation” (Routledge 2014: 6).

Understanding political authority, and how actors accept or resist its legitimacy, is therefore paramount to discussions of activity in a state. These discussions were spearheaded by the work of Antonio Gramsci, a political theorist who was imprisoned by the Mussolini regime from 1926 until his death in 1937. Considering both orthodox Marxist thought and historical process, Gramsci devised the term “hegemony” to describe the state as both the administrative institution and the society that perpetuated its existence. In regard to the latter, Gramsci notes that “the State does have and requests consent, but it also ‘educates’ this consent” (1971: 259). Gramsci’s hegemony, as summed up expertly by Routledge, is

the process by which subaltern classes acquiesced to their own political domination by ruling classes through the use of education, cultural activity, symbolic expression, religion, language, traditional cross-class alliances, etc. (2014: 37).

Gramsci’s hegemony is itself a set of practices by which intellectuals actively select and omit cultural elements of a society to construct authority, both for individuals in the dominant state authority and for the bourgeois who may seek to undermine and reformulate that authority. In the practice of summoning coherent symbols and projects from the unarticulated realm of cultural “common sense”, individuals constructing a hegemonic logic seek to gain active or

passive consent (Routledge 2014: 41). However, in any one hegemonic assertion there is selection of certain symbols, and a subsequent bounding – no hegemony completely encapsulates a culture’s range of expression. This leaves room for alternative viewpoints and counter-hegemonies within the larger realm of a culture’s “common sense”. As implied above, Gramsci also identifies “intellectuals” in his discussions – these are the actors who construct these assertions, and they are often in historically constituted roles that give them this power (scientists, priests, politicians, artisans, and so on).

Applying Gramsci’s concept of hegemony to archaeological investigation involves an analysis of how a hegemony was formulated to motivate individuals and collectives to action. A given prehistoric hegemonic project pulled elements from the “common sense” of that culture, allowing it to “feel right” and “ring true” to the people it sought to control. Yet these projects are inherently partial, selective, and open to reinterpretation. Reproducing a given hegemonic “status quo”, then, is a constant struggle between actors and communities shaping and enacting that practice. Political authority’s coercive powers are an aspect of hegemony; the strategies of the state are composed out of “common sense” as with any other hegemonic effort. In addition, Gramsci’s intellectuals are very present in the archaeological record, as administrators, elites, specialists, and for the purposes of this study, as some ceramicists. However, hegemony is constituted by every member of a society in some way, through other practices that engage the products of intellectuals such as buildings, art, and symbols (Routledge 2014).

Focusing on these practices provides important insight into the material culture under study. Approaching hegemony as perpetually reconstituted also means that archaeologists should seek out the practices that material culture reflects: rituals, gatherings, feasts, and domestic lives of past people. This means that hegemonic practice is not confined to the administration of a

state, but that a state is one of many forms of hegemony that manifests through the construction of political authority. Building a political narrative of control, and exerting that control within established hegemonies and cosmologies, requires strategies articulated from the bottom up as the “common sense” of community organization is co-opted by the political elite-to-be in top-down exertions of sovereignty. In a decidedly non-state context like Late Formative Ecuador, I argue that hegemony must take on an even broader meaning, as a set of practices creating consent for non-political (or barely political) authority. Intellectuals in this case are a much broader category that includes shamans, ceramicists, elders, farmers and fishermen that provide food – and the hegemonic logic constructed is much more ideological or spiritual in nature. Nonetheless, the actions of society’s participants – the incorporation of “sensible” strategies, the inscription of reinforcing messages, and ultimately the “informed consent” that institutionalizes power – are still visible and can be interpreted through the lens of sovereignty. This will keep the focus on what Foucault and Routledge argue is important: practices that propagate authority of any stripe. To apply Foucault’s earlier quote to Chorrera culture:

We cannot speak of *Chorrera* as if it was a being developing on the basis of itself and imposing itself on individuals as if by a spontaneous, automatic mechanism. *Chorrera* is a practice. *Chorrera material culture* is inseparable from the set of practices by which *Late Formative rituals* actually became a way of *building cultural identity*, a way of doing things, and a way of relating to *that cultural identity*.

If life in the Late Formative and its material reflections are to be studied in this way, the next step is to define and discuss how hegemonic logics assert themselves effectively into the practice of being Chorrera. An archaeology of sovereignty is very useful in this regard because it frames ritual routine and spectacle not as two opposed and demarcated events, but as simultaneous and inextricable.

Spectacular routines and routine spectacles

Social performances are the activities and behaviors that are acted out in all moments of a person's cultural experience. This constant act of being cultural, in a practice-based approach, is what composes and recomposes society. Commonly social performance is conceived as having two aspects: the routine and the spectacle. Given the choice, archaeologists (and the public) often choose the latter over the former. Special attention is given to ritual centers, elite burials, and the built environments that elicited awe in visitors across the ancient world. Spectacular social performance is also reflected in symbols, and the impressive materials by which members of society make ideas and concepts tangible. Meanwhile the routine, tangible expressions of authority – the regulation of subjects, their taxation, and the infrastructure supporting control – have also been targets for understanding how elites accrued and used the capital they have had at their disposal, though they may not inspire rapt attention (or funding) like spectacles do. Preferring spectacle over routine, and framing the two as neatly divided, has driven decades of research into social complexity. However, Routledge argues that spectacle and routine are interlinked aspects of any given social performance and cannot be fruitfully divorced from one another:

In all cases we are dealing with social performances that involve both symbolic representation and habit memory; both callings to mind and callings to body, as it were. What matters is that the disparate contexts in which people remember, or are forcibly reminded of the place of political authority in their world are linked by reference to a coherent hegemonic order. (Routledge 2014: 112).

With all this in mind, Routledge offers up a “continuum” of spectacle and routine with three points along it. At the spectacular end of this continuum is the “production of objects of direct intellectual reflection” (Routledge 2014: 112). These objects are the spectacular messages – material and non-material, portable and environmental – that communicate authority and the

possession of that authority by other members of society. Toward the middle of this continuum, these spectacles entrain or regularize authority by hegemonic associations. Built environments, material culture, the personal habitual experiences of all individuals involved – these are all embedding features of a social performance. Material messages inscribe and routine practices incorporate all parties present into social performances that establish the “new normal”, presenting a spectacle as sensible and coherent. Finally, at the “routine” end of this continuum is what Routledge terms the “mundane techniques of sovereignty”: taxation, administration, and subjugation (2014: 113). These are the activities that reinforce the hegemonic order passively, granting the “educated consent” necessary to maintain control.

What makes this continuum so powerful for anthropological discussion is that all three points are often expressed simultaneously in any given moment of social performance. The entirety of this continuum is utilized by premodern elites in an interjection of authority into society. Observance of ritual embeds and entangles a participant, “ordering lives to be lived a certain way” (Routledge 2014: 125). Political elites successfully placed themselves into this re-ordering as an answer to the challenge of rulership, entangling themselves in this re-ordering as well. Furthermore, if hegemonic logics can be composed in order for intellectuals to negotiate political and non-political authority alike (as asserted in the last section), then the spectacle-routine continuum is also useful in understanding how non-political or “ideological” authority is managed.

Ideological authority in Late Formative Ecuador is still a negotiation made between members of a society. From an emic perspective, what greatly expands is the category of “intellectuals”: ancestors, non-human spirits, animals, and plants all gain agency in managing spiritual authority (though some of these have difficulty in enacting their agency without human

interaction). To Gramsci's Western mind, intellectuals were members of a society with definable skills and value to their (likely capitalist) society; it was this value that could be wielded in composing parts of the hegemonic logic. The messages and symbols that "intellectuals" select are different if they are composing an apolitical, ideological hegemony. All of these changes are reflective of the historically situated motivations intellectuals have in acquiring spiritual rather than political power. In an effort to keep this historicity intact, we can surmise that a Chorrera "intellectual" broadens not just in name, but into practices well beyond what Gramsci originally envisioned for this term. A Late Formative ceramicist is still an "intellectual" in the sense that they possess useful and privileged knowledge and skills, which can be utilized through the production and use of their vessels. However Late Formative ceramic "intellectualism" was likely not just negotiated at the individual level, but also with their kin at the familial level, at the community level with other kin groups, and between communities.

Becoming a Late Formative Ecuadorian ceramicist was another form of bounding, into certain lifeways and social circles, that sovereignty theory can help elucidate. This is also true of shamans, farmers, fishermen, or any combination of these occupations as they were composed, combined and experienced in Late Formative society. In short, we must take caution in using the term "intellectual" in this discussion without keeping in mind what this would have looked like for Late Formative people. At this juncture in the Andean historical trajectory archaeologists should not even assume that being a ceramicist was an exclusionary occupation. Given the impressive corpus of Chorrera ceramics gracing museum displays worldwide, it is possible that by this point ceramic production was a full-time endeavor practiced by committed kin groups or portions of the community. However the processes of increasing "craft intellectualism" or craft specialization should be observed in the archaeological record, not assumed *a priori*.

Complicating the issue further is a facet of hegemony that has not yet been discussed here: counter-hegemony. A hegemonic logic of practices, inscriptions, and enforcement can be composed and reinforced by multiple interested parties, or countered with other lifeways. In premodern societies, an individual or family can compose and enact a different logic, or reject hegemonies altogether. One simple way to achieve this is by moving away. Why live in San Isidro, or in other regional centers of the Ecuadorian Late Formative? In this case it is difficult to disentangle the coercive “push” factors of outside human or environmental factors from the attractive “pull” factors that draw new members into a society. On the one hand, the settlement patterns of the Late Formative suggest that valleys like Jama were infilling over this period (Zeidler and Pearsall 1994; Zeidler and Isaacson 2003; Zeidler 2008), meaning there was perhaps less and less distance a disgruntled group could put between themselves and the cultural hegemony they rejected. Keeping practice-based interpretations in the discussion as well, “practices that raised the cost of non-compliance” could have made it more difficult to resist a sovereign effort (Routledge 2014: 124). Non-participation can lead to ostracizing those who do not submit to entangling themselves in a hegemonic logic and “playing along”. In some cases it can even provoke violence against these “othered” pariahs. The likely presence of competing hegemonic logics in Late Formative Ecuador will be discussed further in Chapter 7.

Sovereignty and ceramic culture

The enactment and negotiation of non-political authority in Late Formative Ecuador is by definition an actively managed and historically situated effort. As with many activities of experience and thought this means that it is only partially reflected in the archaeological record. However, in a general sense the creation of a hegemonic discourse relies on the linchpins of messaging, routinization, and enforcement. All three of these aspects are called upon in

sovereign efforts made by elites, and archaeologists can detect aspects of all these activities. This presents three tasks for archaeologists seeking interpretations of sovereign action. First, they must navigate the uneven preservation of these activities within the record. Then they must engage with the historically situated techniques by which elites of the past selected and inscribed their authority into the fabric of society. Third, they must seek to differentiate between these two curations of the archaeological record.

In response to the first task at hand, an archaeologist must select the materials and messages they wish to examine, which are ceramics in this study. Ceramics are one of the more preferentially preserved and message-laden materials in the archaeological record. Ceramics are interactive and portable, able to be embedded within a multitude of social performances, and are capable of (re)enforcing a hegemonic logic through their creation and use. In their production ceramics provide a reflection of the techniques necessary in the shaping of a “sensible” vessel.

The second task is to understand the use-life of the vessel as best as possible, from production through use and into discard. The ceramicist’s mental concept of an ideal vessel is informed both by their situated standards of usefulness and aesthetics; what is useful and beautiful comes both from the ceramicist’s imagination as well as their hands-on experience with already existing vessels. In turn the execution of this mental design is accomplished by callings to body and mind. Tactile habits and skills inform the ceramicist in making physical decisions concerning the vessel, but innovations also arise through desires to individualize vessels, “happy accidents” or mistakes that produce unintended (and subsequently desired) qualities, and other reactions to in-the-moment challenges that arise in the production of the vessel.

Material messaging, in effect, begins at the first conception of the vessel. What purpose will the vessel serve? Will it be in the fire for domestic cooking, or a feast? Will the contents be stored? How accessible does the vessel need to be? Is the vessel even meant for living members of the community, or does it have a special use-life planned in funerary interment or as part of a shaman's accoutrements? Function and form are inextricable in this – how best can the purpose be achieved, given the set of practices and preferences that the community has already established as sensible? How much room is there in this tradition for personal touches (intentional or otherwise)? At the union of function and form deeper priorities of the community (and ideological authority) become apparent. What iconographic motifs are utilized on which vessels? Is a given assemblage focused more on storage or consumption, and of what contents? Who is capable and permitted to produce ceramics? Where is the clay and temper sourced, and does that imply a relationship of the community with that area? All of these questions are potentially reflected in the way that ceramic assemblages are “grown” by their producers.

With regard to a ceramic vessel's life after production, archaeologists can examine the use, re-use, and exchange of the vessel with the goal of engaging historically situated techniques of building and enforcing hegemonic logics. A vessel's life experiences reflect the practiced incorporation and the material inscription imparted to that vessel – and now that effort is no longer solely in the mind and body of the ceramicist. The family who commissioned it, a shaman, distant relatives or guests coming to visit – all of them now have agency in the use of the vessel. Thus a vessel's presence and purpose in society reflect its participation in routine and spectacle: the “routinization” of ceramic form and function within society. To this end, archaeological context becomes incredibly important, and ethnoarchaeological studies can provide useful analogies for discerning the situated purpose and desired forms of ceramic vessels

(DeBoer and Lathrap 1979). Following a ceramic vessel into its discard and second lives (repair, “upcycling” or recycling, destruction and deposition) also requires a careful study of the context in which these messages are maintained or discarded.

As a final thought on this topic, it must be noted that an archaeologist is imposing their own “hegemonic logic” in the course of studying the material. Archaeological rediscovery of material culture is itself bounded by the theories that motivated interpretation and the methods that analyzed the materials. As we will discuss in the next chapter, archaeological inquiry in Late Formative Ecuador has seen several perspectives (one could say hegemonic logics) rise and fall in the century of formal study carried out there. These perspectives are another level of bounding, and while it seeks to resemble the logic that embedded Chorrera ceramics originally it will always be incomplete. The assemblage’s curation by different archaeologists further bounds the interpretations available for discussion (as is the case with this study – see Chapters 4 and 5). These are sources of error that are important to address in analysis.

Commensality, ceramics, and sovereignty

As mentioned, ceramics preferentially reflect some practices in the archaeological record. Commensality, the practice of sharing food within a community, is one such practice; feasting is defined broadly within this practice as a ritual communal consumption of food and drink (Dietler 2001: 65). Recent practice-based approaches to archaeology have brought feasts and commensality into focus (Dietler and Hayden 2001; Hastorf 2012; Kerner et al. 2015; Twiss 2007). Archaeologists of recent years have begun to consider everyday eating, spectacular feasts, and all commensal activities in between. Food is deeply intertwined in cultural identity (Twiss 2007: 1), and its preparation for daily eating and large-scale feasting can also reflect differential

status within a society (Hastorf 2012). Commensal activities present opportunities for political maneuvering, the resolution (or introduction) of communal tensions, and sites for the enactment of social control by economic or religious means (Dietler 2001: 69).

Dietler's identification of commensality as an inherently political practice articulates well with this chapter's definition of sovereignty as the enactment of control by routinized spectacle. Dietler approaches ritual and specifically commensal practice as "an instrument of both domination and resistance, as an arena for the symbolic naturalization, mystification, and contestation of authority" (2001: 71). These commensal politics allow for actors in all the feast's positions to assert or change their positions in socially meaningful ways. This dynamic conception of commensality accords with sovereignty's continuum of routine spectacle and the emphasis it places on the moment of social performance as embodying all parts of that continuum. That agreement is likely due to the common roots that these theories share in practice-based anthropological theory (Comaroff and Comaroff 1991, 1993).

Dietler's commensal politics settle into three modes: the empowering feast, the patron-role feast, and the diacritical feast (2001). Each of these three feasts act to acquire or maintain social, economic, or ideological capital in the practice of holding a feast. Where they differ is in their assertion of rankings and stratified power. Empowering feasts are diffuse "leveling" events where power is only loosely and temporarily gained through the conversion of economic capital into social capital (Dietler 2001: 79). I argue that a good Andean example of this mode of feasting was discussed by Vega-Centeno (2007) at the site of Cerro Lampay. Vega-Centeno identified numerous small "work party" events in the mound of Cerro Lampay, where food was

given to workers and their labor reciprocated that gift. This interpretation is thus an “empowering feast” in that party hosts had to wield their newly gained social capital immediately in order to contribute to the growth of the mound.

Meanwhile, patron-role feasts and diacritical feasts more distinctly “redistribute” capital and enforce institutionalized asymmetries of power; they do not expect equal reciprocation of all participants (Dietler 2001: 83) and in the case of diacritical feasts they explicitly demarcate highly ranked individuals with different cuisine and consumption (Dietler 2001: 85). No matter which feasting “mode” is in use, these commensal activities are reflected in the archaeological record through the presence of ceramics for cooking and serving. Moreover, commensality is a very useful practice for individuals to carefully gain social capital and power within their community. This means that sovereignty’s routine-spectacle continuum is also useful for analyzing commensal practices.

Enacting a sovereign archaeology

Having discussed hegemony, routine and spectacle in the archaeological literature, as well as their intersection with commensality, we must now return to the questions at hand in this thesis. First, in what ways is this assemblage representative of the Tabuchila regional variant of the Chorrera ceramic tradition? Second, how can this study and future research contribute to archaeological interpretations of the nascent social complexity taking place during the Late Formative? The first question requires a careful analysis of the vessel forms observed from excavations in the Jama River Valley. Materials from this region have been identified as the Tabuchila regional variant by Estrada (1957); subsequent work by Zeidler and Pearsall (1994) has kept this nomenclature. The present study assesses the utility and validity of that designation by describing and analyzing the ceramic assemblage recovered from excavations in a modal

analysis, a method described in more detail in Chapter 5. I argue that pursuing an archaeology of sovereignty is appropriate for this study's questions because it approaches the archaeological construct of "Chorrera ceramic culture" not merely as a typology, but as a set of historically particular practices which built group identity, enforced ideological/spiritual well-being, and laid the groundwork for institutions of political authority in pre-Columbian Ecuadorian societies.

Regional ceramic variants under an archaeology of sovereignty are more than geographically distinct assemblages. The differences among collections are reflective of changes in practice through space and time, as the ideal "Chorrera-ness" was continually negotiated and manipulated. If the present assemblage is to be considered the Tabuchila regional variant it must display a significant set of similarities in use and meaning between regions – cultural affinity – while also presenting local innovations, idiosyncrasies, and contributions to the larger style. That dialogue between "regional" and "variant" must be negotiated constantly in archaeological study just as it was in practice by the Chorrera. The remainder of this study participates in that dialogue by the methods it employs, the specific questions asked of the ceramic assemblage, and the practice-focused interpretations of Tabuchila.

With regard to the validity of Tabuchila as a regional variant, this study confronts that validity on both etic and emic levels. Does this ceramic assemblage share broad similarities with assemblages from other regions of the Chorrera sphere, in the archaeological sense? Performing a modal analysis on the ceramic assemblage from the Jama River Valley grants it context with other modal analyses of Ecuadorian ceramics, and variance by the processes with which it was excavated. To phrase this from an emic perspective, what does regional variation mean to the people who made Chorrera culture? Ultimately, the higher-level goals of qualitative analyses like modal analysis are in "pots, not potsherds" (Raymond 1995) – this is not just a reconstructive

goal, but a re-immersive goal as well. Modal analysis is a chance to re-embed ceramics in their larger archaeological context, in the routine and spectacle they shaped and inscribed. Sovereignty and modal analysis share common goals of reconstructing past practices such that archaeologists and their subjects both find them sensible. The shared aims of sovereignty and modal analysis will be discussed further in Chapter 5.

The corollary question of this thesis is much broader: are discussions of Chorrera ceramics and Late Formative culture well-informed by the regional variant “model”? As will be discussed in the following chapter, conceptualizing Chorrera not as a monolithic tradition but as a set of dispersed regional variants has been useful in grappling with the sheer breadth of ceramic expression present in Late Formative Ecuador. However, the largely vertical nature of excavation in studying this time period means that variation in ceramic style has been explored much more in depth than changes in practice, ritual, and settlement by Late Formative peoples. This corollary question is posed without the expectation of a full answer in this study, as a call to bring practice-based approaches to social complexity to the study of Late Formative Ecuador. Part of the intent of this study is to illustrate the utility of a sovereign archaeology in interpreting ceramic material culture and the lives of past denizens of the Jama River Valley.

This chapter has established the theoretical motivations of this study: an archaeology of sovereignty that focuses on the historically situated practices of the people of the Ecuadorian Late Formative. The goals of a sovereignty approach force a re-framing of Chorrera as an archaeological concept, away from the old typologies and traditions of the Chorrera moniker and toward the vibrantly diverse traditions and challenges that Late Formative Ecuadorians constantly augmented and confronted. I believe that sovereignty and practice-based

archaeological theory can drive exciting new interpretations in Ecuadorian archaeology.

However, before arriving at these future directions, the past investigations of western lowland

Ecuadorian archaeology must first be discussed and the present study must be explored.

CHAPTER 3: PAST EXPLORATIONS OF CHORRERA CERAMIC CULTURE

The goal of this chapter is to examine previous studies of Chorrera ceramics, in order to frame the current study and identify areas of future research on the Ecuadorian Late Formative. The first portion of this chapter will provide a brief historical overview of archaeological studies in Ecuador, with a particular focus on the two main perspectives that have predominated in the literature of the last century. The hyperdiffusionism championed by Betty Meggers and Clifford Evans, and the culture-historical perspective Donald Lathrap proposed in opposition, have both extensively informed the Ecuadorian national perspective on their cultural heritage as well as the questions archaeologists have posed. The second part of this chapter will focus more specifically on these scholars' contributions – and those of many others since – both to understandings of Chorrera ceramics and to the broader “Chorreroid” cultural phenomenon. Current archaeological research considers Chorrera to have existed for nearly a millennium, across nearly every western province of Ecuador (*Figure 1.1*). This “footprint” is represented in the archaeological record by numerous regional variants, which will be discussed below. As we will see, where Lathrap, Evans, and Meggers argued over the diffusion of ceramic production to Ecuador from outside cultures, more recent studies prioritize the intra-Chorrera variation in style and form over its geographic extent, and the innovative and creative leaps of Chorrera ceramicists in developing their craft.

The first portion of this chapter is a historical overview of Formative Ecuadorian archaeology and the priorities and contributions of several notable individuals to this field. By necessity much of this historical overview revolves around explorations of the Early Formative Valdivia culture; however, many early studies on the Ecuadorian Formative began to address

Late Formative Chorrera sites as well. This section provides historical background to the current study, framing it within the achievements, struggles, and development of Ecuadorian archaeology. While proceeding largely chronologically, and with as much focus on Chorrera as possible, some issues (like that of looting) are presented here as they impact the field more generally.

Early efforts at chronology, and the hyperdiffusionist perspective

Karen Bruhns (2008) summed up the development (and struggles) of Ecuadorian archaeology succinctly as “a series of unfortunate events.” These events have their beginnings in the early 20th century, when the earliest archaeological inquiries in Ecuador were made. Jacinto Jijón y Caamaño, an amateur archaeologist, recognized the successes that archaeologists had in setting up chronologies in Mexico and Peru; he enlisted Max Uhle to work in Ecuador and impose Uhle’s chronology of cultural “horizons” on Ecuadorian prehistory. Unfortunately, Uhle had sustained a head injury in prior excavations and had trouble directly extending his Peruvian chronology into Ecuador. This second difficulty stemmed from the limited presence of pre-Inca Peruvian cultures in Ecuador (Bruhns 2008: 183). Jijón y Caamaño continued his work after Uhle returned to Peru, but there was little headway on framing a chronology until mid-century. With that said, several local archaeologists were able to identify very early ceramics without knowing just how old they were. Indeed, Francisco Huerta Rendón discovered Chorrera in 1936 and understood it was quite early, though he had little information with which to contextualize his discovery (Echeverría Almeida 1996).

One of the first successful efforts to create a cultural chronology for the western lowlands was based on G.H.S. Bushnell’s excavations at La Libertad on the Santa Elena Peninsula (1951). Bushnell recovered four deposits of ceramics and arranged them according to formal and stylistic

elements he perceived in the ceramics as “carrying over” between traditions. This arrangement appears to have ignored the stratigraphic sequence of the materials. Bushnell identified four ceramic complexes: the Pre-Guangala Horizon, Guangala, Engoroy, and Manteño. He incorrectly placed Guangala before Engoroy in his chronology, an error that went unresolved until the 1980s (Bischof 1982). However, Bushnell laid the groundwork for later attempts at developing a chronological sequence. Two archaeologists, Betty Meggers and Clifford Evans, seized upon this opportunity with the help of Ecuadorian businessman Victor Emilio Estrada.

Estrada was a prolific traveler, and for several decades he collected ancient artifacts from throughout Ecuador. Estrada’s interest in collecting spurred him to visit Meggers and Evans at the Smithsonian Institution in 1953, and he invited them to do fieldwork in Ecuador so as to determine the age of some early ceramics (possibly Valdivia, Machalilla, and Chorrera). Meanwhile, Evans and Meggers were investigating the origins of social complexity and ceramic production in South America. Thus began one of the most lasting archaeological inquiries in Ecuador to date, as Meggers and Evans excavated at numerous sites in the western lowlands including the type-sites of La Chorrera and Valdivia (Beckwith 1996; Bruhns 2008). These and Bushnell’s excavations ended up informing the chronological sequence still in use today by archaeologists in Ecuador.

Working from obsidian hydration and radiocarbon dates acquired from excavations, Meggers and Evans defined Ecuadorian pre-history as belonging to four periods: Preceramic (before 3400 BCE), Formative (3400 – 500 BCE and typically broken up into Early, Middle, and Late periods), Regional Developmental (500 BCE – 500 CE), and Integration (500 – 1532 CE) with a recognition of Inca presence after 1500 CE (*Table 3.1*; Meggers 1966: 25).

Table 3.1. Major periods in prehispanic Ecuador as established by Estrada (1957) and Meggers (1966), and general cultural chronology of regions of the western lowlands. After Zeidler and Pearsall 1994: Figure 1.2.

Period	Time	Guayas	Southern/ Central Manabí	Northern Manabí	Esmeraldas
Integration	500 CE - 1532 CE	Manteño, Milagro- Quevedo	Manteño	Jama- Coaque II	Tardío Temprano, Balao, Tumbavido,
Regional Developmental	500 BCE – 500 CE	Guangala, Guayaquil	Guangala (S.), Bahía (Cent.)	Jama- Coaque I	Tiaone, Chevele, Selva Alegre
Late Formative	1000 BCE – 500 BCE	Chorrera (Engoroy)	Chorrera	Chorrera (Tabuchila)	Chorrera (Tachina)
Middle Formative	1500 BCE – 1000 BCE	Machalilla	Machalilla	Machalilla? Tabuchila 1?	
Early Formative	3400 BCE – 1500 BCE	Valdivia (Phases 1 – 8)	Valdivia (Ph. 2 – 8 in S., Ph. 6 – 8 in Cent.)	Valdivia (Piquigua, Ph. 8)	
Preceramic	10000 BCE – 4000 BCE				

Despite Meggers' and Evans' intent to delineate phases in a long cultural sequence, in practice these periods are treated as stages of cultural evolution reflective of their predispositions about the emergence of social complexity. Specifically, Evans and Meggers had conceived this chronology in the midst of the midcentury neoevolutionary paradigm; this may have contributed to the conflation of change with progress or increase in social complexity. At the heart of this chronology was the assumption that indigenous Ecuadorians could not develop these technologies on their own. They argued that the presence of ceramic technologies among the Valdivia reflected contact from contemporary outsiders, who gifted these technologies with contact. For Evans and Meggers, the primary suspects were the Valdivia's near-contemporary Jōmōn fishermen of Japan (Estrada, Meggers and Evans 1962). This chronology thus had the

effect of validating the three investigators' belief in the hyperdiffusionist origins of ceramic culture in the Andes, because it illustrated the growth and progression of cultures in Ecuador from its "birth" in trans-Pacific Valdivia-Jōmōn contact. To use a biological metaphor for this concept, Evans and Meggers essentially argued that culture in Ecuador developed from a cultural "tree-cutting" from the Jōmōn cultural complex. This belief was stubbornly held, despite the absence of evidence, by all three of these individuals until their deaths, leaving an ethnocentrist stain on Ecuadorian archaeology that persists to this day (Salazar 1995 discusses this in detail). The author experienced this hyperdiffusionist narrative firsthand when, as he wrapped up a visit to the Museo de Antropológico y Arte Contemporáneo in 2015, he was given a free copy of Julio Viteri Gamboa's *Ni Mayas Ni Aztecas Sino Ecuatorianos* (2010 [1963]), which argues that Jōmōn gave ceramics to the Valdivia, who then passed this technology on to Mesoamerica (see also Evans and Meggers 1966). However, Meggers and Evans were far from the only people concerned with chronology and culture in the Andes, and they quickly found an intellectual nemesis in Donald Lathrap.

Culture history and processualism come to Ecuador

Donald Lathrap's perspective on the Andes came from his early fieldwork in the Ucayali River area of the upper Amazon Basin in eastern Peru, and set him on a path to profoundly disagree with the assertions of Meggers and Evans. To Lathrap, the Amazon, not the Andes, was the heart of innovation in South America; this meant that ceramic production and complexity were spurred not by the Japanese, but by South American "Tropical Forest Culture" (1970). While still retaining an element of cultural diffusion, Lathrap's theories were informed primarily by culture-historical theory, and he often sought out long-distance trading connections with great antiquity between the Andes and the Amazon (see Lathrap 1973). This meant that historical

contingencies and connections between cultures had to be incorporated into the development of Ecuadorian cultures. This was something that Lathrap failed to see in Estrada's, Meggers' and Evans' work on their chronological framework and connections to the Far East. Lathrap viewed their work as ignoring local regional traditions and consistent contact through trade in favor of one momentous occasion of cultural transmission by a distant and otherwise unconnected society.

One of the more remarkable arguments Lathrap made was enshrined in his 1975 Field Museum exhibit, *Ancient Ecuador: Culture, Clay, and Creativity, 3000-300 BC* (Lathrap, Collier, and Chandra 1975). In this exhibit, Lathrap argued that Ecuadorian agricultural societies had their roots in Valdivia culture and developed numerous stylistic and technical innovations since the Early Formative. He also argued for connections with far-flung Andean contemporaries including those between Chorrera and Chavín. This work was incredibly important to Ecuadorian archaeology because it presented indigenous Ecuadorians as engaged with each other and their neighbors, even if those connections were yet to be completely understood. Many of these connections, according to Lathrap, could be discerned through ethnographic analogies drawn from the modern Shipibo-Conibo peoples of the Ucayali River area. Since Tropical Forest Culture was Lathrap's font of Ecuadorian culture, the Upper Amazon was the region Lathrap felt could best be used in order to draw parallels to the distant Ecuadorian past. As such, part of the power of Lathrap's 1975 exhibit was his careful use of ethnoarchaeological analogy to interpret Valdivia, Machalilla, and Chorrera ceramic styles, iconography, and meanings.

Meanwhile, processual methods were also making their way into Ecuadorian fieldwork during the 1970s. Processualism greatly improved the standards for archaeological excavation, and its increased focus on human-environmental interactions began to revise and deepen

archaeological understandings of the Ecuadorian past. Perhaps the best example of this comes from the Valdivia site of Real Alto, excavated by Donald Lathrap, Jorge Marcos, and James Zeidler (1977), among others. Careful excavation over many field seasons yielded a complex picture of the growth and changes that took place at the site, and helped define numerous discrete phases of Valdivia culture. In comparison, Meggers' and Evans' excavations were poorly controlled and used radiocarbon dates from samples unassociated with the ceramics they were attempting to date (Bruhns 2008: 185).

One of the more important methods Lathrap introduced to Ecuador was modal ceramic analysis. Lathrap (1962) developed this classificatory and interpretive method in his fieldwork in the Ucayali area, and it stands as an important counterpoint to the type-variety method employed by Meggers and Evans. This study employs modal analysis, and it will be discussed at greater length in Chapter 5. The qualitative, analogical, and interpretive nature of Lathrap's ceramic analyses has profoundly impacted the trajectory of inquiry into the Late Formative of Ecuador. But before leaving this discussion of the history of archaeology in Ecuador, some mention must be made of the extensive looting that has taken place in the country alongside its archaeological development. Looting in the past fifty years has built a large corpus of decontextualized "floating" artifacts, partly as a result of former government policy regarding cultural patrimony (Zeidler 1982). Ecuador faces deep ethical challenges due to these destructive practices; museums, archaeologists, art historians, governments, and local communities have handled these problems in different ways.

Heritage, art history, and the ethics of looting in Ecuador

Archaeology and looting have deeply intertwined histories. Anthropologists of the later twentieth century began to recognize their accountability to the people whom they were studying and, by extension, to the people who identified culturally with that heritage. However, while it appears that cultural heritage has long been associated with sites as well as artifacts in places like Peru and Mexico, much more emphasis has been placed on artifacts in Ecuador. Thus the practice of illicit looting, or of buying and selling artifacts to museums or private collectors, did not meet with the same scrutiny or stigma in Ecuador as elsewhere.

This behavior has persisted, in my opinion, because the practice of buying antiquities for archaeological study has not been perceived to impede academic inquiry but rather to enable it. Victor Emilio Estrada, the businessman who convinced Betty Meggers and Clifford Evans to explore Ecuador, did so with his own collections (known as the Museo Victor Emilio Estrada). As mentioned above, Estrada had already spent years traveling through Ecuador, collecting attractive ceramics and identifying them by the places where he bought them. Such is the case with the regional variant of Chorrera under scrutiny in this study, named Tabuchila by Estrada for the village of the same name where he purchased examples (Estrada 1957). Regardless of Estrada's motives, his model for archaeological study has since been emulated by many Ecuadorians. For example, many families in San Isidro have some museum-quality Valdivia figurines or Chorrera whistling bottles on the mantle or in the kitchen; some individuals have substantial collections. One individual has been building a "casa museo" in order to monetize their own extensive assemblages of looted material. As elsewhere in archaeology the job description is assumed to include appraisal; several individuals I met wondered if I could identify their ceramics and put a price-tag on the artifacts.

These practices were tacitly enabled by the state for many years with a *laissez faire* approach to looting. This was codified in the Banco Central of Ecuador's policy of buying antiquities from commercial looters for many years (both in Quito and Guayaquil), with few questions asked (Zeidler 1982). While international sales by commercial looters have since been curtailed, domestic commercial looting continues, though without the blessing of the state for some years now. Nonetheless, much damage has been done to archaeologists' understanding of Chorrera and the subsequent Jama-Coaque cultures by this practice, even as their masterpieces are showcased in national museums. Efforts by the government to care more thoroughly for their heritage have come in fits and starts through proposals to create heritage tourism sites and archaeological parks (Zeidler 2015). The complicated relationships between archaeologists, the government, and local cultural groups in Ecuador preclude any uniform archaeological ethics from being imposed (Morse 1994). However, irreparable damage has been done to Ecuador's cultural heritage, making it difficult to understand the interrelation that ancient residents of this region had with their neighbors and with each other.

Evans and Meggers' hyperdiffusionist perspectives have stubbornly remained at the fringes of Ecuadorian archaeology. The persistence of the hyperdiffusionist argument is aided somewhat by artifact-centric museum exhibits that lack archaeological context. At the very least, what has endured is an immense sense of pride in the perceived centrality of Ecuador to Andean civilization. Today, the standing Pre-Columbian art exhibit of Guayaquil's Museo Antropológico y de Arte Contemporáneo (MAAC) is dominated by a vast wall depicting the spondylus trade's reach from Mesoamerica to the Chilean coast, with Ecuador at its heart. Regardless of whether Ecuador really is the core of New World complexity (and many would argue that it is decidedly not), the odd combination of personally owning artifacts, nationalistic

pride, and Meggers' and Evans' argument for the temporal primacy of Ecuadorian culture in the Andes have all contributed to a perception that Ecuador's cultural heritage is misunderstood by its neighbors. The beliefs of the Jōmōn hyperdiffusionists are alluring, as they explain Ecuador's prehistory unilaterally and situate it as the cradle of American cultural innovation. The prevailing archaeological interpretations of Ecuadorian prehistory are much more complicated, and are not as easily wielded for nationalistic political purposes. However, it is incumbent upon archaeologists to test hypotheses and discard them if they do not hold up to scientific scrutiny regardless of their utility in generating pride for the nation's cultural heritage.

Questionable provenience and interpretations aside, these ceramics have come under study by several art historians and archaeologists, not least of which was Donald Lathrap (1975). Lathrap was the first to use the term "Chorreroid" in reference to the broad cultural sphere that Chorrera regional variants seemed to share in the western lowlands. More recently, the work of Elka Weinstein (1999, 2007), Karen Stothert (2003, 2007) and Tom Cummins (2003) brought forth the rich ideological representations and meanings present in Chorrera and Formative artworks. The expansive collections in national and international museums have also yielded intriguing new discussions of Chorrera musical instruments and innovations (Pérez de Arce 2015). These efforts reflect Donald Lathrap's deeply held belief that any artifact, even a looted one, can be made useful for analysis.

The Chorrera footprint: regional variants and recent studies in Late Formative Ecuador

With the history of Ecuadorian archaeology in mind, this chapter will now address the more recent explorations of Chorrera culture, which were informed by and took place amidst the arguments made by Lathrap, Meggers, and Evans about ceramic analysis and cultural origins in the north central Andes. Together they produce a patchwork understanding of Chorrera, defining

its extent in space and time quite broadly. Each of them is a well-informed glimpse into local Chorrera ceramic production and expression, with radiocarbon dates and a few syntheses (Staller 2001; Zeidler 2003, 2008) providing some comparisons between them. This section will first review the Chorrera regional variants found in each area of western Ecuador before discussing the syntheses which cover all Chorrera ceramic expressions and their contemporaries in the north-central Andes.

The assembled data thus far point to a complicated picture of growth, regional innovation and diffusion, exchange, and (occasionally) catastrophe across the last millennium before the common era. One of the more fruitful ways of conceptualizing these interactions is as a “Doppler effect” emanating from various locations, moving over the landscape, and showing up farther away with more time lag (Zeidler 2003: 494, from Deetz and Dethlefsen 1965). This does make determinations of contemporaneity difficult to base solely on ceramic qualities alone, even if they imply extended direct or indirect connections between several peer communities. With time and much more research, these effects could potentially be traced back to their points of origin alongside questions of the full range of Chorrera ceramic expression; however, this is well outside the scope of this study.

The Guayas Basin: Provinces of Guayas and Los Ríos

Several studies of Chorrera culture have taken place along the Guayas drainage in the last four decades. The rapid expansion of Ecuador’s second city, Guayaquil, has expedited some of these studies. The Guayas River extends north from the Gulf of Guayaquil far into Ecuador, and acts as somewhat of an eastern boundary for the western lowlands of the nation. The type-site of La Chorrera, excavated by Meggers and Evans in the 1950s, is located along one of these forks. The ceramics from this site have only been discussed in the literature in preliminary reports

(Evans and Meggers 1957, 1982) and in greater detail in an unfinished manuscript by Betty Meggers; this latter manuscript had some portions sent to James Zeidler for discussion (letter from Betty Meggers to James Zeidler, letter dated May 27, 2003). For the purposes of this discussion, Meggers' and Evans' determinations of Chorrera diagnostic traits will be considered the "classic" definition of the style developed within a type-variety classification system.

The ceramic decorative types Meggers and Evans (1957, 1982) established in this "classic Chorrera" scheme were Chorrera Incised (fine incision on a polished surface), iridescent, zoned red, zoned red-and-black, rocker stamped, white slip, and burnished line on an unpolished surface. These types were found to be common to four sites within the Guayas Basin by Meggers and Evans (1982). In a letter to James Zeidler, Meggers also noted several more common types on the coast, including red banded, an embellished shoulder, as well as Ñaupe Incised and Machalilla Incised; altogether Meggers identified seventeen diagnostic Chorrera types among thirty-four vessel forms (Betty Meggers to James Zeidler, personal communication dated May 27, 2003). Even within Meggers' own work, it seems that what constituted "classic Chorrera" in the heartland of the style continually broadened with time. As we will see from work throughout western Ecuador, this exhaustive list still does not fully cover Late Formative ceramic expression. Other archaeologists working in this "heartland of Chorrera" have uncovered several variants of the ceramic style, and began to develop a more nuanced perspective of the spatial and temporal boundaries of Chorrera than the designations Meggers and Evans asserted.

One of the earlier investigations in the Guayas Basin came from Resfa and Abraham Parducci (1975), who excavated at the site of San Pedro de Guayaquil near the modern city of the same name. These excavations yielded relatively late radiocarbon dates (UW 125: 2290±100 BP, 340 BCE; UW124: 2185±80 BP, 235 BCE; UW 123: 2175±60 BP, 225 BCE; Parducci and

Parducci 1975: 251-2), and established the Fase Guayaquil of Chorrera. Notable ceramics from this study included some fragments from strap-handle whistling vessels – some of the latest dated. Also of interest was that five of the sixteen burials recovered in their excavations were interred on a bed of broken ceramics, a burial treatment not recorded anywhere else (Parducci and Parducci 1975: 243). Considering the late dates associated with this ceramic assemblage, this phase may be better understood as a Chorrera/Bahía transitional style, closely related to the Guangala style at the twilight of Chorrera ceramic expression.

A number of studies were conducted in the 1980s at various places within the Guayas drainage. On La Puná Island, in the Gulf of Guayaquil, Thomas Aleto (1988) elaborated on a Guayaquil phase very different from the materials excavated from San Pedro de Guayaquil. Aleto's work determined that this new phase, dubbed Bellavista, had two phases which entirely predated the San Pedro de Guayaquil assemblage and were contemporary with the Late Formative Chorrera horizon. This meant that San Pedro de Guayaquil represented a third phase of a local Guayaquil style (Aleto 1988: 387). Upriver from Aleto's La Puná studies, María Nieves Zedeño conducted her *licenciatura* thesis research at the site of Peñon de Río (1990) as a part of a larger archaeological excavation program and field school of Guayaquil's Escuela Superior Politécnica del Litoral. Zedeño's modal analysis is one such study performed closest to the type-site of La Chorrera (Evans and Meggers 1982). She identified two paste types and sixteen vessel forms. Intriguingly, few of these forms or their decorations resemble the "classic Chorrera" characteristics. Zedeño also argued that her excavations encountered a domestic context containing many post molds (1990: 28-29).

Farther up the drainage in the province of Los Ríos, work by the Swiss archaeologist Nicolas Guillaume-Gentil and his crew revealed a multi-component site, La Cadena. One of the *tolas* (mounds) at the site, Tola 5, was built during the Regional Developmental Period; underneath this mound, Formative sherds were discovered that were diagnostic of Chorrera and Terminal Valdivia occupations at the site. The ceramics from the excavation of this mound (across all occupations observed) were the subject of a licenciatura thesis by Katherine Ramírez (1996). The study by Ramírez examined all ceramics recovered from the tola, not just the ceramics of the Late Formative levels. Because of this inclusive approach, Ramírez identified numerous vessel forms that she cross-references with the Guayaquil phase from lower in the Guayas drainage along with several Engoroy forms. More pertinent to this thesis, a carinated bowl form (#7) and a wide-mouthed olla form (#15; also known as the “cuspidor”) are explicitly cross-referenced with the Tabuchila variant by Ramírez. This suggests some measure of contact with the northern Manabí coast, and activities taking place at the mound which incorporated ceramics from a broad swath of western Ecuador.

Returning to the mouth of the Guayas, in 1997 excavations by Amelia Sánchez and Ángelo Constantine took place at the site of Los Samanes. Late Formative occupations were found in two features; the ceramics from these features became the focus of Rosalba Chacón’s licenciatura thesis (2004). Chacón’s work identified further variability in the expressions of Chorrera ceramics just within the Guayas Basin, far beyond what Evans and Meggers (1982) described as diagnostic for Chorrera. Jonathan Damp, Sánchez, and Constantine have also written field reports regarding excavations in the Parque Los Samanes (2010) and have continued expanding archaeologists’ understanding of the Late Formative Guayaquil complex.

The Guayas Basin sites that Meggers and Evans excavated and obsidian hydration dating of those sites led them to argue that Chorrera existed from 1500 BCE to 500 BCE and incorporated the Machalilla style (Meggers 1966: 55, 66). These determinations have been disputed for several reasons. Pardo and Pardo (1975) found several Chorrera ceramic traits in the San Pedro de Guayaquil assemblage which was dated well into the third century BCE, pushing Chorrera and the Terminal Formative later than Evans and Meggers would argue it existed. In addition, Meggers' and Evans' use of questionable obsidian hydration dating over radiocarbon analysis (which was accessible to them at the time of their excavations) calls their chronology of Chorrera into question. Investigations into regions outside the Guayas Basin further complicate the picture that "classic Chorrera" first presented.

The Santa Elena Peninsula (Guayas Province) and the Southern Manabí Coast

The Santa Elena Peninsula of Ecuador juts out into the Pacific, west of the Guayas Basin in the province of Santa Elena. While the Río Guayas may have some of the earliest discovered Chorrera ceramics, the Santa Elena Peninsula has had some of the most thorough research performed there. Further, many of the collections from this area are considered the "standard" for Chorrera studies; comparisons with type collections from this region have served as the point of departure for assessing ceramic variation.

This type collection was first excavated by Edwin Ferdon (1941) at the site of La Carolina, which was located near the modern town of La Libertad. This site was also excavated by Bushnell (1951) as noted above. Re-analysis of these excavated materials by Michael Simmons (1970) produced a type-variety assemblage that stands as one of the most "representative" assemblages of Chorrera ceramics almost a half-century on. Simmons followed Bushnell in calling the Late Formative ceramics Engoroy, "distinct from, though related to,

Chorrera”, and divided these into Early, Middle and Late phases (1970: 55-56). The thoroughness of this study’s application of the type-variety approach has made it useful for comparing several sites across Ecuador (see Aleto 1988; Beckwith 1996; Lippi 1983; Zedeño 1990). While this study will focus on other modal analyses for comparison, Simmons’ work may be helpful in future research at a regional level.

Henning Bischof’s analysis of material from two sites near the town of Palmar was also organized by a type-variety system. He split the artifacts into three divisions of six phases: Early (Phases 1-3), Middle (Phase 4), and Late (Phase 6) (Bischof 1982). Bischof, like Simmons, argued for the distinction between coastal Engoroy and the inland Guayas Chorrera (which as discussed above, was beginning to be called the Guayaquil complex by this time). To work within this system Bischof proposed a “Chorrera series” in order to loosely assign and relate Chorrera-related assemblages within the Late Formative (while avoiding the more encapsulating concept of a Chorrera “horizon”).

I mentioned at the outset of this thesis that very few horizontal excavations have been performed in Late Formative contexts. A notable exception to this pattern came from Richard Lunniss’ (2008) excavations at Salango in southern Manabí Province. Lunniss uncovered eight phases of a ritual floor at the site, dating to the Middle Late Formative and onward for several centuries. The basic plan of this space appears to have been square, with corner posts and a central pit into which figurines were interred in the early phases. The space underwent several transformations over its long occupation, with walls being built to further demarcate the sacred space, a division in floor layouts into complementary halves, and in later phases a raised walkway up to the (by then mounded) door of the ritual structure. The delineation of the sacred space (both within and without) reveals potent ritual activity by successive generations of

shamans at Salango, and especially when put in context with the work of Karen Stothert (2003; see below). Studies like this are a powerful example of how horizontal excavation will allow archaeologists to get at the ideological and anthropological questions at the root of their archaeological analysis. While the Chorrera ceramic footprint is certainly important to delineate and understand, it is also necessary to keep practice and authority in mind for the broader questions posed in this study.

The last study I will discuss in this region is Laurie Beckwith's dissertation research on ceramics from three sites north of the peninsula: Loma Alta, the Albarrada de Achallán, and a site near Salango (known as OMJPLP-141C; Beckwith 1996). Beckwith performed a modal analysis on these ceramic collections and was able to document a great deal of similarity and variability in Chorrera ceramics from the Santa Elena Peninsula assemblages; in short, Beckwith determined that the collections were quite similar, with most variation arising out of temporal rather than spatial distance (1996: 458). As in Zedeño's study at Peñon del Río, Beckwith found that very few of the "diagnostic Chorrera" traits were present in significant amounts within the three collections she examined (Beckwith 1996: 463); this assessment included the negative painting, rocker stamping, zoned black-and-red, and zoned punctate decorative techniques, among others.

The studies performed in the Santa Elena Peninsula and southern Manabí suggest an intriguing pattern: Chorrera of the Guayas Basin and Chorrera of the peninsula show many marked differences, both temporally and spatially. Only some of this variability is well-understood at this point, yet it remains stark enough for several scholars of the coast to argue for

a separate Engoroy tradition or a broad Chorrera ceramic series, rather than a monolithic Chorrera “horizon”. This pattern continues as we move into northern Manabí and Esmeraldas provinces farther up the coast.

Northern Manabí and Esmeraldas

Manabí and Esmeraldas provinces have long been known to contain Chorrera ceramics and Late Formative occupations; many of the provenienced ceramics in Donald Lathrap et al.’s 1975 Field Museum exhibit came from the Río Chico area of central Manabí. However, the nature of these occupations is generally even more poorly understood than those in the Santa Elena peninsula and Guayas Basin, with only a few major studies defining ceramic expression in the Late Formative of this northern coastal region.

Northern Manabí is currently mostly understood through the lens of sustained archaeological work in the Jama River Valley. James Zeidler performed initial reconnaissance and limited excavation in this valley in the early 1980s, and worked with Deborah Pearsall on a joint archaeological/paleoethnobotanical project in the late 1980s and early 1990s which included excavations at the central mound of San Isidro and various other locations in the valley (Zeidler and Pearsall 1994). This work drove the development of an absolute chronology for the Jama Valley (Zeidler et al. 1998) and established a master ceramic sequence for Terminal Valdivia and Chorrera occupations as well as several phases of the descendant Jama-Coaque Tradition (Zeidler and Sutliff 1994).

Excavations by Evan Engwall as a part of the project sought to understand Late Formative occupations in the valley, and the materials he excavated were classified as the Tabuchila variant of Chorrera. The archaeological goals and results of this project will be further discussed in the following chapter, but much of Late Formative subsistence, occupation, and

ceramic expression in northern Manabí is understood due to the work done on this project. It should also be mentioned that radiocarbon dates from one of the sites Engwall excavated are some of the earliest associated with Late Formative occupations in Ecuador (Zeidler 2003; Zeidler et al. 1998).

Figural ceramics from northern Manabí abound in museum collections (as discussed earlier in this chapter). Elka Weinstein's dissertation, *The Serpent's Children* (1999) performed an iconographic analysis on the corpus of figurative ceramics and especially whistling bottles from this region of coastal Ecuador. Employing ethnoarchaeological analogy from the work of Gerardo Reichel-Dolmatoff and Peter G. Roe, Weinstein argued that these likely grave-goods were part of an ancestor cult in Chorrera ritual life. While the ceramic corpus Weinstein examined is different in form to that of this study, it comes from the same region and roughly the same time period. Thus Weinstein's analyses and conclusions will be important for understanding some of the "material messaging" this thesis seeks to understand in the more utilitarian wares examined.

Moving north to Esmeraldas province, the presence of ceramics contemporary with Chorrera becomes much more difficult to pin down; however, two possible candidates are the Tachina style of southern Esmeraldas and the Mafa style of the Santiago-Cayapas region. The former, Tachina, was first identified by Matthew Stirling in the early 1960s at the site of La Cantera (1963). This style was also encountered at the same site in the 1970s (Alcina Franch 1979; López y Sebastián and Caillavet 1979); however, very little information has been made available regarding this Chorrera variant. With luck, future research can compare the ceramics from northern Manabí to this northern neighbor.

Farther north and nearer to the border with Colombia, the Mafa phase of the Santiago-Cayapas Basin appears to be roughly contemporaneous to the later centuries of the Late Formative (Tolstoy and DeBoer 1989). A few sherds and forms of this phase have been described by Warren DeBoer as part of his volume on the cultural chronology of the Santiago-Cayapas (1996: 73-81). Mafa ceramics “tend to be thin-walled...[and] a red slip is often preserved, although such texturing techniques as incision and brushing are more common than pigmentation” (DeBoer 1996: 73-74); this general description of Mafa correlates well with some characteristics of Chorrera ceramics, including those from San Isidro (see Chapter 5).

Cultural chronology in northern Manabí is also complicated by the occasional eruption of volcanoes to the east near Quito, which forced abandonment of this region at least three times in prehistory (Zeidler et al. 1998; Zeidler and Isaacson 2003). Pertinent to Chorrera, the eruption of Pululahua around 467 BC caused sudden abandonment of the Jama River Valley as well as much of the rest of northern Manabí, as local lifeways were unable to endure the thick layer of ashfall deposited by the volcano (Zeidler 2008: 471). This volcanic exodus creates a punctuated cultural sequence in northern Manabí which contrasts with the continuous occupations of the Late Formative in the lower Guayas Basin, and likely acted as a driver of forced interaction and cultural exchange in the Terminal Formative.

Syntheses of Chorrera, regional contemporaries, and expressions of ideology in the Formative

With the burst in archaeological inquiry throughout Ecuador at the close of the 20th century, a few scholars were able to compile new syntheses of the state of research for Chorrera ceramics and the Late Formative. These syntheses integrate the emerging perception of Chorrera as a set of spatially and temporally variable assemblages. Some of these syntheses also seek to incorporate the broader interactions that people within western Ecuador had with their neighbors

in the highlands, in southern Colombia, and in northern Peru. In addition, I will briefly touch on the work of Karen Stothert (2003) in her synthesis of ideological expression through the Formative Period; that work has greatly informed the present study on the relationship between the archaeological record and the ideological experiences of Formative north central Andeans.

John Scott (1998) synthesized understandings of Chorrera and the Late Formative with the more recent studies of Laurie Beckwith (1996), Evan Engwall, and others. He revised the classification of diagnostic Chorrera traits established by Evans and Meggers (1957, 1982) to reflect the findings of these new studies. Where older typologies emphasized traits more common to the Guayas Basin such as rocker-stamping and white-on-red paint (Evans and Meggers 1957, 1982), Scott's Chorrera diagnostics include iridescent paint, incised decoration, red paint decoration, red-and-black in incised zones, and line burnishing (1998: 271). In addition, diagnostic vessel forms are also noted, and they include globular bowls with restricted mouths, annular base bowls, whistling bottles, wide-mouthed ollas or *cuspidors* ("spittoons"; Scott translates this to "escupideras"), and napkin-ring earpools (Scott 1998: 271-272). Scott's definition of the Chorrera style is more inclusive of the collections found in recent decades; for those who argue that Late Formative cultures formed a unified Chorrera cultural horizon, Scott's determinations provide helpful data to make those arguments. For any scholar of the Late Formative, Scott's work is useful for comparison between collections.

Two recent scholars of the Ecuadorian Formative discuss the social and cultural developments over the course of this lengthy period; as part of this they described the Late Formative occupations of the western lowlands. John Staller (2001) proposes that the regional variation present in Chorrera ceramics stems from earlier regional variation and "cultural drift" from earlier Valdivia occupations (Staller 2001: 222; also see Beckwith 1996). Staller makes a

distinction between Engoroy and Chorrera, but does not differentiate between the northern Manabí and the Guayas regions (Staller 2001: 236). Interestingly in this synthesis Staller also argues for another Chorrera regional variant in El Oro province, the Arenillas phase (2001: 237). Since Staller is primarily concerned with how the Valdivia and Machalilla cultures contributed to later Chorrera innovation, he proposes that 1) Machalilla is a continuation of Valdivia and 2) most Chorrera variants developed directly out of the Machalilla and terminal Valdivia styles. In this scheme Tabuchila would have arrived to northern Manabí from the Guayas Basin (Staller 2001: 242).

Two other syntheses of recent research were composed by James Zeidler, with a chronology and compilation of radiocarbon dates (2003) as well as a treatment of the Ecuadorian Formative as a whole (2008). The former concerns the western lowlands specifically, while the latter pertains to the Formative across all of Ecuador. While Staller's perspective was heavily informed by his work in El Oro to the south, Zeidler's is more centered on northern Manabí. As mentioned above, these works focus on the Pululahua volcanic eruption which caused the abandonment of northern Manabí during the Late Formative (Zeidler 2003, 2008); northern Manabí also presents the earliest radiocarbon dates securely connected to Chorrera occupations (Zeidler 2003). The early presence of Chorrera-like ceramics in northern Manabí does not support Staller's suggestion that Tabuchila was a diffusion from the Guayas; it rather suggests the opposite, that Tabuchila is one of the earliest ceramic expressions of Chorrera, unless earlier occupations are found and dated in the Guayas Basin (Zeidler 2003: 506).

While these syntheses propose connections between the western Ecuadorian lowlands and its neighbors (Zeidler 2008), not much research has yet been performed with the explicit aims of understanding the nature of interaction and exchange with those neighbors. However,

there are several highland contemporaries at Cotacollao (Villalba 1988), Pirincay (Bruhns 1989, Bruhns, Burton, and Miller 1990), and Cerro Narrío (Collier and Murra 1943); the presence of Quito obsidian at western lowland sites is a clear testament to interaction (Zeidler 2008). More distant interactions may be reflected in the eastern lowlands and the Upper Amazon by the early presence of stirrup-spout bottles in eastern lowland sites (Valdez et al. 2005; Valdez 2016). Connections with northern coast Peru perhaps took place at Tumbes (Moore 2010) and Pechiche (Izumi and Terada 1966), partly due to the budding Peruvian desire at this time for Ecuadorian *Spondylus princeps*. To the north of Ecuador, the Terminal Formative was marked by the growth of the Tumaco-La Tolita cultures, which extended across much of the Colombian coast and into Esmeraldas (DeBoer 1996); even in Tumaco, the Inguapí I phase appears to have some contemporaneity with later Chorrera manifestations (Patiño Castaño 2000).

One more synthesis, this time of Ecuadorian Formative ideology, is crucial for understanding how archaeologists in this region have conceptualized the expression of ideology in this interesting period. Karen Stothert (2003) draws from ethnographic analogies of Tropical Forest culture back into the archaeological record, and seeks out the presence and practice of shamanism and shaman-leaders in Formative society. Stothert addresses ideological expression throughout the lengthy Formative period, and in doing so notes several shifts in ideological expression by the Late Formative. With regard to burial practices and the worship of the dead, the Late Formative saw an expansion and intensification in the practice of burying objects with the dead, with dedicated cemeteries outside the community and much more impressive goods interred with the deceased (Stothert 2003: 358). In the ceramic record, this is reflected in the use of whistling bottles in mortuary contexts which have since been disinterred by looting, or in the use of fancy serving wares. Stothert interprets these offerings as “pump primers”, an investment

with future benefits in mind (2003: 358). Other aspects of Formative ideology that Stothert identifies are the practices of shamanic transformation and animal symbolism – using powerful psychoactives and impressive material culture (such as the ceramic whistling bottles) to empower a shaman’s rituals (2003: 366). Stothert argues that shamanic practice intensified during the Late Formative period while maintaining the same ideological scheme – the shift is not in type, but in degree. These trends, as reflected in the material culture, “might correspond to the institutionalization of the shamanic specialty in the Late Formative period, this likely driven by competition among shamans (Stothert 2003: 373).

With specific regard to ceramics and feasting, Stothert sees the elaboration of ceramic vessels (especially bottles) as motivated by creating libations for ritual or commensal use. The use of ceramics in feasting could have asserted the community’s “connectedness with the spirit world” in the feeding of dead ancestors, while allowing individuals an opportunity to assert or enhance their position within society (Stothert 2003: 390). The creation of ceramics may also have been “viewed as a religious activity or personal meditation” (Stothert 2003: 392).

Underpinning much of these interpretations are the assertions of Mary Helms (1993) in viewing shamans as knowledge-seekers ideologically (or politically) motivated to travel great distances to acquire prestige goods and develop privileged knowledge at pilgrimage centers. For the Late Formative, Stothert tentatively suggests that San Isidro may represent an ancient cult center (Stothert 2003: 383). Ultimately this synthesis is important to the odd pattern of occupation in the Formative archaeological record, namely communities’ “political autonomy and their apparent connectedness across geographical space” (Stothert 2003: 407). To Stothert, the lack of highly stratified and hierarchical authority in Formative Ecuadorian cultures did not preclude them from pursuing, attaining, and wielding heterarchical ideological authority.

Conclusions

This chapter has presented the historical and regional background of the archaeology of western lowland Ecuador in the Late Formative. Past archaeological discourse centered on the dialogue between hyperdiffusionists and more particularist culture-historians. These arguments have since given way to a more nuanced understanding of the Ecuadorian Formative which argues for neither diffusion by Japanese nor Tropical Forest culture, but rather a region that independently developed ceramic technology. The assembled studies of recent decades provide pockets of deep understanding across the region, yet relatively few syntheses of this data has been proposed. As established at the outset of this study, the Chorrera assemblage from the Jama River Valley represents one of these pockets which has not yet been fully discussed. Thankfully several studies (Beckwith 1996; Scott 1998; Staller 2001; Zeidler 2003, 2008) have incorporated some of the elements of the Jama Valley Chorrera assemblage into their interpretations. The next chapter will delve into the materials recovered from Evan Engwall's excavations in order to establish the context of the material and describe the larger project goals within the Jama River Valley.

CHAPTER 4: ARCHAEOLOGICAL EXCAVATIONS IN THE JAMA VALLEY, MANABÍ

The last chapter covered a brief historical and regional overview of archaeological research in the western lowlands of Ecuador which has greatly expanded our understanding of Chorrera's full ceramic expression. This chapter focuses on a project that has not yet been discussed in detail: the excavations undertaken by Evan Engwall, a PhD candidate at the University of Illinois Urbana-Champaign, during the field seasons of 1991 and 1994. These excavations took place under the auspices of the Proyecto Arqueológico-Paleoetnobotánico Río Jama (PAPRJ), an NSF-funded archaeological and paleoethnobotanical project which has operated in the Jama River Valley of northern Manabí since 1988. The first section of this thesis will discuss the PAPRJ's goals and results, which will aid in establishing the environmental and cultural setting of Engwall's excavations. Particular focus will be on the excavations of the central platform mound of the San Isidro site (M3D2-001), which was partially constructed during the Late Formative occupation of the valley.

One of the goals of this thesis is to disseminate the investigations and results of Engwall's fieldwork, as his dissertation on the excavations and ceramics recovered was never completed. The next section of this thesis will necessarily rely heavily on Engwall's excavation notes, field journals, photographs, drawings, and a chapter of his unpublished dissertation that was provided to me by Engwall and Dr. James Zeidler. This chapter will briefly review the nature of the three sites that Engwall selected for his fieldwork, and discuss the results of excavation in those sites. It will also be informed partially by my own visit to San Isidro in the summer of 2015, during which I visited two of the three sites Engwall excavated. Further description these three sites' excavation is present in Appendix A.

The Proyecto Arqueológico-Paleoetnobotánico Río Jama

The Proyecto Arqueológico-Paleoetnobotánico Río Jama (PAPRJ) was initiated in the late 1980s by James Zeidler and Deborah Pearsall, as a direct result of Zeidler's earlier field schools at the site of San Isidro with students of the Centro de Estudios Arqueológicos y Antropológicos of the Escuela Superior Politécnica del Litoral (ESPOL) in Guayaquil. These took place during three field seasons in 1981, 1982, and 1983, during which stratigraphic test excavations were carried out in the immediate vicinity of the large ceremonial platform mound in the center of the modern town of San Isidro (Zeidler 1994; *Figure 4.1*). One of these deep cuts in Area XII/C (> 5m in depth) to the northwest of the central mound allowed for the definition of a long stratigraphic sequence (Zeidler 1994; *Figure 4.2*). This sequence spans from Terminal Valdivia times (Valdivia Phase 8) in the Early Formative Period, through the Late Formative Chorrera culture (Tabuchila Phase), and through the long stratigraphic sequence of the Jama-Coaque Tradition (subdivided into four phases of the Muchique). The four phases of the Jama-Coaque Tradition spanned from circa 240 BCE to the Spanish Conquest in CE 1532 (Zeidler et al. 1998). Another notable discovery in these early excavations was the identification of three distinct layers of volcanic ash, representing explosive eruptions of volcanoes in the northern Ecuadorian highlands (Isaacson 1994; Zeidler and Isaacson 2003; Zeidler 2016). Because of these intriguing results, Zeidler and Pearsall embarked on a larger program of continued archaeological site testing as well as systematic archaeological survey, but this time on a valley-wide scale with the aim of investigating prehispanic settlement processes and subsistence practices in the Jama Valley.

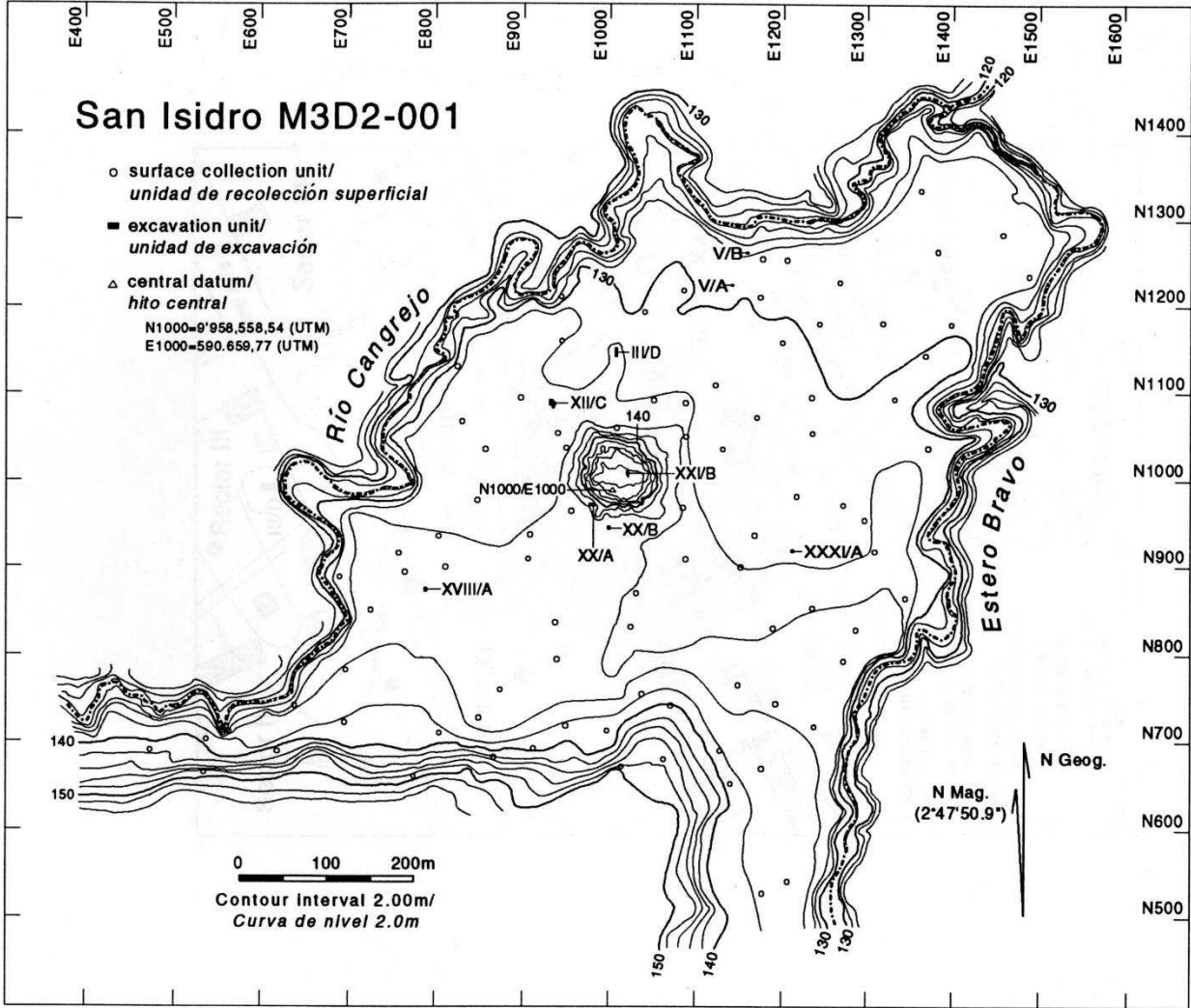


Figure 4.1. Map of San Isidro, with 1981-1983 season units labeled. Reprinted from Zeidler 1994.

San Isidro M3D2-001
Sector XII/Area C

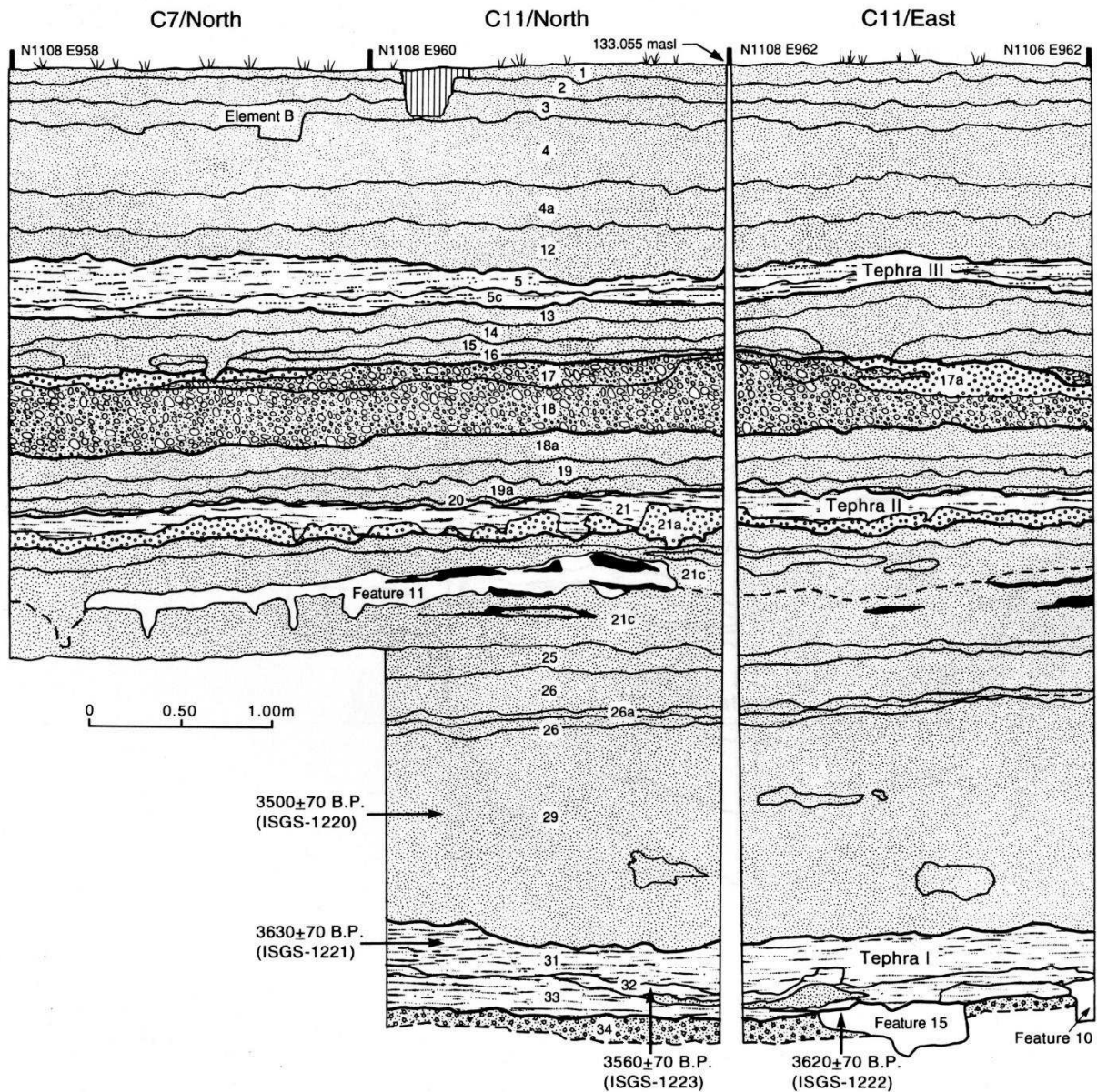


Figure 4.2. Profile drawing of Unit XII/C, establishing site stratigraphy. Reprinted from Zeidler 1994.

With a series of three jointly awarded grants from the National Science Foundation (BNS-870949, BNS-8908703, and BNS-9108548), the PAPRJ was designed to explore archaeological and ethnobotanical lines of evidence in order to answer questions about the nature of social inequality over the prehispanic cultural sequence of the Jama Valley and the region of

northern Manabí. This region of northern Manabí was selected partly due to its relatively undefined sociocultural trajectory at that time; one of the goals of research was to construct a cultural chronology of the entire valley. In addition, the environmental setting of the valley was examined in order to understand the regional landscape's geology and ecology and to inform subsequent paleoethnobotanical and archaeofaunal studies.

The PAPRJ determined that the environment of the Jama River Valley is quite ecologically varied. Along the drainage, the climate shifts between two major zones: the upper valley's more humid pre-montane forest, and the lower drainage's drier tropical (and occasionally thorny) forest. This climate is also greatly dependent on the interplay between the oceanic currents of the Humboldt (May through November) and the El Niño current (December through April) (Zeidler and Kennedy 1994: 13-15). Together the region experiences a sharp divide between the wet and dry seasons. The divide between the two zones of the valley is located some 15 km inland, at a sharp change in topography and geology known as the Jama Narrows. This geological and ecological divide has important effects on the lifeways accessible to people living in these two zones.

In the lower valley, mangrove estuaries, shoreline beaches, alluvial floodplains, and some erosional hills characterize the landscape (Zeidler and Kennedy 1994: 25). This variety allowed for early occupants of the lower valley to pursue hunting, fishing, gathering, and eventually some agriculture in the alluvial channels. Upriver in the Jama Narrows, the topography varies sharply from 300 to 600 meters above sea level, and the river itself plunges through a 100-meter deep gorge to 20 meters altitude and the lower valley. This area of the valley is hilly and rocky, with relatively less dense prehistoric and modern occupation (Zeidler and Kennedy 1994: 29). The upland reaches of the valley are composed of alluvial floodplains, as well as erosional hills and

valleys. The higher rainfall of the upper and middle valley as well as the tributaries of the river meant that more opportunities for floodplain agriculture were present. The mound center of San Isidro is located in the middle valley, and these floodplains contain the highest density of archaeological sites in the drainage (Zeidler and Kennedy 1994: 29). Following these three zones – the lower valley (I), the narrows (II), and the middle and upper (III) – the PAPRJ assigned three strata for regional survey and selective archaeological testing. While numerous sites spanning the entire cultural sequence of the Jama River Valley were tested over the course of the PAPRJ, one site will be discussed here in more detail: the mound center of San Isidro (M3D2-001).

Excavations at San Isidro (M3D2-001)

The site of San Isidro is located roughly 25 kilometers inland from the coast, nestled along the Río Cangrejo tributary and capped by the modern town of San Isidro. The site itself consists of a large central mound (*tola*) with a footprint of roughly 40 hectares (Zeidler 1994). The mound itself measures some 17 meters high and 100 meters in diameter, and intact portions of the base and bottom third of the mound appear to show a square shape (*Figure 4.3*). Zeidler suggests that this large artificial mound was a regional ceremonial-administrative center for the valley region “at least during the long Jama-Coaque occupation, if not earlier” (Zeidler 1994: 71). The site is unrivaled in its size and in the density of adjacent archaeological sites in the valley. This suggests it was a primary center in the valley with numerous residential sectors nearby for many centuries. Excavation of the mound and adjacent areas of the San Isidro site by the ESPOL field schools and the PAPRJ helped establish a cultural chronology for the valley, and the antiquity of San Isidro’s occupation.

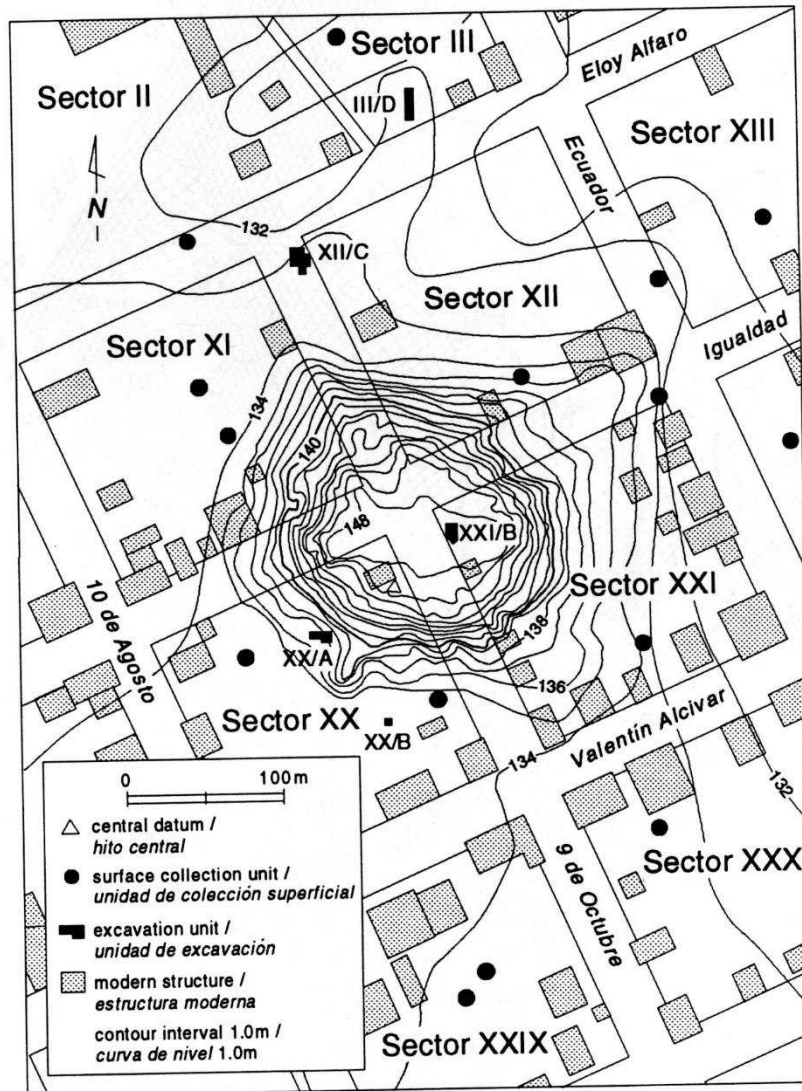


Figure 4.3. Excavation units of the PAPRJ at M3D2-001, San Isidro. Reprinted from Zeidler 1994.

Test cuts in the *tola* quickly established that the most of the mound's volume was added during the Jama-Coaque occupations of the Regional Developmental and Integration Periods; however, some deposits and building activity took place as early as Terminal Valdivia (Phase 8), in the late Early Formative (Zeidler 1994: 79). These occupations were determined over the course of several test excavations in the early and mid-1980s, which revealed the presence of cultural occupations by cultural remains (especially ceramic sherds) as well as the presence of

three volcanic tephra deposits which overlaid successive occupations in the valley. With regard to this thesis and the Late Formative Period, only one unit in this early set of excavations (Sector XII/Area C) explored Late Formative occupations (Zeidler 1994: 87; *Figure 4.2*). Sector XII/Area C revealed Late Formative occupations in one thick deposit, 21c, containing Late Formative sherds of the “Tabuchila Complex” first named by Emilio Estrada (1957). Deposit 21c also exposed an occupation floor and several small postholes; *in situ* ceramics were found on this prepared floor as well as several burned clay lenses (Zeidler 1994: 87). However, the structure denoted by the post-holes was likely small and temporary rather than a sturdy living structure. This deposit was overlaid by Tephra II, a volcanic ash deposited during the eruption of the Pululahua volcano; based on the stratigraphy, Zeidler classified Deposit 21c as “Tabuchila Phase 2”, of the Middle Late Formative (Zeidler 1994: 87; Zeidler and Isaacson 2003).

The PAPRJ returned to San Isidro in 1988 to augment the ceramic assemblage gained from earlier excavations and to explore other sectors of the site to determine if site stratigraphy was consistent across different sectors of the site. All four excavation units in three sectors (XVIII/A1, V/A1, V/B1, XXXI/A1) reached Late Formative levels, since each one was excavated beyond Tephra II (Zeidler 1994: 88). However, only one unit, XXXI/A1, found Late Formative archaeological features of note. In this unit two large pit features (22 and 23) were excavated; Feature 22 contained a fragmented but nearly complete Tabuchila bowl displaying red-on-buff painting on exterior and interior surfaces. Radiocarbon samples were retrieved under this vessel and returned a date of 2845 ± 95 rybp (approximately 895 BCE; AA-4140; see Table 4.1), placing it in Tabuchila Phase 1 (Zeidler 1994; Zeidler et al. 1998). The ceramics recovered from San Isidro formed a preliminary sample of the vessel forms and design statements made by Late Formative artisans (*Figure 4.4*).

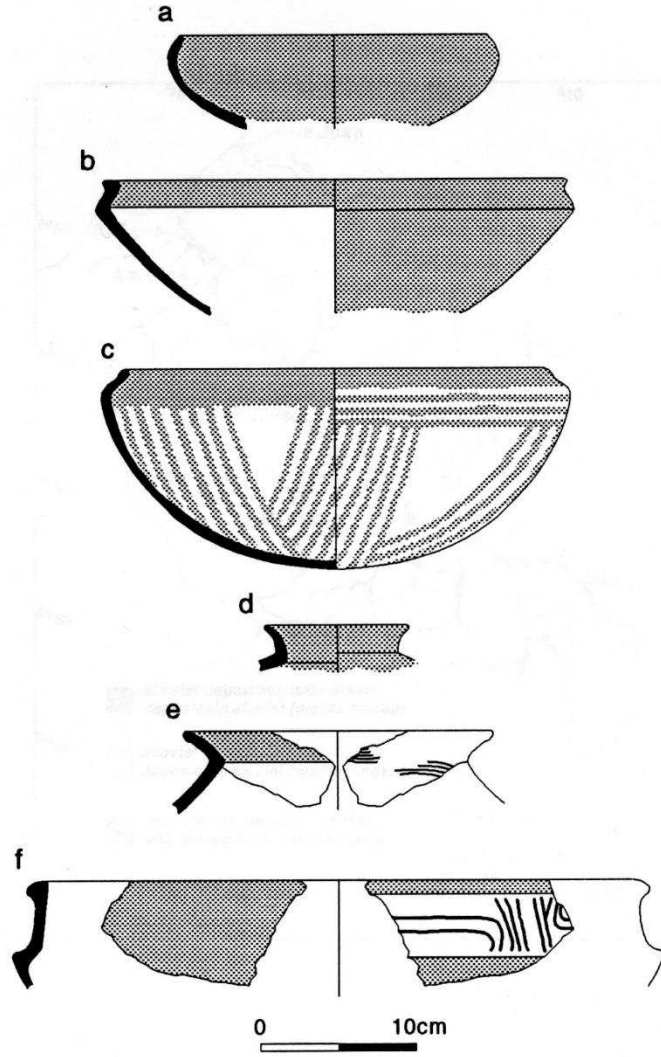


Figure 4.4. Ceramic vessels found at M3D2-001, San Isidro. Reprinted from Zeidler and Sutliff 1994.

Table 4.1. Radiocarbon dates from Late Formative sites in the Jama Valley region of northern Manabí. All dates from Zeidler, Buck and Litton 1998.

Site (with context, where available)	Radiocarbon lab and sample number	Uncalibrated date radiocarbon years BP	Probability calibrated range (68.2%)	Probability calibrated range (95.4%)
La Mina	Illinois State Geo. Survey, ISGS 2366	3030 ± 80	1400-1130 B.C.	1440-1010 B.C.
Dos Caminos (Context 4)	Illinois State Geo. Survey, ISGS 3308	2930 ± 80	1260-1000 B.C.	1380-910 B.C.
Dos Caminos (Context 52)	Illinois State Geo. Survey, ISGS 3309	2930 ± 80	1260-1000 B.C.	1380-910 B.C.
Dos Caminos (Context 19)	Illinois State Geo. Survey, ISGS 3310	2880 ± 70	1210-930 B.C.	1290-840 B.C.
San Isidro (Feature 22, Sec. XXXI/A1)	University of Arizona, AA 4140	2845 ± 95	1190-890 B.C.	1300-810 B.C.
Veliz (M-42)	Humble Oil, HO 1307	2800 ± 115	1130-820 B.C.	1400-750 B.C.
El Mocal (Interface with Tephra II)	Illinois State Geo. Survey, ISGS 2377	2500 ± 160	800-410 B.C.	1000-200 B.C.

This sample was quickly expanded in subsequent excavations which specifically targeted Late Formative occupations both near San Isidro and elsewhere in the Jama Valley. In Chapter 6, San Isidro's ceramics will be related to the larger assemblage where appropriate.

Site Selection in the Jama River Valley

Over the course of the regional survey conducted by the Proyecto Arqueológico-Paleoetnobotánico Río Jama, thirty-three sites were determined to have Late Formative components of varying size and density (Zeidler 1995; *Figure 4.5*). Engwall selected three sites for excavation: El Mocal, an upland site in Stratum II of the survey area; Finca Cueva, located on farmland just outside the town of San Isidro; and Dos Caminos, situated in another stretch of

farmland with some urbanization in the vicinity of San Isidro but upriver, near the confluence of the Río Cangrejo and a small offshoot of the main river. These sites were chosen by Engwall “in order to assess the variability of site location and function, material culture and subsistence” (Engwall 2001: 1). The three sites were selected with the expectation that the material record would differ between the two sites closer to the ancient regional center of San Isidro and the more rural El Mocoral. It should be noted that logistics also played a role in Engwall’s decision, as a vehicle was only available during the first field season of 1991. Fieldwork shifted in 1994 to the more “suburban” sites near San Isidro, where access to more workers, technicians, and water (for flotation sampling) was easier (Engwall 2001: 1). For detailed description of these excavations, refer to Appendix A; where necessary, I will refer to this report in the following discussions of these three sites of the Jama River Valley.

Discussion of El Mocoral (M3B4-031)

El Mocoral is a unique site among the three excavated by Evan Engwall, due to its location away from Late Formative centers of the Jama River Valley and its small size (approximately 0.5 hectares, on the scale of one or a few families). It is far from the mounded regional center of San Isidro, yet maintains a strong archaeological affinity to that center. Perhaps due to this settlement’s position on the landscape, it appears these occupants had considerable access to items considered by archaeologists to convey some status, such as obsidian, earspools, the complete cucurbit-shaped whistling bottle, and the aforementioned white-and-red painted bottle fragment. The juxtaposition between the site’s remote location and its sustained access to culturally significant materials is striking. Many ceramics from El Mocoral exhibit formal and stylistic similarities to contemporary forms in the highlands and

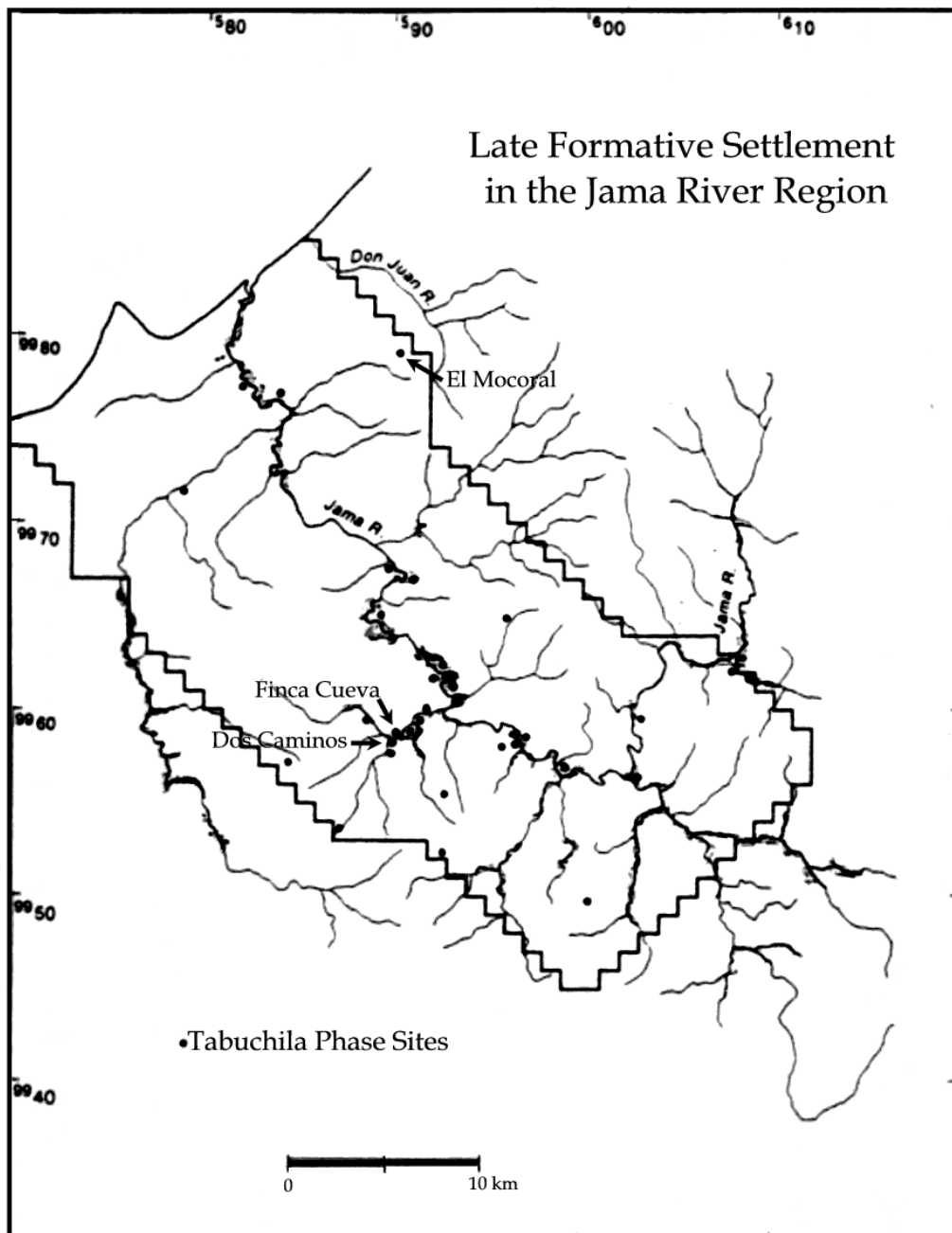


Figure 4.5. Late Formative sites identified in the course of survey in the Jama River Valley. Reprinted from Zeidler and Isaacson 2003.

further south along the coast; likewise, the obsidian can only be assumed to come from the Quito source (Zeidler et al. 1994) as four obsidian samples bracketing the Chorrera occupation in the Jama Valley (two from Terminal Valdivia contexts and one each from Jama-Coaque I and Jama-

Coaque II contexts) all demonstrated chemical affinities with obsidian sources in the Quito region. The relatively late dates recovered from the site place its occupation around 550 BCE. El Mocoral, then, may be considered an example of the valley “infill” process underway in the Late Formative, as populations increased from established farming practices and diverse food diets begun in the alluvial bottomlands. The residents of El Mocoral identified with Chorrera practices and beliefs; this is evident by their possession of the squash whistling bottle and earspools. Given the presence of these “exotic” materials, I posit one of two simple interpretations regarding how people moved through the Late Formative landscape.

The first possibility is that the individuals of El Mocoral were able to obtain these materials directly from regional centers like San Isidro, through whatever rituals or gatherings that inspired communities to make their way to San Isidro from other areas of Ecuador. Essentially, this first interpretation argues that San Isidro acted as a “middle-man” of sorts for families and larger kin-groups of the Jama Valley to gain access to far-flung trade networks. The other possibility is that the people of El Mocoral were themselves former residents or relatives of communities in the highlands or the southern Ecuadorian coast. This makes the regional center of San Isidro a middle-man of a different sort; rather than providing these materials for residents of El Mocoral, they would have been a lifeline of local Chorrera culture for these outsiders. More research will be needed in order to better understand the nature of valley infilling in the Late Formative of the Jama Valley, but for the time being, these possibilities provide some tentative ways to broadly interpret the presence of El Mocoral in the archaeological record. It is likely that trade, population pressure from successful Late Formative subsistence, and other factors all

played a part in this process. Yet no matter what drove these families to El Mocoral, people in the Late Formative were surely able to move through their landscape and make connections with communities new to them. These interpretations and others will be further explored in Chapter 7.

Discussion of Finca Cueva (M3D2-009)

Evan Engwall selected Finca Cueva for excavation based on the presence of numerous Late Formative ceramics retrieved from illicit looting of the site in previous decades. Unfortunately, the vast majority of excavated contexts pertained to the subsequent Regional Developmental Jama-Coaque occupation of the valley. While this thesis will not discuss Jama-Coaque materials further, Engwall's excavations are still notable. Finca Cueva was known to be a cemetery by local landowners and *huaqueros*, and Engwall was able to archaeologically verify this by excavating a Jama-Coaque burial. Numerous aspects of Jama-Coaque burial practices – the yellowish brown clay loam, the interment of individuals with ceramics atop their face, the numerous small organic lenses around the burial – are potentially valuable for future studies of Jama-Coaque burials. However, as just mentioned Finca Cueva was known as a Late Formative cemetery as well as a Jama-Coaque cemetery. I will briefly relate an anecdote from Engwall's 2001 report on his excavations which details a Late Formative burial treatment that *huaqueros* call *correlonas*. The only definition I have found for this term is “a woman who runs around” but it may be a reference to the length of these features:

Several unrelated individuals have consistently described these *correlonas* to me. They are comprised of a lengthy pit (filled in) some 8-10 meters long. The features are apparently somewhat triangular, terminating in a point at one end, while the other end appears to measure some 3-4 meters. Apparently the pit features become deeper as they widen from one end to another. The fill often consists of reddish soil, unlike other burials in the region. The deepest and widest end of the feature contains the remains of a single person, often accompanied by a variety of ceramics, including naturalistic bottles, well-crafted bowls, *Spondylus* beads and blue stone (turquoise or blue sodalite?). One *correlona* at the Finca Cueva contained a large golden nail or pin. As far as I have been

able to ascertain, as many as six or seven of these elaborate burials have been looted in the region, most around San Isidro. While caution must be exercised in dealing with *huaquero* stories, the consistent details provided by different parties are striking, and suggest that a major mortuary complex existed in the region during the Tabuchila Phase, unlike any other known in Ecuador. (Engwall 2001: 57)

Unfortunately, the case remains that as of 2016, no Chorrera tombs of this nature have been excavated by archaeologists. However, it should be noted that these burials were present (according to Engwall's informants) at Finca Cueva. That the Chorrera and Jama-Coaque peoples both selected this area for the resting place of their dead speaks to some shared heritage of these groups over time, and the strong social memory of the Jama-Coaque in returning to San Isidro after repeated volcanic events (see Zeidler 2016). Chapter 7 will return to these *correlonas* as part of a larger integration of the ceramic assemblage into the lifeways of Late Formative people in the Jama River Valley, and as part of the larger relation of sovereignty theory into pre-state societies.

Discussion of Dos Caminos (M3D2-008)

Of the three sites Evan Engwall excavated in his two field seasons of work there, Dos Caminos is likely the site with the most straightforward interest to archaeologists and this project. At Dos Caminos, Engwall found three bell-shaped pits, a burial, and potentially part of a structure, all dating to the Late Formative Period. In addition, roughly ninety percent of the Late Formative ceramics discussed in this thesis come from Dos Caminos, and especially the bell-shaped pits. The assembled picture of occupations at Dos Caminos is a valuable and crucial addition to archaeologists' understanding of Late Formative life in the Jama River Valley. The fact that looters only dug to Tephra II meant that the ashfall acted to deter deeper intrusion into Late Formative contexts.

Several different activities at Dos Caminos can be inferred from these excavations. Units 1-8 may have revealed part of a Late Formative structure (though not enough to ascertain its function or dimensions), or at the least some kind of well-trodden space, judging by the presence of small, broken-up ceramics in these contexts. Meanwhile, this site was also the location of some type of ritual activity related to the interment of individuals (such as Burial 1), and reflected in the material culture left in the bell-shaped pits.

These bell-shaped pits are worthy of additional discussion as to their function in Late Formative society. As will be discussed in Chapters 6 and 7, ceramics recovered from these pits are heavily skewed toward large fineware vessels and cooking jars with everted red-slipped rims, with some evidence of very fine Chorrera figurines, whistling bottles, and *orejeras* also present. These bell-shaped pits have an identical shape, closely similar ceramics (as will be seen in the next chapters), and identical radiocarbon dates. In addition, ceramic design statements like the northern Manabí wide-mouthed olla (*cuspidor*) were also recovered from the mound of San Isidro just ten minutes' walk away. I argue these features are a reflection of one or several commensal events hosted by the residents of San Isidro during the very early Late Formative Period. The bell-shaped pits themselves may have been more related to storage, but the contents of the pits when filled in suggest a modest scale of feasting activity occurring at Dos Caminos.

Adding to this argument, results of botanical and archaeofaunal analyses (by Deborah Pearsall and Peter Stahl; see Appendix B) support the feasting event hypothesis. Botanical remains increased greatly in the richness (density) of recovered phytoliths and macro-remains in the vicinity of Feature 7 (the excavated bell pit); the vast majority of this material was maize which occurred within the feature and in the deposit in general. During the Late Formative, maize was increasing in agricultural use in the western lowlands of Ecuador (Pearsall 2004), but

within the context of well-established agricultural programs using *achira*, arrowroot, cucurbits, and numerous other herbs. It is quite striking that maize was found in this context to the exclusion of other plants. Meanwhile, archaeofaunal analysis of Feature 7 identified hundreds of fish bones present, along with the remains of a few rodents and deer. The fish fragments that were identifiable included grunts, drums, and barracuda – all ocean-dwellers.

Large storage pits may have been an innovation of Late Formative groups, but they were not the last to use them in the Jama River Valley. At Pechichal (M3B4-011), Zeidler (2016) identified several large Jama-Coaque bell pits dug into Tephra III. These dwarf the bell-shaped pits found at Dos Caminos in all dimensions. Zeidler (2016) argues that they served as a form of insurance against bad agricultural seasons for Jama-Coaque peoples, as part of a strategy to cope with the volcanic activity present in the region. In the pits excavated at Pechichal, large amounts of plant and food refuse were found and subsequently analyzed by Pearsall (2004) and Stahl (2000). It is likely that the Dos Caminos bell-pits had a similar primary function as storage pits for corn grown on-site. At some point these pits were used instead as refuse pits; at this point it is unclear whether that secondary function was intentional, opportunistic, or inadvertent. While corn may preserve for a time, fish do not keep unless salted or dried; their presence in bell-pits may imply they were eaten not long after they were caught and transported to the middle valley, 30km+ from the coast. The presence of burned charcoal also suggests the use of fire, likely for cooking. Finally, pit features have also been associated with feasting at Pirincay, another Late Formative site in southern highland Ecuador. Excavations there revealed numerous “party pits” dug into a plaza space at the site, with identical contents involving eating, drinking, and the sacrifice of llamas (Bruhns 2003: 151; Bruhns et al. 1990).

Regardless of the original use of the bell-shaped pits themselves, their fill contains numerous ceramic vessels and hundreds of sherds that I argue are a reflection of feasting activity taking place at the site (to be discussed below). Late Formative proto-elites – intellectuals with the opportunity and inclination to accrue power – may have set up these kind of rituals with the goal of reinforcing their status and perceived generosity. The proximity of burial contexts to many of these bell-shaped pits and feasting events could also have been an intentional decision to link ancestors and the dead to living kin, especially if Weinstein’s argument for a Chorrera mortuary cult is considered (1999). It should be noted that these dual objectives support each other well, if we are to assume that nascent political power in the Late Formative was acquired by shamans or other spiritually powerful individuals. Given a shaman’s privileged experiences in other realms and perspectives, they would have been uniquely suited to make these rituals sensible and effective to their fellow members of society. This accords with larger trends of social stratification in the Andes throughout the Formative (Burger 2008). These efforts may have also included the acquisition of political capital in order to have it reciprocated through mounding labor at San Isidro (see Vega-Centeno 2007), though at this point that possibility remains conjectural at best. At the least, the practice of using bell-shaped pits to coax the earth with future fecundity may also be reflected in the interment of the gourd-shaped whistling bottle at El Mocal, albeit on a smaller scale.

The interpretation of the bell-shaped pits at Dos Caminos relies on several lines of evidence, including the archaeofaunal, botanical, and ceramic analyses. Having discussed at length the source of the impressive collection of Late Formative ceramics retrieved by Engwall, we now turn to the analysis of these artifacts and their interpretation.

CHAPTER 5: MODAL ANALYSIS OF LATE FORMATIVE CERAMICS OF THE JAMA RIVER VALLEY

The primary goal of this chapter is to define the methodology of modal analysis and how it will be employed in this study. Justification will also be provided for the use of modal analysis for this ceramic assemblage. The use of qualitative modal classifications over type-variety analysis will be central to this justification, though this choice is also bound up in the history of archaeology in the region. Once the scope and aims of modal analysis have been established, this chapter will then discuss the results of modal analysis undertaken on the ceramics of Dos Caminos, Finca Cueva, and El Mocal. The following chapter will describe the vessel forms encountered within the assemblage and compare the results to studies elsewhere in the western lowlands of Ecuador.

Modal analysis in archaeology

Ceramic analysis is an archaeological enterprise with deep roots. Considering that ceramics are disproportionately represented, they have long been utilized in an effort to track changes in ancient cultures over space and time. One of the first ceramic analyses performed in South America identified correlations between geographically specific ceramic traits and linguistic dispersions (Nordenskiöld 1930). Another early effort to understand ceramics in South America focused on identifying ceramic style, trait, and complex (Howard 1947). For the South American tropics, the first major breakthrough in ceramic typologies came with the introduction of the type-variety classification system which had been developed in North America and Mesoamerica. The type-variety approach analyzes ceramics by establishing “types”: individual sherds are divided up by their surface finish, decoration, and (if obtainable) vessel form. Emphasis is placed on establishing types based on their geographic location, and defining

common traits across all types (i.e. Machalilla Red Banded, Ñaupe Incised). Varieties are subdivisions of the type, which show significant differences within that type. From there, ceramic types can be grouped (into ceramic groups), and at higher (more regional) levels into complexes, horizons, and spheres of interrelation between types and groups. This technique was designed to understand the relationships between sites over time and has been employed broadly in Mesoamerica, especially in the Maya lowlands (Ford 1952; Healy 1980; Sabloff 1975; Smith, Willey, and Gifford 1960).

For the western lowlands of Ecuador, type-variety classification had advocates in Betty Meggers and Clifford Evans (Evans and Meggers 1957; Meggers 1966). Their excavations at the type-site of Valdivia had established four periods of Valdivia occupation, through the establishment of types in recovered ceramics (Evans and Meggers 1957; Meggers 1966: 39). As discussed in Chapter 3, much of that work centered around the identification of ceramic traits that could then be correlated with the Jōmōn ceramics of contemporary Japan, or contact with Mesoamerican contemporaries. Problematic diffusionism aside, Evans, Meggers, and their Ecuadorian colleague Emilio Estrada succeeded in establishing the first broad strokes of Ecuadorian prehistoric ceramic sequences through type-variety classification. These ceramic cultures strongly informed the Preceramic – Formative – Regional Developmental – Integration stage chronology they were developing alongside their classifications, with Valdivia and Machalilla representing the Early Formative and Chorrera characterizing the Late Formative.

Evans' and Meggers' initial work, however, was almost immediately called into question by Donald Lathrap, whose work in the Upper Amazon (1962) had catalyzed a new method of ceramic classification. Lathrap's modal analysis (also known as structural classification) was informed by several other scholars' work, including Irving Rouse (1939, 1960) and John Rowe

(1961), and developed an alternative to type-variety studies. Rouse sought out ceramic traits he called “modes”, which are “any standard, concept or custom, which governs the behavior of the artisans of a community, which they hand down from generation to generation, and which may spread from community to community over considerable distances” (1960: 313). To Rouse, types were traits imposed by the archaeologist onto the material in order to group it better; modes, on the other hand, represent traits that were culturally significant to the ceramicists and communities *producing and utilizing the vessel*. Tracking the changes in modes over time provides the archaeologist with larger cultural standards and traditions. Rouse also defined two types of modes: conceptual modes, which are those standards the ceramicist had in mind in the production and intent of the vessel, and procedural modes, which are habitual actions taken by the ceramicist in the production and use of the vessel (1960: 318).

While Lathrap’s 1962 dissertation remains unpublished, his method was implemented by several of his students (Raymond 1972; Raymond, DeBoer and Roe 1975; Aleto 1988). In addition, numerous studies of Chorrera ceramic assemblages within the Ecuadorian lowlands have used modal analysis as their method of classification (Beckwith 1996; Chacón 2004; Ramírez 1996; Zedeño 1990; also see Chapter 3). Raymond (1995: 228) describes modal analysis (what he calls structural classification) in this way:

The key steps in a structural analysis are: (1) to define those units which exhibit structure; (2) to determine the dimensions of variability; (3) to identify and describe those values of a variable which affect "meaning"; and then (4) to construct the rules which structure the relationships among dimensions and generate units which carry "meaning". "Meaning" is to be understood as how a category of artifacts is evaluated or interpreted in either a functional or symbolic sense by the group which makes and uses it.

Modal analysis seeks the internally culturally sensible categories, priorities, and methods of production reflected in ceramic attributes. One of the end goals of this analysis is not the sorting of all sherds into types, but the identification of useful fragments that reflect complete vessel forms and aid in reconstructions of a culture's ceramic expression. In the words of Raymond (1995), the goal is in understanding "pots, not potsherds". Following Raymond's blueprint for modal analysis, then:

- 1) The units which exhibit structure in this study are ceramic vessels, either fragmented or complete;
- 2) The dimensions of variability include traits such as rim diameter, paste, vessel thickness, vessel form, surface treatment and decoration;
- 3) The values of these variables that recur often in the assemblage are identified as "modes";
- 4) The modes of ceramic vessels which commonly occur together are constructed as "modal combinations", which are the rules ceramicists followed in creating the assemblage. For iconography, modal combinations of particular motifs are termed "design statements". Comparing relationships between these combinations, and bringing these combinations into their archaeological context, allows for functional and symbolic meanings of the vessels to be discerned.

Selecting Modal Analysis for this Study: "The Proper Scale"

Type-variety analysis has provided many archaeologists, especially in Mesoamerica, with useful interpretations of ceramic assemblages and cultural change at a regional level. However, this system of classification was not deemed useful for the study at hand, for several reasons: (a) problems with its treatment of variation; (b) its lack of temporal sensitivity; and (c) the focus of existing scholarship on ceramic analysis in Ecuador. I will briefly discuss each of these points in turn, but it must be emphasized that this is not a condemnation of type-variety studies. Rather, the scope of the type-variety method appears inappropriate for the current state of ceramic research in the Jama River Valley and the questions this thesis asks of the material. I liken this to the selection of the proper magnifying lens to observe certain phenomena; a hand-lens is a poor choice for studying bacteria and supernovae alike. In the same way, type-variety's emphasis on

constructing regional types over broad spans of time is not appropriate for understanding a ceramic assemblage from one valley and a short span of time. Using the “proper scale” for this endeavor necessarily removes type-variety analysis from consideration, along with the following problems with type-variety analysis.

Type-variety classifications have often been criticized for the way they treat variation within ceramic assemblages. Membership in a particular type is often considered monothetic – that is, a given sherd must present all of the type’s designated characteristics to be a member of that type. However, many ceramic forms and expressions are polythetic, since people are involved in the production of ceramic vessels, “in which each entity possesses a large number of the attributes of the group, each attribute is possessed by a large number of entities, and no single attribute is either sufficient or necessary for group membership” (Hammond 1972: 451). The assembled effect of this strict, etic imposition by the analyst is that in the lumping of multiple attributes into monothetic types, type-variety classification often obscures variation rather than illuminating it (Lippi 1983; Aleto 1988: 106). These problems are compounded when reanalyzing data first recorded by the type-variety method. The Barton Ramie Maya collections (Robert Smith, Willey, and Gifford 1960; Gifford 1976) were re-analyzed qualitatively based on the collection’s reports in order to understand which sherds depicted belonged to certain types (Michael Smith 1979). However, the presentation of the data essentialized the examples of the type to the point that a clear definition was unusable and unrepeatable (Michael Smith 1979).

Type-variety analyses have also been criticized for lacking temporal sensitivity. John Rowe (1959) struggled with the culturally broad type-variety system of classification. To Rowe, types were often very long-lived within their cultures, which did not lend them temporal sensitivity. To overcome this, type-variety analysis required a large and random sample unlikely

to be encountered in archaeological study (1959: 318-319). As mentioned elsewhere, the present assemblage has already been extensively curated; the ceramics under discussion here are a selection that Engwall made in order to prioritize special finds and diagnostic sherds (such as rims and bases) for analysis. This further limits the usefulness of a type-variety analysis for this study. Instead, Rowe argued for the use of features (modes) that were culturally significant in order to more tightly control for ceramic changes over time. Maria Masucci, an Ecuadorianist advocate of type-variety analysis, concedes that modal analysis “can give finer chronological information” (Masucci 1992: 101). To the credit of type-variety methodology, many of the above criticisms have been addressed by Masucci and others into their work.

Ultimately, both modal and type-variety analyses can be useful in the sense that a strong dialogue between the methodologies can yield much better results than either one can alone. To my mind, a dialogue must be generated between the two methods. Initial type-variety studies can paint broad cultural chronologies, follow-up modal analyses can define local chronologies and aid in the comparisons between sites and regions, and further type-variety classifications (this time informed by culturally significant modal relationships, rather than imposed types) can provide regional chronologies that synthesize local activity into more detailed interaction spheres. The idea of combining modal and type-variety analyses is not new (Sabloff 1975; Healy 1980:80; Masucci 1992; Culbert and Rands 2007), and inter-site interactions in the Maya sphere (for instance) have been well-aided by these methodological combinations.

The simple fact is that Ecuadorian archaeology has not received the sustained breadth and depth of scrutiny that the Maya heartland has seen, nor does it have epigraphic material to reconstruct patterns of interaction and control. As I see it, Ecuadorian archaeology is currently in the second phase of this dialogue: the assembly of local chronologies across the region, tightly

defined by many attributes of ceramic variation. This is evidenced by the recent studies of Chorrera ceramics that employ modal analysis (Aleto 1988; Beckwith 1996; Chacón 2004; Ramírez 1996; Zedeño 1990; see also Chapter 3). Follow-up questions using the type-variety method (far beyond the scope of this thesis) can perhaps develop a detailed chronology reflective of the broader movements of people through the “Chorrera horizon”. Considering that the primary goal of this thesis is to define what Tabuchila ceramics look like and inquire about their unique contribution to Chorrera expression, type-variety analysis is quite literally out of the question.

Dimensions of variability measured in this study

The first task of this modal analysis is to define the dimensions of variability that will be examined and compared. These dimensions often mirror Rouse’s conceptual and procedural modes. Some dimensions vary because they reflect different intentions for the vessel, or remain the same across vessels because they share similar purposes. Other dimensions may be procedurally consistent as similar techniques are executed across a ceramicist’s career, or between ceramicists; they may also vary as mistakes are made or as the ceramicist experiments with other procedures.

This analysis consists of individual sherds being measured on as many of these dimensions of variability as possible. Some sherds do convey more information than others – for instance, body sherds do not communicate as much as rim sherds or bases when looking at the maximum size of a vessel. This means that an active “triage” of artifacts is performed in the course of analysis, to prioritize sherds which have more of these dimensions of variability. Where possible, refits were also attempted in order to produce more complete vessel form profiles and bring out more dimensions of variability in a given case. At the beginning of this

process, analysis provides mostly “noise” – modes are identified for each dimension of variability, but combinations of modes are at first difficult to parse out. However, with time and effort patterns began to emerge, and modal combinations were established.

In all, 839 ceramic artifacts were examined to some extent. 463 of those artifacts comprise 370 detailed entries with most (or all) of the following dimensions of variability measured. Accounting for some cross-referencing between entries, which were subsequent identifications of two sherds belonging to the same vessel, approximately 350 unique vessels are represented by the analyzed assemblage. However, this represents only some 40% of ceramics recovered from Engwall’s excavations (Evan Engwall, personal communication 2016).

Vessel Form

The form of a ceramic vessel consists of its physical size and shape. In order to discuss this important dimension, a system of classification must be chosen; for this study, Shepard’s classification system (1956) has been selected. This system seeks to define critical inflection points, vertical and horizontal silhouettes of vessels, and sherd contours in order to determine what form the sherd partially (or completely) represents. Shepard’s classification breaks down vessel form into three broad groups: unrestricted vessels, simple and dependent restricted vessels, and independent restricted vessels. These groups are further subdivided into the contour of the vessel: simple, composite, inflected, and complex. All three of Shepard’s groups are represented in the assemblage, with a total of fifteen vessel forms that will be discussed individually in Chapter 6 (Table 6.1).

Unrestricted Vessels

Simple Contours

- Form 1: Open Bowl, Simple*
- Form 2a: Plates, Simple
- Form 2b: Plates, Polipod Bases
- Form 3: Earspools

3a. Conical Contour 3b: Hyperbolic Contour

- Form 4: Cups

Composite Contours

- Form 5: Open Bowl, Inflected*
- Form 6: Open Bowl, Wide Rimmed with Annular Base

Simple Dependent Restricted Vessels

Simple Contours

- Form 7: Closed Bowl, Simple*

Composite Contours

- Form 8: Closed Bowl, High Shoulder
- Form 9: Closed Bowl, Carinated

Independent Restricted Vessels

Composite Contours

- Form 10: Wide-Mouthed Olla (Cuspidor)

Inflected Contours

- Form 11: Jars, Inflected Ollas
- Form 12: Jars, Everted Rim
- Form 13: Jars with Narrow, Flared Mouths
 - 13a: Short Necked
 - 13b: Long Necked

Complex Contours

- Form 14: Bottles, Strap-handled with Whistle
- Form 15a: Figurines
- Form 15b: "Neckrest" Jars with Modeled Figures

*Annular bases present in some examples of these forms

Rim and Lip Modes

Since the determination of vessel form is an important aspect of modal analysis, rim sherds often present some of the most diagnostic portions of a vessel's contour, and have been prioritized for study in this assemblage. Along with the contour of the vessel, rim sherds often

exhibit varying elaborations and treatments either for functional or aesthetic purposes. In addition, the lip of the vessel often presents a specific characteristic treatment, separate from the behavior of the rim. As such, rim modes were identified as well as lip modes.

Rim Modes (*Table 5.1*)

1. Direct
2. Everted straight
3. Everted flared
4. Inverted straight
5. Inverted flared

Lip Modes (*Table 5.1*)


















1. Flat
2. Rounded
3. Tapered, evenly on both sides
4. Beveled, exterior or interior
5. Tapered interior or exterior
6. Flat, with thickened exterior
7. Flat, interior and exterior thickening
8. Scalloped
9. Ext. elaborated (longer and rounded, not flat like #6)
10. "Comma" thickened elaboration, interior or exterior

Formal Characteristics: Necks

Some vessels in the assemblage possess necks, which are defined as a portion of the vessel immediately below the rim which somehow restricts the passage of the container's contents. However, this portion must have more than one point of restriction; a neck is not defined in this study as a critical point, but as a distinct elaboration of the vessel's contour. This means that all simple contours, unrestricted vessels, and simple dependent unrestricted vessels lack necks by definition.

1. Short Neck (< 26 mm)
2. Long Neck (> 26 mm)

Table 5.1. Diagrams of rim modes and lip modes in the Jama Valley Tabuchila assemblage.








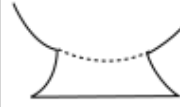
Lip Modes			Rim Modes		
 1. Flat	 2. Rounded	 3. Tapered	 1. Direct	 2. Everted straight	 3. Everted flared
 4. Beveled ext.	 5. Beveled int.	 6. Tapered int.	 4. Inverted straight	 5. Inverted flared	
 7. Tapered ext.	 8. Flat, ext thickened	 9. Flat, int. and ext thickened			
 10. Scalloped	 11. Ext. elaborated	 12. "Comma" elaboration			

Formal Characteristics: Shoulders

The shoulder of the vessel is an inflection or critical point that restricted vessel forms exhibit, which delineates the body of the vessel from the rim or neck of the vessel. Only a few distinct shoulder modes are present in Vessel Forms 8, 9, and 10 (all closed bowls) (*Table 5.2*). Where many of these shoulders meet the interior of the vessel's neck, some carination is present.

1. Rounded shoulder
2. Pointed shoulder with interior rounding
3. Inflected shoulder (both surfaces follow inflection contour point)
4. Carinated shoulder with exterior nicking (highly diagnostic of Vessel Form #8)

Table 5.2. Diagrams of shoulder modes and base modes in the Jama Valley Tabuchila assemblage.

Shoulder Modes			Base Modes		
 1. Rounded	 2. Pointed	 3. Inflected	 1. Flat	 2. Globular	 3. Annular low
 4. Carinated, ext. nicking			 4. Annular high		

Formal Characteristics: Body

The body of the vessel is that portion of the vessel that is not represented by any of the other characteristics labelled here. Body sherds lacking elaborations of a neck, base, or rim are usually not diagnostic of a particular vessel form. Nonetheless the body of a vessel often defines a large portion of the vessel's contour and thus is important to relate in understanding volumes of vessels.

Formal Characteristics: Bases

Bases are defined as the portion of the vessel that contacts the ground while the vessel is in an upright position, from the point of contact to the closest critical point (Table 5.2). By far the most numerous mode of base in this assemblage is the annular base mode. This torus-shaped elaboration provides a pedestal-like horizontal silhouette, and appears to be present within several vessel forms. However, there are only a few examples of complete horizontal silhouettes in the assemblage, which makes assignment of annular bases to specific vessel forms difficult in most cases. Nonetheless annular bases consistently serve to support a rounded base.

1. Flat
2. Globular
 - 2a. Rounded
 - 2b. Ovoid
3. Annular, low (< 20 mm in height)
4. Annular, high (> 20 mm in height)

Paste and Sherd Composition

One of the immediately recognizable features of this assemblage is that many sherds have a very fine composition which pleasantly “clinks” between sherds and is reflective of their high firing temperature. When fired, ceramics of this fine paste were partially oxidized to a reddish color with a reduced core of dark gray. In addition, temper in this fine paste is usually very small or small (generally less than a millimeter) and made up of white, black, or gray subrounded or subangular rock in relatively low percentages (3-7%). These characteristics display a “seared” look in cross-section, which suggests that sherds are highly carbonaceous in their composition. However, very occasionally a larger inclusion (1-2 mm) is present in a given sherd’s cross-section, perhaps from incomplete temper grinding. The result of this composition and temper is a consistently fine, clean-breaking ceramic sherd. This paste mode is dominant in the Dos Caminos and Finca Cueva components of the assemblage, with notably lower frequency in the El Mocoral component. I am curious if volcanic ash from the post-Valdivia Tephra I contributed to the high firing temperatures possible with the clays of the Jama Valley Chorrera assemblage – something a petrographic study could determine mineralogically.

The other common paste composition of this assemblage has much coarser temper and is more porous. This thick composition is more frequently seen within Vessel Forms 11 and 12 (inflected ollas and everted rim jars). The choice of larger temper and coarser paste could be a reflection of the regular exposure to heat that these vessels would have had to endure in cooking

(Schiffer et al. 1994, Searle and Grimshaw 1959). Further petrographic studies between these two dominant pastes could determine if the same kinds of temper were used, albeit with more or less processing depending on the intended use for that temper.

Surface Treatments

Surface treatment is defined as the technique that the ceramicist used to finish the various surfaces of the vessel. Treatments can be performed while the vessel is still plastic, or while it is leather-hard or completely dry (Shepard 1954: 65). Treating the surface evens the contour of the vessel, creating a more attractive and useful ceramic vessel and also priming it for decoration.

The ceramic assemblage in this study presents the following surface characteristics:

1. Smoothed: achieved by hand-wiping the surface while the clay is still plastic.
2. Scraped: a smoothing technique that instead uses a tool to smooth the surface of the still-plastic vessel.
3. Burnished: a very common technique in this assemblage, which uses a smooth stone to rub the surface of the leather-hard (partially dried) vessel and align the clay particles to produce a lustrous sheen. In this assemblage burnishing was combined with hand-smoothing and pursued to varying degrees of completion; by passing over the surface of the vessel as many times as possible, higher burnishing (and thus greater luster) is accomplished.
 - 3a. Low: the smoothed surface is still visible in many places, and it appears the burnishing tool was passed over the surface only once or a few times.
 - 3b. Medium: the burnishing tool has covered almost all of the vessel's surface, and a qualitatively modest luster has been achieved. Occasional spots of smoothed surface are still visible, or the vessel's reflectiveness is generally dull.
 - 3c. High: the burnishing tool's mark is still noticed, but the surface is completely covered by the technique, leaving a strong luster.
4. Polished: This technique does not leave marks like burnishing, since the potter uses a cloth or rag to smooth the surfaces of the vessel and create a uniformly high luster. Within this assemblage, polishing followed burnishing in some examples, further enhancing the sheen of the finished vessel.
 - 4a. Low: Polishing is partial or only present enough to provide a dull luster to the surface.
 - 4b. High: Completely covered by the technique, providing a highly reflective and uniform luster to the surface.
5. Slipped (combinable with 3 and 4): The use of slip is a common technique in ceramic production for priming a surface for decoration, or simply creating a more aesthetically pleasing ceramic. A slip is a water-clay suspension used to paint surfaces or zones of the vessel with a color; this obscures imperfections of the surface after firing. The ceramic assemblage in this study almost exclusively exhibits a clay slip that, when fired properly,


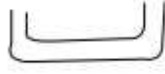









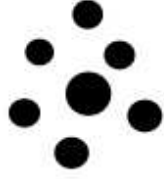

provides a striking deep red color (10R 4/6). This slip darkens if over-fired or reduced, to a duller brown color (usually 10R 4/2; hues and values range yellower than this at times). The slip is typically applied over the exterior body of the vessel, often creating a contrast with an un-slipped exterior neck; or on the interior of the vessel, from the lip to the interior body of the vessel.

Surface Decoration, Design Motifs and Iconography

At the outset of this study, design motifs present in the assemblage were selected as a potentially useful point of comparison with other assemblages. Designs provide a chance for the ceramicist to individualize the vessel further from other examples of its form. This study observed where the design was placed on the vessel, and attempted to denote the features of the design (*Table 5.3*).

1. Motifs produced by incision
 - 1a. Line (horizontal, vertical, diagonal; if more than one, number and direction)
 - 1b. Double line break
 - 1c. Parallel lateral S-curves
 - 1d. Hatching, X-patterns and herringbones
 - 1e. Wavy lines
 - 1f. Wave-and-dash
 - 1g. Serrated lines and zigzags
 - 1h. “EKG” zigzag
 - 1i. Dash produced by fingernail impression
2. Motifs produced by painting
 - 2a. Bands and lines
 - 2b. Semicircles
 - 2c. Dots
 - 2d. Triangles
3. Motifs produced by molding and application
 - 3a. Scalloping
 - 3b. Zoomorphic representations
 - 3c. Anthropomorphic representations

Table 5.3. Diagram of decorative motifs in the Jama Valley Tabuchila assemblage.

Decorative Modes						
<i>Incised</i>						
1a. Line	1b. Double line break	1c. Lateral S-curve	1d. Hatches, herringbones	1e. Wavy line	1f. Wave-and-dash	
						
1g. Serrated line, zig-zag	1h. "EKG" zig-zag	1i. Fingernail dash				
<i>Painted</i>						
2a. Bands, lines	2b. Semicircle	2c. Dots	2d. Triangle			

Summary

This chapter has sought to evaluate two methodologies available for use in ceramic studies. For several reasons, modal analysis has been selected as the methodology best suited for the questions at hand in this thesis, and the current state of research into Late Formative ceramics of the Jama River Valley in northern Manabí. As part of that selection, discussion has focused on the dimensions of variability that were studied in the course of analysis. Importantly to the broader conceptual goals of this thesis, modal analysis reconstructs rules of production and stylistic traditions which ceramicists created and regularly altered. The next chapter will present the results of this analysis by describing the fifteen vessel forms present in the assemblage, contextualizing and understanding modal combinations, and comparing results to similar studies performed elsewhere in Late Formative Ecuador.

CHAPTER 6: RESULTS OF MODAL ANALYSIS OF THE JAMA VALLEY TABUCHILA ASSEMBLAGE

This chapter is a discussion of the results of the modal analysis laid out in the previous chapter. Results will be presented by discussing each of the vessel forms established in the course of analysis (*Table 6.1*). Where possible with each vessel form, comparisons and connections will be made with other assemblages analyzed in western lowland Ecuador. The assemblage will also be situated in its archaeological context (as established in Chapter 4 and Appendix A). The purpose of this analysis is twofold. First, it contributes to the archaeology of western lowland Ecuador by describing a ceramic assemblage recovered from archaeological excavation rather than through looting. Second, the comparison of the northern Manabí material with contemporary collections illustrates how Chorrera as a stylistic tradition was partially developed in the Jama River Valley as an early regional variant called “Tabuchila”.

By comparing significant modes within the identified dimensions of variability, patterns in production and aesthetics can be identified, which together can be considered parts of a style. I am using Peter Roe’s (1995) definition of style:

an intentional, structured system of selecting certain dimensions of form, process or principle, function, significance, and affect from among known, alternate possibilities to create pleasing variability within a behavioral-artifactual corpus. Style is both the process of creating information through differentiation so that it is recognizably evocative of a specific cultural context, and a way of circumscribing choice via the imposition of a frame within which creation or recombination occurs. (Roe 1995: 31)

Styles are potentially sensitive to various kin groups or communities of “ceramicist intellectuals” – especially in the melting pot of commingling ceramic production spheres western Ecuador displayed in the Middle and Late Formative. Making comparisons among assemblages

Vessel Form	# of conclusive entries	Lip Treatments												Rim Treatments					Shoulders				Bases				Incised Decoration											Painted Decoration			
		1 - Flat	2 - Rounded	3 - Tapered	4 - Beveled ext.	5 - Beveled int.	6 - Tapered int.	7 - Tapered ext.	8 - Flat, ext thickened	9 - Flat, int and ext thickened	10 - Scalloped	11 - Ext. elaborated	12 - Comma thickened	1 - Direct	2 - Everted straight	3 - Everted flared	4 - Inverted straight	5 - Inverted flared	1 - Rounded	2 - Pointed	3 - Inflected	4 - Carinated, ext nicking	1 - Flat	2 - Globular	3 - Low Annular	4 - High Annular	1a Line	1b Double line break	1c Lateral S-curve	1d Hatched	1e Wavy lines	1f Wave-and-dash	1g Zigzag	1h EKG	1i Fingermal dash	2a Bands/lines	2b Semicircles	2c Dots	2d triangle		
1: Open Bowl, Simple	100	40	9			38	5	1		4			88	9			N/A	N/A	N/A	N/A	?		3	?	54	1	2	4	19	2	2					2					
2: Plate	9	3			1						1		2	6	1		N/A	N/A	N/A	N/A	?		1		2																
3: Orejera	37	4	1	1		21						2	4	4	21		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																	
4: Cup, Direct Walls	4	1						1					2				N/A	N/A	N/A	N/A	2				2																
5: Open Bowl, Inflected	26	8			1	11		1					10	3	8		N/A	N/A	N/A	N/A			4	?	2	7	1	1				1									
6: Open Bowl, Wide Rim	6	1	3	1									1	3	1								1	?	2		1		1	1		?									
7: Closed Bowl, Simple	22	1	8	1	2			6	2		1	1	1	4		6	12				22				8			1			2										
7T: Tecomates	8	1	2	1		1		1				2				6	2	?						?	4			1								1					
8: Closed Bowl, High Shoulder	19	1	3	1		1		12	1	1					8	12				6				?	2							1									
9: Closed Carinated Bowl	28	7	1					20					6	3		9				6				?	4	2	2	2								2	1				
10: Wide-Mouthed Olla	31	1	6	2	1		1	10		3			6	19						6	13			?	4		4								7	5			3		
11: Inflected Olla	2	2													2		?						?	?																	
12: Everted Rim Jar	28	1	14	8		2	2						21	7						24		4		?				6				8		4		5					
13: Short Necked Jars	11	6				4		1					1	10			?								1										1						
Totals	331	17	98	24	3	4	79	23	42	3	4	5	33	151	57	31	26			57	51	32	6	2	0	8	0	90	2	16	7	21	3	13	1	4	20	6	0	3	

Table 6.1. Diagram of modal combinations which characterize the variability of the Jama Valley Tabuchia assemblage.

from other regions of western Ecuador (and thus other production areas) is useful in examining general formal and stylistic affinity as well as exchange within the western lowlands, as the patterns of local style versus outliers and non-local sherds are drawn from modal analysis. Exchange is especially interesting as other modal analyses have found Tabuchila vessel forms in Los Ríos and the Santa Elena Peninsula (Beckwith 1996; Ramírez 1996). Evidently Tabuchila traits made it overland east to the Upper Guayas Basin and the Río Daule as well as south via the coast. Considering Tabuchila's early contribution to Late Formative ceramics, subsequent Engoroy and Guayas Chorrera variants would have followed northern Manabí's regional sensibilities while also contributing to and editing those trends to suit their own changing tastes and needs.

Vessel Forms of the Jama River Valley Assemblage

Form 1: Unrestricted Vessel, Simple Contour: Open Bowl

IAB: Composite Contour: Open Bowl with Annular Base

This vessel form is a simple open bowl form, often with slightly concave walls and an everted straight or direct rim (*Figures 6.1, 6.2*). Annular bases are potentially combinable with these simple globular silhouettes, creating a composite contour. Most examples of this form present incised decoration on the interior rim of the bowl; the nature of the decorative motif is a source of great variation within the assemblage. In addition, several lip modes are present, including rare scalloped and molded forms (*Figure 6.3*). While the form of this vessel is straightforward, the degree of customization available to artisans in rim and lip decoration is impressive. Of the ninety-nine sherds closely analyzed of this form, most present lips that are rounded (39 examples, 39%) or tapered on the interior (upward) side of the bowl (40 examples, decorated in much detail; if any decoration was present then it consisted of one or two parallel

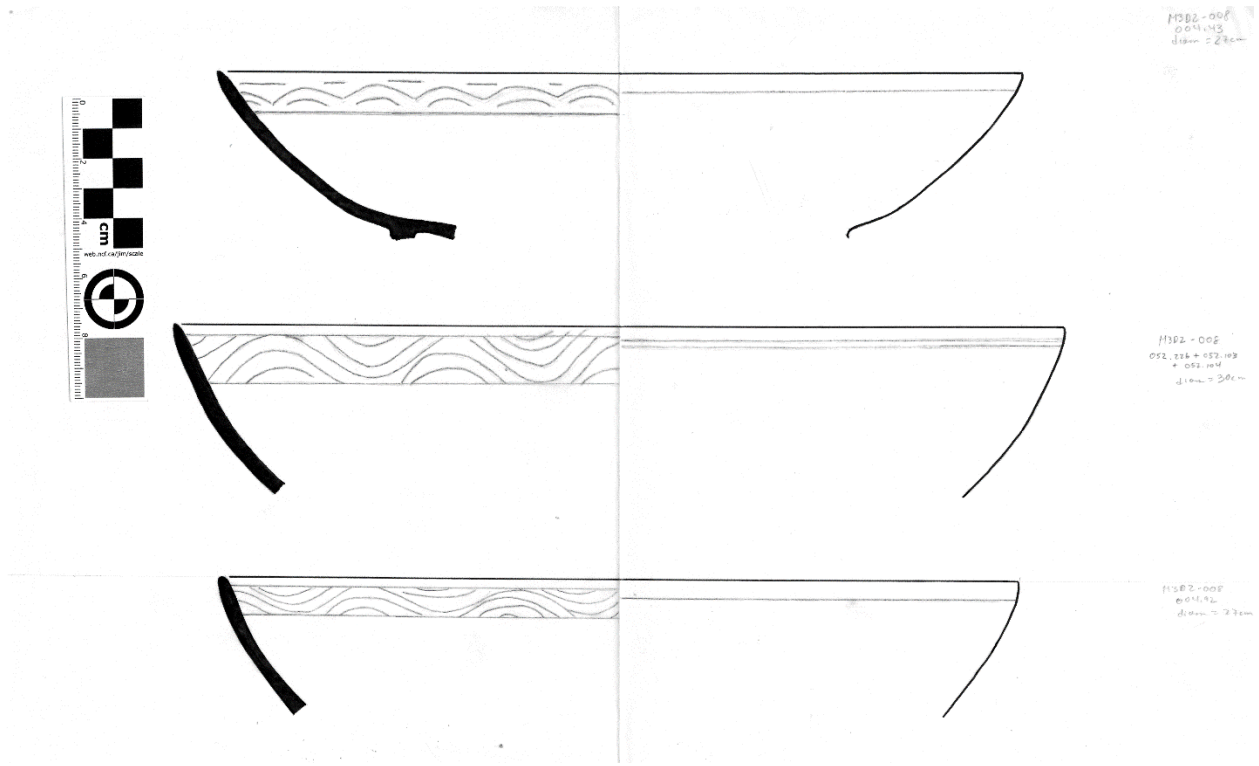


Figure 6.1. Three examples of Vessel Form #1. Drawing by Evan Engwall.



Figure 6.2. Photos of two representative sherds of Vessel Form #1. Photos by author.



Figure 6.3. Vessel Form #1 sherd with uncommon “piecrust” scalloped/nicked rim treatment. Photo by author.

40%). However, several scalloped and molded lips are also present. Exteriors of bowls were not horizontal lines incised around the bowl’s circumference, just below the rim. The interior of the vessel, on the other hand, was clearly intended for decoration by fine-line incision. Parallel horizontal or diagonal incision lines are most common, but double line breaks, parallel S-curves, herringbones, serrated zig-zags, wavy lines, semicircles, and dashes were all potential decorative motifs just below the rim. Rim diameters (which could be obtained on 56 rims) have several modes, centering around 22cm (6 examples), 25cm (10 examples), and 30cm (7 examples) in diameter; however, examples as small as 10.5 cm and as large as 40 cm were observed. I argue that many of these vessels were used for serving rather than cooking, due to their wide, shallow form and the presence of annular bases on some of them. The lack of sooting on these bowls also supports this conclusion.

An intriguing subset of this vessel form exhibits a brown slip and burnishing, rather than a red one; these bowls also have fine-line incision, often with wave motifs on the rim interior and occasionally scalloped or “piecrust” lips. The decorations and treatment of this subset appears to more closely resemble Machalilla surface treatments than anything from Chorrera; considering this assemblage’s early dates this may be evidence of some contact between people of the Jama River Valley and their coastal contemporaries. The brown surface treatment also has been seen at early Late Formative occupations along the Santa Elena Peninsula, albeit on carinated vessel forms (Beckwith 1996: 166).

Form 2: Unrestricted Vessel, Simple Contour: Plates

2AB: Plates with Annular Bases

2PB: Plates with Polipod Bases

A plate is defined in this analysis as a particular form of bowl that is open and shallow, and is typically much wider than its height. This form is scarce within the Jama Valley Late Formative assemblage. One plate sherd with an annular base was found from one of the bell-shaped pits at Dos Caminos; otherwise very few sherds that were at first glance open bowls trended toward being flatter (*Figure 6.4*). However, one sherd from El Mocoral is incredibly thick and appears to have some articulation with a polipod base, resembling a complete example encountered in San Isidro private collections (*Figures 6.5, 6.6*). This very thick plate may have been used for serving, or perhaps as a grinding *metate*. A less likely but potentially possible interpretation of these thick plates is their use as stools or seats. Stools and seats (especially stone ones) were used by later peoples of Ecuador and Central America, exclusively by elites. With so little of a sherd present any interpretation as a type of seat is purely speculative.

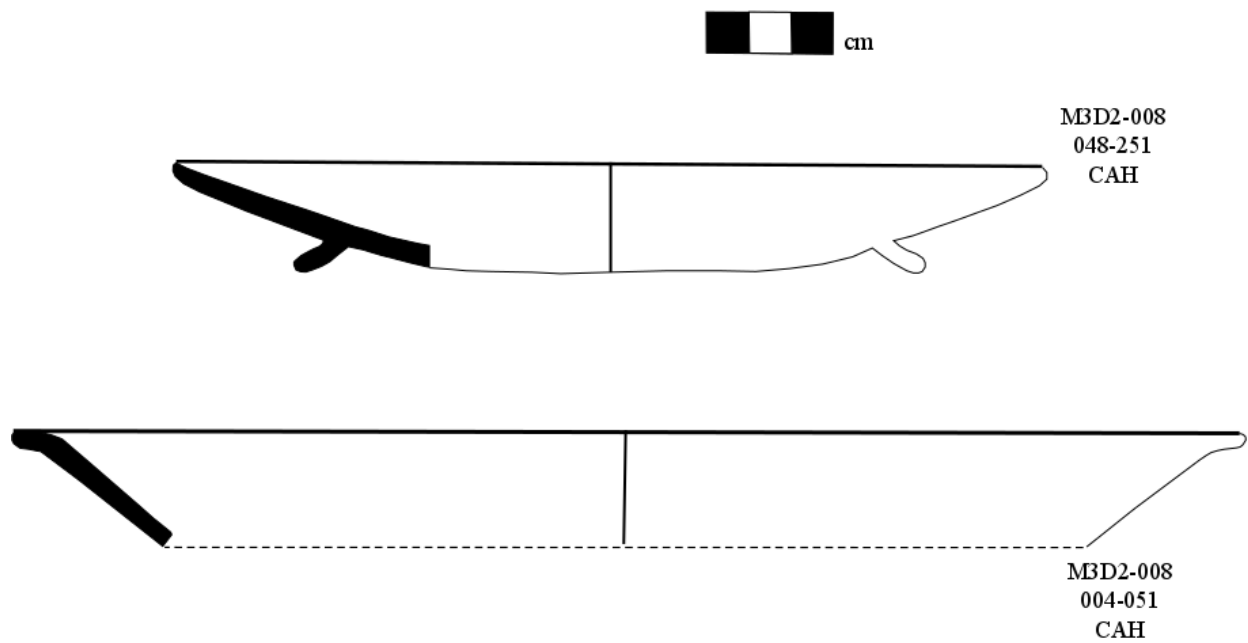


Figure 6.4. Drawing of two examples of Vessel Form #2. Drawing by author.



Figure 6.5. Profile and bottom views of polipod plate sherd from El Mocoral. Photos by author.



Figure 6.6. Complete polipod plate from a private collection in San Isidro. Photo by author.

At any rate, the presence of one plate form with the articulation of a hollow straight foot is very similar to other plates found in Chorrera and Engoroy assemblages in the Santa Elena Peninsula, and specifically in levels dating to the Middle of the Late Formative (Beckwith 1996: 460). This accords with the later radiocarbon dates found at El Mocal.

Form 3: Ceramic Object, Simple Contour: Earspools (Orejeras)

3a. Cylindrical, Single-Flared Contour

3b: Hyperbolic or Double-Flared Contour

These ceramic objects are simple, but its presence has potent implications for discussing life in the Late Formative. *Orejeras*, or napkin-ring earspools, are circular rings which are meant for personal adornment and body modification by stretching the earlobe. They have been considered diagnostic of Chorrera occupations since Betty Meggers and Clifford Evans first

discussed them (1957). To Meggers and Evans, these earspools were indicative of contact with Mesoamerican contemporaries. More recent interpretations by Evan Engwall (2002) suggest Tropical Forest ethnographic analogues, with earspools being used as part of a coming-of-age ritual for Shavante males, and bodily adornment being more generally utilized in South American indigenous groups as a way of marking passage into adulthood.

Within the Jama Valley Late Formative assemblage, 63 fragments of earspools were recovered from several contexts at Dos Caminos (57 objects) and El Mocoral (6 objects). These earspools range in diameter from 28 millimeters to an impressive 62 millimeters (*Figure 6.7*). The contour of the earspool is everted with one orifice being several millimeters larger than the other; in addition the wide end is flared outward, potentially to help prevent the earspool from falling out. Within this general contour two distinct modes are present: one being more conical (with more straight everted walls), and the other being more hyperbolic (symmetrically flaring walls) (*Figure 6.8*). The hyperbolic contour is only present in a few sherds, partly due to the need for a complete silhouette to determine whether both ends flared.

Form 4: Unrestricted Vessel, Simple Contour: Vertical-Walled Cups with Flat Base

Very few examples of this form are present in this assemblage, and most of those are inferred from base sherds which articulate with a small portion of the wall. However, visits to San Isidro and the private collections of residents there show that complete examples of this form exist (*Figure 6.9*), and in complementary pairs, no less. The similarity to central Andean *keros* is difficult to ignore, but without good archaeological contexts for these vessels that similarity remains superficial.



Figure 6.7. Two photos of *orejeras* from Dos Caminos (outside and inside). First row: Context 47. Second row: Context 50. Third row: C48 (left three) and C52 (right three). Photos by author.

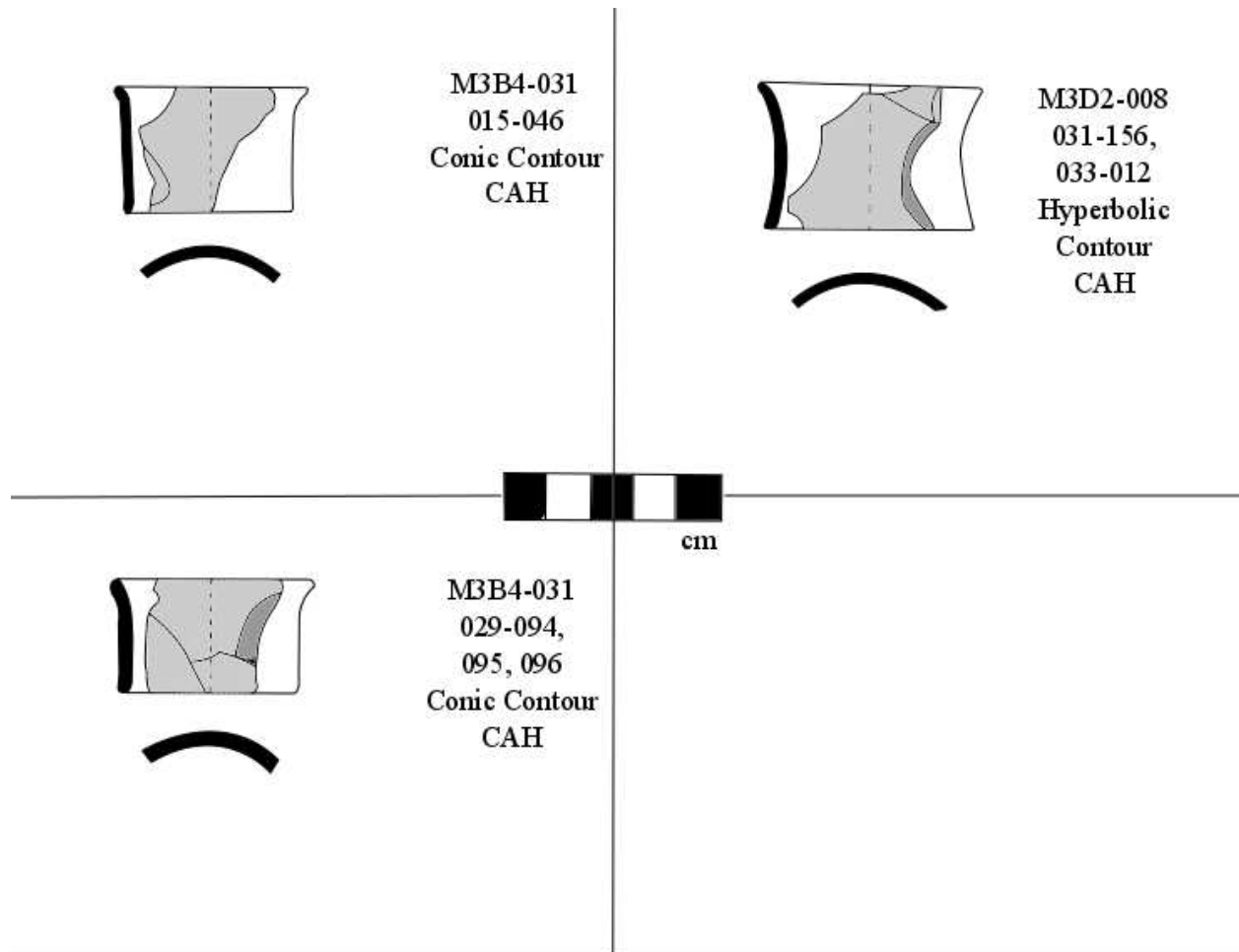


Figure 6.8. Drawing of three examples of orejeras, showing both conical and hyperbolic contours. Drawing by author.



Figure 6.9. Photo of paired flat-walled cups, from a private collection in San Isidro. Photo by author.

Form 5: Unrestricted Vessel, Composite Contour: Open Bowl, Inflected
5AB: Open Inflected Bowl, Annular Base

This open bowl form differs from Form 1 because of the addition of an inflection point to the contour of the vessel (*Figures 6.10, 6.11*). As with Form 1's sherds annular bases appear to be prevalent in examples of this vessel form (*Figure 6.12*). The wide base would have mitigated spillage from the wide opening, suggesting a serving function for this vessel form. Precious few examples in the Jama Valley Late Formative assemblage present a complete silhouette of the open bowl with an annular base; more commonly this form was inferred in analysis by the presence of broken articulation on the bottoms of rim sherds. That the break commonly occurred leaving the rim sherd unaffected implies that the base was applied in construction after the basin of the open bowl was already modeled.

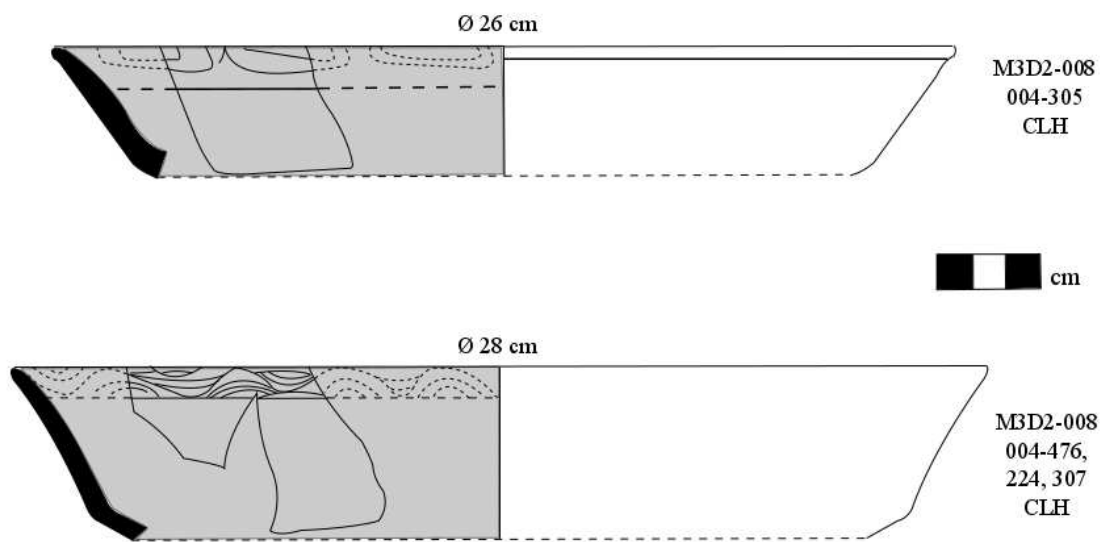


Figure 6.10. Drawing of two representative inflected open bowls. Drawing by Corrie Herrmann.

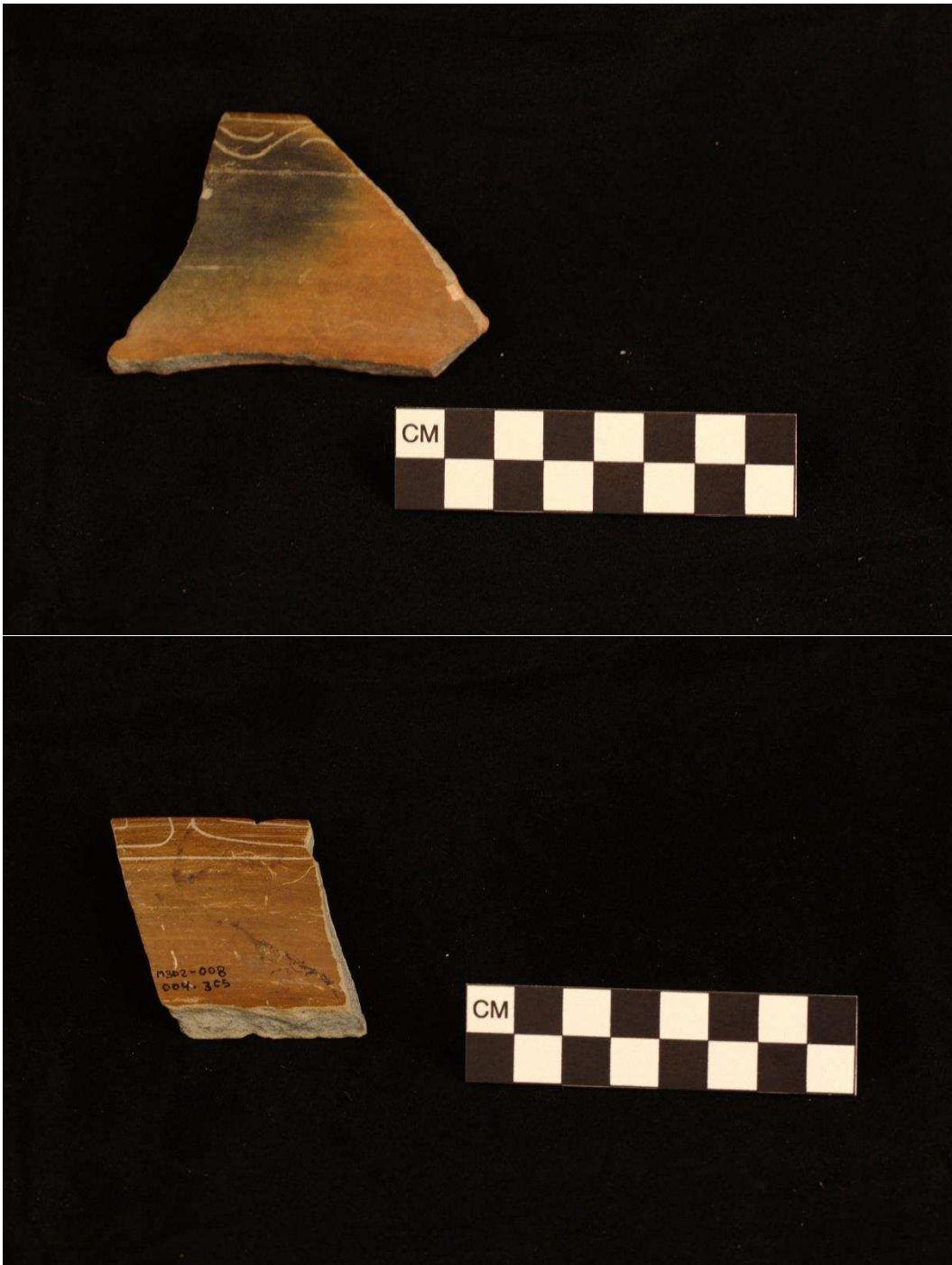


Figure 6.11. Two photos of open inflected bowl sherds. Photos by author.



Figure 6.12. Photo of exterior surface of annular base with body inflection present. Photo by author.

*Form 6: Unrestricted Vessel, Complex Contour: Direct Open Bowl, Wide Rimmed
6AB: with Annular Base*

This uncommon vessel form was first encountered in the personal collection of a resident of San Isidro, with an impressive complete example (*Figure 6.13*). As clearly seen through the complete example, this open bowl form has a wide everted rim, vertical walls with an inflection point with the basin, and is often supported with an annular base. Notably in the complete example, a molded applique platform or “tray” was placed along one side of the rim, a design choice with unclear purpose. One resident of San Isidro half-jokingly told me it would work in placing shrimp shells; while that interpretation could not be discarded, I remained unconvinced.



Figure 6.13. Top and near-profile views of a complete example of Vessel Form #6, from a private collection in San Isidro. Photos by author.

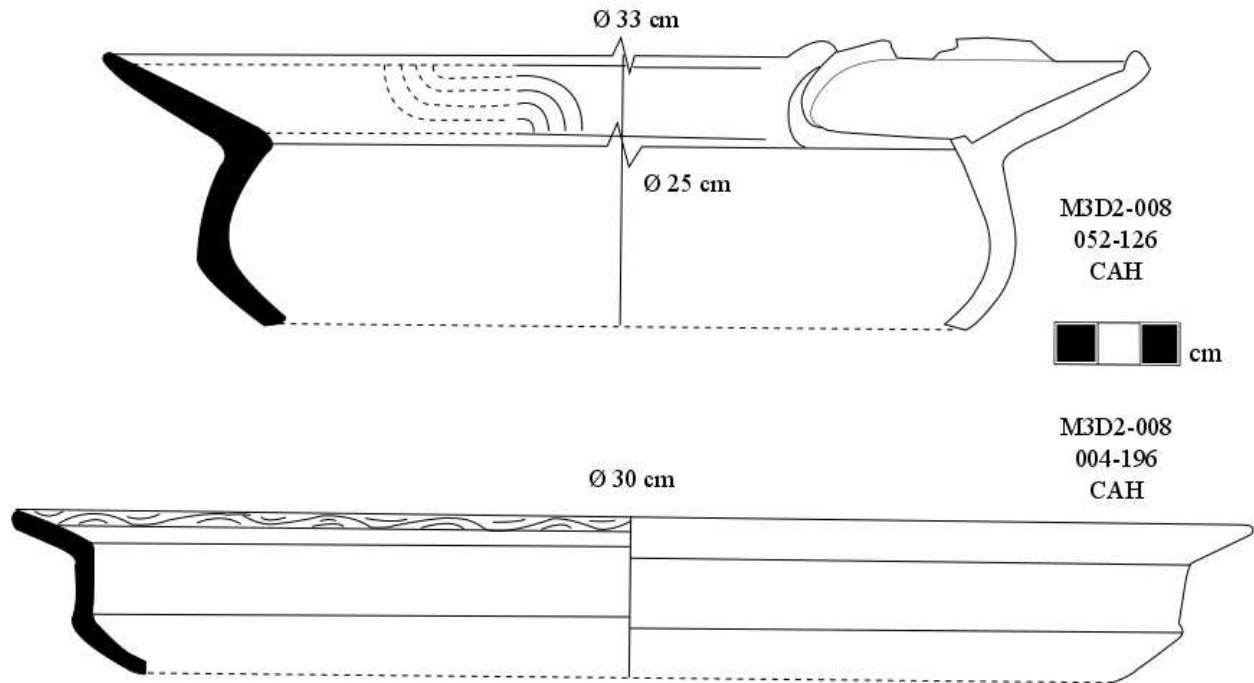


Figure 6.14. Drawing of two examples of Vessel Form #6. Drawing by author.

One sherd within the assemblage presents a very similar contour to the complete example from San Isidro, and even has part of the applique platform intact (*Figures 6.14, 6.15*). The rim of this vessel is partially eroded, and especially within the applique's boundary. This erosion may be use wear of the pharmacological variety (lime for coca or hallucinogenic snuff) or from culinary/alimentary use. More closely scrutinized examples of this distinctive vessel could shed light on the purpose of the rim elaboration. Another sherd has a light brown polished and slipped surface, with incised decorations similar to the Machalilla-like designs of some Vessel #1 rims (*Figures 6.14, 6.16*). This composite unrestricted form, while lacking the iridescent paint of the forms identified by Beckwith (1996: 166), nonetheless may be somewhat inspired by coastal designs.



Figure 6.15. Photo of sherd representing Vessel Form #6, with marked similarities to complete example from Figure 6.13. Photo by author.



Figure 6.16. Photo of Vessel Form #6 sherd with some similarity to Machalilla forms and decoration. Photo by author.

*Form 7: Simple Dependent Restricted Vessel, Simple Contour: Closed Bowl, Simple
7AB: Composite Contour: Closed Bowl with Annular Base
7T: Tecomates/Neckless Ollas*

These vessels have a point of vertical tangency in the body of the vessel that is greater than the mouth of the vessel, making it closed rather than open. However, these vessels have several sub-forms which appear to have different functions due to their variable size, composition, and decoration. The bulk of examples in this vessel form have simple rounded shoulders and restriction, with rounded or tapered exterior lips on inverted flared or straight walls (closing the bowl) (*Figures 6.17, 6.18*). Rim diameters range broadly from 24 cm up to 42 cm; there is a slight tendency of the vessel's rim diameters to be greater than 30cm. Compositionally this vessel form is also quite variable; some examples are made of the fine, "near-temperless" paste of nicer vessels (as described in the previous chapter), and others have more heavily tempered cross-sections. One example was able to be reconstructed into a complete silhouette, with accompanying basin fragments, and an annular base wider than the mouth or body of the vessel (*Figures 6.19, 6.20*). Still other fragments lack an annular base, but have elaborate rim decorations that make them look more like everted rim jars (Form 12) than simple closed bowls. This "common" form of the simple closed bowl has also been found at the mound of San Isidro (M3D2-001), in Sector XII/Area C (Zeidler and Sutliff 1994: 114, 115). This "simple shallow bowl with [an] incurving wall" from San Isidro is one of several vessel forms represented in the larger Jama Valley assemblage and supported at Dos Caminos and Finca Cueva (see Figure 7.2a in Zeidler and Sutliff 1994). Another vessel mentioned in the report on San Isidro strongly resembles the squat closed bowl with annular base: "the low pedestal bowl with a broad base, usually the same width as the shallow bowl itself" (Zeidler and Sutliff 1994: 115).

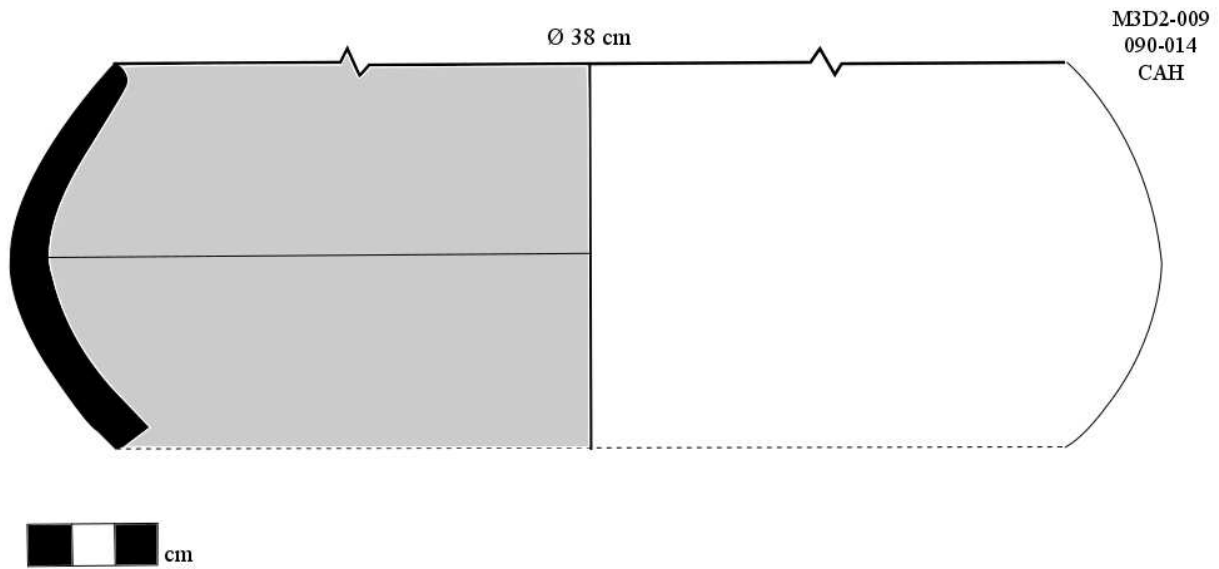


Figure 6.17. Drawing of simple closed bowl from Finca Cueva. Drawing by author.



Figure 6.18. Photo of simple closed bowl with extensive exterior gouging, creating a scaly appearance. Photo by author.

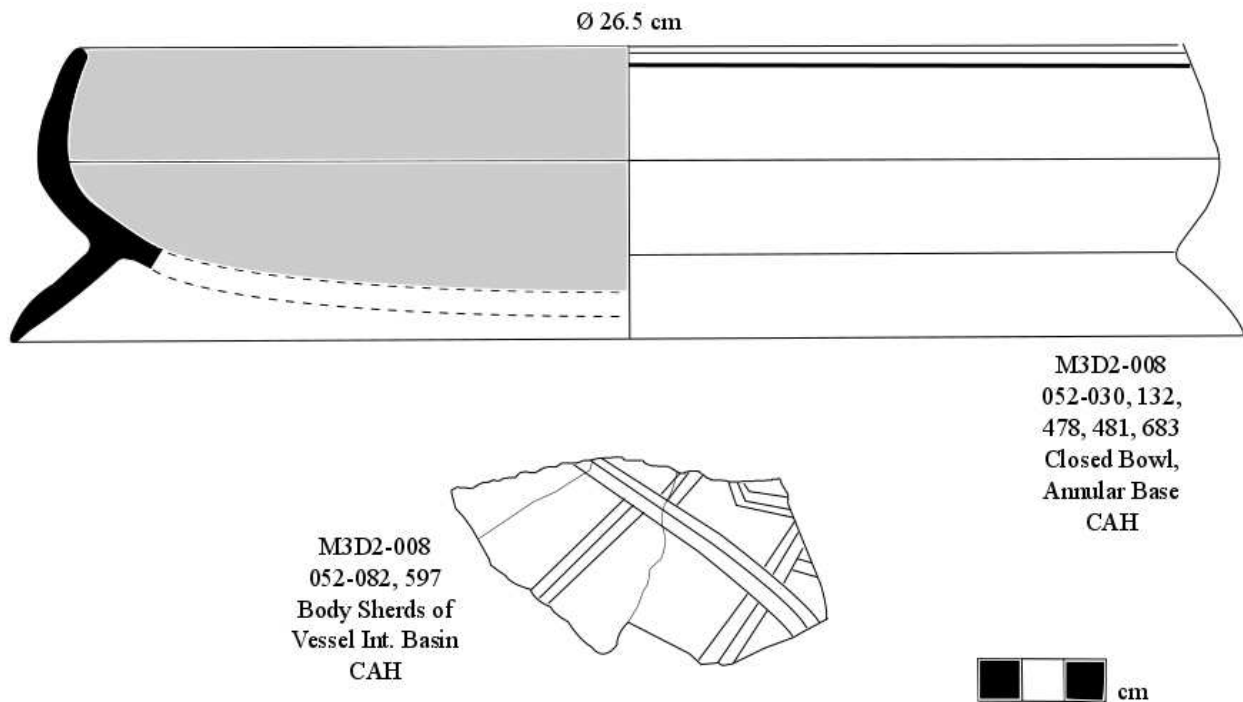


Figure 6.19. Drawing of closed bowl with annular base. Note body sherd from this vessel with incised design on the basin interior. Drawing by author.



Figure 6.20. Photo of closed bowl with annular base. Photo by author.

Another sub-form of this vessel form is the “tecomate” or “neckless olla”, a small and highly restricted bowl. Several rim sherds of these vessels were located, and may be fragments of

these small storage vessels. Complete examples of tecomates are highly treasured by museums and private collectors; several were found in San Isidro's private collections in the shape of fish or with two modeled heads attached to one side (*Figure 6.21*). These vessels also have a recognizable cultural use as pots containing lime (*coqueros*), which could activate the alkaloids in chewed coca. The sherds in this collection are not large or definitive enough to show their use for *coqueros*, but at the site of Capaperro just upstream from Dos Caminos, a Valdivia 8 burial (of the late Early Formative) contained a young female shaman with numerous grave goods including a complete *coquero* vessel (Zeidler, Stahl and Sutliff 1998). Evidently coca use began sometime in the Early Formative, and continued into the Late Formative.

The broad range of many dimensions of this vessel form makes it difficult to find many patterns; between the tecomates, the finer wares and coarse cookwares it appears that closed bowl forms were employed for many purposes, and were thus designed with a range of compositional and design properties in mind. The following vessel forms are more refined classifications of the generic closed bowl form.

Form 8: Simple Dependent Restricted Vessel, Composite Contour: Closed Bowl, High Shoulder

In sharp contrast to the prior vessel form, this form is one of the more standardized in the assemblage, across the eighteen examples analyzed. These wide-mouthed bowls are only technically closed by contour; the high shoulder of the vessel has a direct or slightly inverted rim elaboration only a few centimeters high (*Figure 6.22*). Thus while these bowls are "closed," their



Figure 6.21. Tecomate/coquero vessels from private collections in San Isidro. Photos by author.

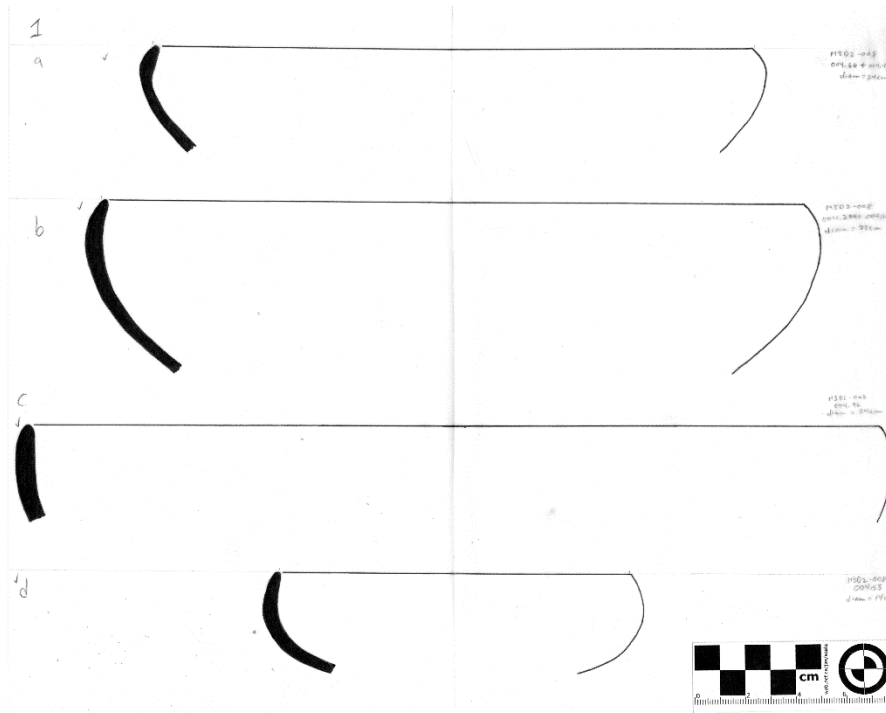


Figure 6.22. Drawing of several examples of the closed bowl with high shoulder. Drawing by Evan Engwall. contents would have been quite accessible. It does not appear that any of these bowls had annular bases; instead the high shoulder contributes to a wide and low globular basin which (among complete examples) has a relatively low center of gravity.

One of the highly standardized elements of this vessel form is in the decoration of the vessel. Decoration of the vessel is typically on the shoulder, which is nicked at regular intervals (*Figure 6.23*). This creates an attractive “geared” or scalloped exterior shoulder, which looks somewhat organic or even crustacean/molluscan in inspiration. Exterior shoulder nicking has been seen in contemporary Machalilla ceramics at La Ponga (Lippi 1983), further linking coastal Guayas communities to the Jama River Valley. With regard to the function of the vessel, many examples of this vessel form are over 32 cm wide (12 objects, 66%); this lends itself to a large serving or cooking bowl. The slight inward lip could have mitigated spillage of the bowl’s contents.

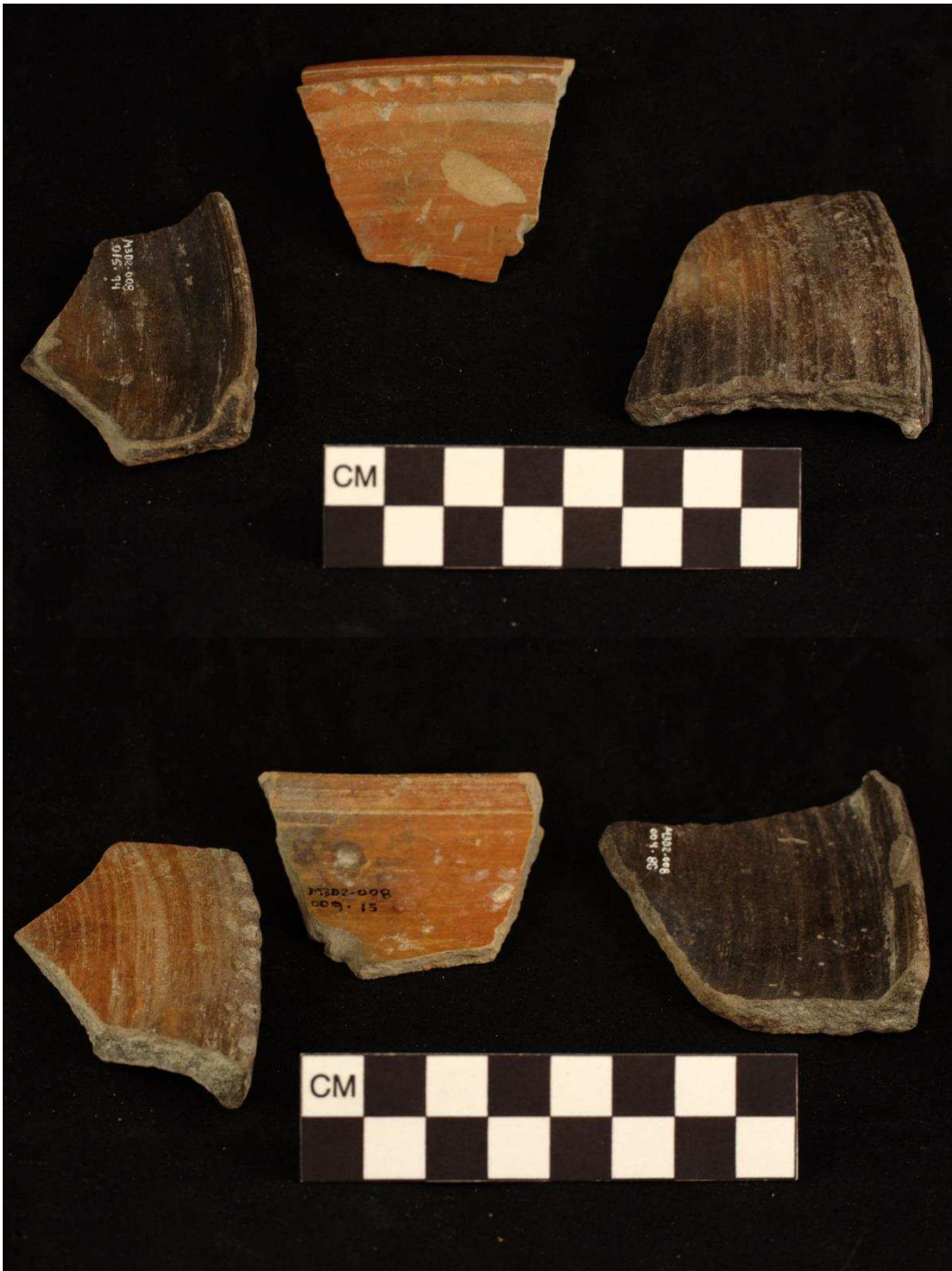


Figure 6.23. Photo of select closed bowls with high shoulder, showing exterior nicking on shoulder. Photo by author.

Two examples of this vessel form were found in two separate contexts from excavations at the site of San Isidro (Zeidler and Sutliff 1994: 114, 115); both artifacts display the high and prominent shoulder carination (Figure 7.2b, c in Zeidler and Sutliff 1994). One of these vessels

was found *in situ* at the bottom of the 1988 test unit (Sector XXXI/Unit A1), with “red-on-buff [decoration] over the entire exterior and interior surfaces in a striking quadripartite design of narrow red bands” (Zeidler and Sutliff 1994: 115). Radiocarbon samples retrieved from the fill underneath this vessel returned a date of 2845 ± 95 rybp (895 BC; AA-4140). Zeidler and Sutliff (1994: 115) noted that both the vessel form and the radiocarbon date were correlated to the Early Engoroy phase of coastal Guayas (now Santa Elena) province.

Form 9: Simple Dependent Restricted Vessel, Composite Contour: Closed Bowl, Carinated

This form is perhaps most easily explained as between Forms 8 and 10 (and not just numerically). These closed carinated bowls keep the wide globular basin and carinated shoulder of Form 8, but the elaboration of the neck and rim is much longer and generally more restrictive, like Form 10 (*Figures 6.24, 6.25*). However, the carination of the vessel’s shoulder lack Form 8’s regular nicking. 28 sherds were analyzed that fell into this classification.

This form’s lip is commonly unelaborated and flat, or has some thickening of the exterior or both sides of the lip. The rim is usually straight and inverted, creating the most restriction at the lip. Rim diameters are commonly around 30-35 cm (14 sherds, 50%) with examples as narrow as 21.5 cm and three examples greater than 40 cm. Compositionally all examples analyzed had a fine paste and most of them present the “near-temperless” composition of finely made ceramics. In terms of decoration, diagonal or horizontal incised lines are common on the exterior, and interior decoration is rare (*Figure 6.26*).

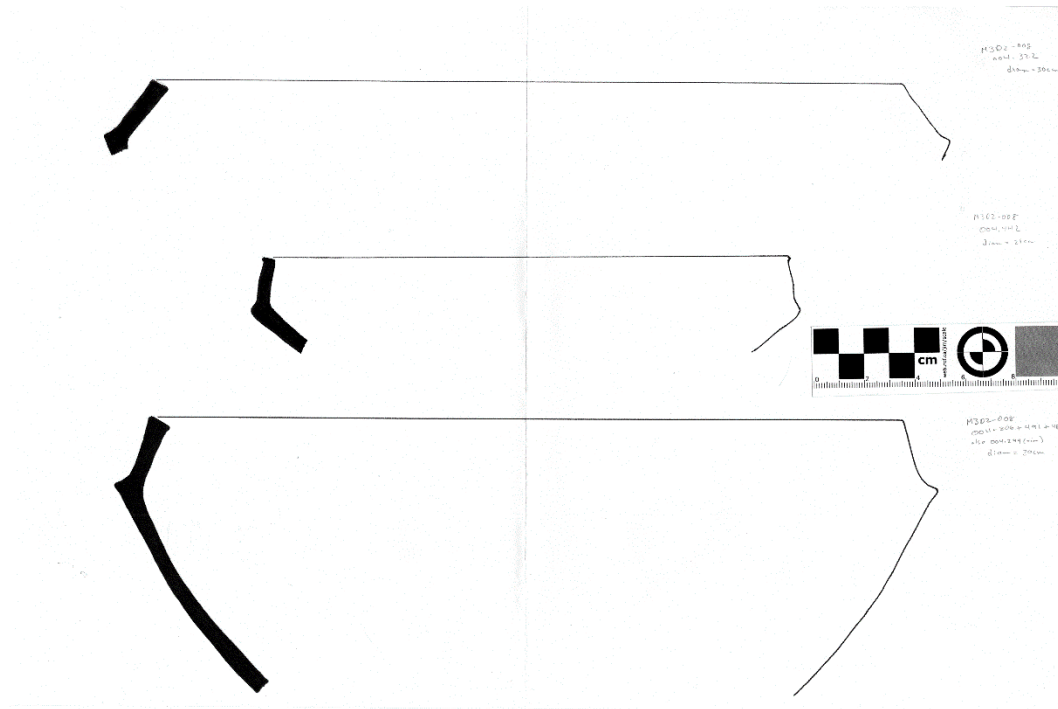


Figure 6.24. Drawing of closed carinated bowls, lacking rim elaboration. Drawing by Evan Engwall.



Figure 6.25. Drawing of closed carinated bowls, with rim elaboration. Drawing by Evan Engwall.



Figure 6.26. Photo of typical lateral S-curve (or double line break?) decoration on exterior of closed carinated bowl.
Photo by author.

Interestingly, two conjoined sherds in this vessel form come from two different contexts: these are Contexts 4 and 48, which pertain to the two different bell-shaped pits of the Dos Caminos site. Assuming no methodological or labeling slip-ups, this would strengthen the ties between these two pit features temporally and suggests both were open at or around the same point in time (*Figure 6.27*).

Form 10: Independent Restricted Vessels, Composite Contour: Wide-Mouthed Olla (Cuspidor)

This vessel form has an independent orifice over a swelling round- or inflected-shouldered closed bowl, with a direct or everted straight neck. The neck is often smoothed on the exterior and lacks slip; the exterior body, interior neck and lip are often slipped with the common 10R 4/6 red slip (*Figures 6.28, 6.29*). Incisions are occasionally employed on the lip or exterior,



Figure 6.27. Photo of diagonal line incision on exterior of closed carinated bowl. These two joined sherds were recovered from the two bell-pit features excavated. Photo by author.

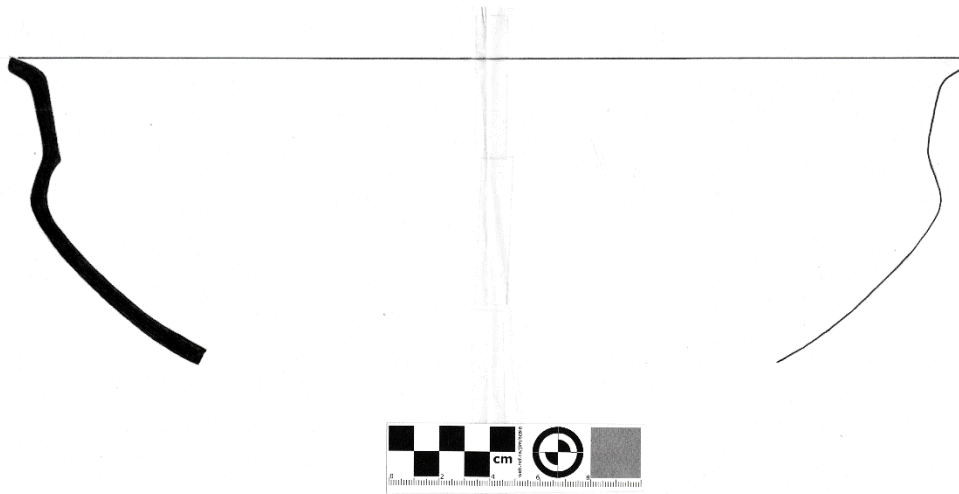


Figure 6.28. Drawing of wide-mouthed olla vessel form. Drawing by Evan Engwall.



Figure 6.29. Exterior and interior photos of wide-mouthed olla depicted in Figure 6.28. Photos by author.

in horizontal lines or the occasional lateral-S design (*Figure 6.30*). Rim diameters are bimodal around 40cm and 20-25cm, and rims are often as wide as (or wider than) the shoulder's point of vertical tangency.

This vessel form was first found by Evans and Meggers (1957) at the type-site of La Chorrera in the Lower Guayas Basin, yet was not discussed by them until 1966 in an article discussing the commonalities they saw between Ecuador and Mesoamerica. However, the frequency of wide-mouthed (>40cm) examples suggests an ethnographic analogy established by Lathrap (1970). Among the archaeological and ethnographic ceramic assemblages of the Shipibo-Conibo, Lathrap argued that ceramics with a rim diameter over 40 cm were more likely to be used as *chicha* fermentation vessels. While no examples in the Jama Valley assemblage have residues that can be tested for this, their presence is weighted heavily toward Contexts 4 and 52 – the bell-shaped pits – which contained large amounts of corn. A few examples of wide-mouthed olla rims and shoulders are present at Finca Cueva through common identification of the elaborated shoulder or the everted straight rim with a smoothed and lateral S-curve incised rim exterior. Vessels like the wide-mouthed olla (and other wide-mouthed, closed vessels in the assemblage) may have been used for brewing or at least serving maize-based *chicha*.

This form of restricted bowl has been noted in several collections of Late Formative ceramics since its discovery by Meggers and Evans (Beckwith 1996; Meggers and Evans 1966; Ramírez 1996; Zeidler and Sutliff 1994: 115). The “cuspidor” was named as a diagnostic Chorrera vessel form by Clifford Evans and Betty Meggers (1966), as well as by John Scott (1998). The Jama Valley assemblage's wide-mouthed ollas establish the vessel form with several design variants, one of which was discovered in the *tola* of La Cadena (Ramírez 1996). A few



Figure 6.30. Photo of wide-mouthed olla exterior, showing unslipped exterior neck with lateral S-curve motif present. Photo by author.

examples of this form were also recovered from the excavations along the Santa Elena Peninsula (Beckwith 1996). One example of a flared-rim, wide-mouthed olla form was also identified as Form #14 at Peñon del Río (Zedeño 1990: 86).

Twenty-five sherds were selected for analysis of this vessel form, and as mentioned several distinct modal combinations were established within the vessel form. The first is similar to other closed vessel forms: the interior rim and neck are slipped red (usually 10R 4/6), along with the exterior body from the shoulder down. Burnishing is also quite prevalent as a surface treatment, on both slipped and unslipped surfaces. Lips of these vessels may be unelaborated, Neck exteriors are smoothed and unslipped, and in four examples have a lateral S-curve incision present as well. These S-curves are only present otherwise on high annular bases for open bowls; it is possible that these wide-mouthed ollas and the open bowls shared this decoration because they were meant to be used together as cooking/fermenting and serving vessels, respectively. For this form, a common design statement is the regular repetition of the lateral S-curve with

alternating columns of diagonal lines. Notably, a wide-mouthed olla fragment was found in the profile cuts of Sector XX/Area A at the site of San Isidro; it displays the form's diagnostic elaborated shoulder, direct rim, and smoothed exterior neck with most of this lateral S-curve design statement present (see Figure 7.2f in Zeidler and Sutliff 1994). The shared presence of this vessel form at bell-shaped pit features and the central mound of San Isidro not only "attests to continued mound building activity by the Chorrera inhabitants of the valley" (Zeidler and Sutliff 1994: 115), but it links that mound building activity to the feasting events that I argue are reflected in the bell-shaped pits (see below, and Chapter 7).

The second modal combination is more iconographic in nature, with the interior of the vessel painted red (10R 4/6 or near this color) in parallel horizontal stripes, and capped along the rim interior with red semicircles (or perhaps triangles; some sherds make the semicircle difficult to view) (*Figure 6.31*). These wide-mouthed ollas often have long, slightly everted and straight necks, with lips that thicken on the exterior. This differs from the typical wide-mouthed olla neck which is more squat in stature. The semicircle-and-band paint treatment is quite similar to contemporary treatments of some La Ponga Machalilla vessels (Lippi 1983). This borrowing or transmission of a Machalilla design statement to an early execution of a "classical Chorrera" form gives credence to the argument that the Jama Valley assemblage represents a "transition" between Middle Formative Machalilla and Late Formative Chorrera ceramic styles. Ecuadorian archaeology has seen similar arguments made between Valdivia and Machalilla (Lippi 1983; Staller 2001), and between Chorrera and Bahía (Aletto 1988).



Figure 6.31. Photos of wide-mouthed olla showing Machalilla-influenced red paint on buff, with semicircle and band design statement. Photos by author.

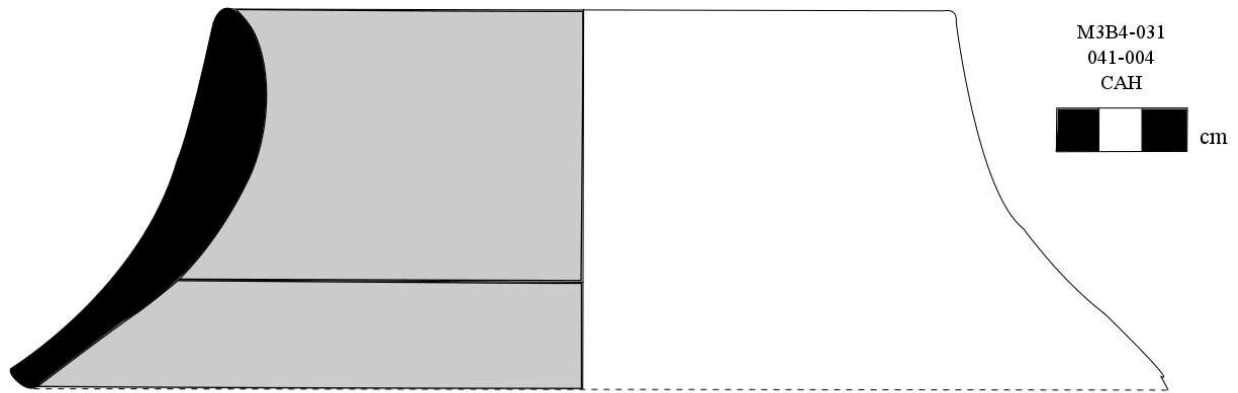


Figure 6.32. Drawing of inflected olla form from El Mocoral. Possibly non-local, as it resembles Cotocollao ollas.
Drawing by author.



Figure 6.33. Photo of exterior of inflected olla from El Mocoral. Photo by author.

Form 11: Independent Restricted Vessels, Inflected Contours: Jars, Long Necked Ollas

Of all the vessel forms identified in this assemblage, long-necked ollas remain the most poorly represented. Two examples of the form come from El Mocoral's Late Formative contexts, and no other sherds conclusively presented the diagnostic long neck and scraped, unelaborated rim. Both examples showed a coarse texture and composition, standing out across the entire assemblage (*Figures 6.32, 6.33*).

This vessel form is not like any other in the assemblage, which I argue is due primarily to their non-local origin. The two sherds recovered actually resemble highland Cotacollao-like vessels from Cotacollao in the Quito Basin, or from Pirincay in the southern highlands of Azuay Province (Bruhns 2003). Occupations at both of those sites were somewhat contemporary with the El Mocoral Middle Late Formative occupation.

Form 12: Independent Restricted Vessels, Inflected Contours: Jars, Everted Rim

This vessel form consists of a globular jar, with a restricted neck and an everted straight or everted flared rim elaboration (*Figures 6.34, 6.35*). This rim has a red slip (around 10R 4/6) in every example (*Figure 6.36*). The shoulder may be rounded (globular) or have a slight inflection point. Below the rim on the upper shoulder of the vessel, painted bands of red slip, deeply gouged dashed incisions, and a serrated horizontal zig-zag pattern can be present alone or together (*Figure 6.37, 6.38*).

Everted rim jars like this appear to represent a cooking vessel form. Compositionally this form heavily weighs toward coarse paste with a high amount of large temper, which would provide good heat transfer in cooking. The larger temper also implies less processing in temper grinding, and could be a reflection of the more utilitarian purpose of these vessels. Hundreds of body sherds present in the assemblage show this coarse paste, and may be body sherds of these

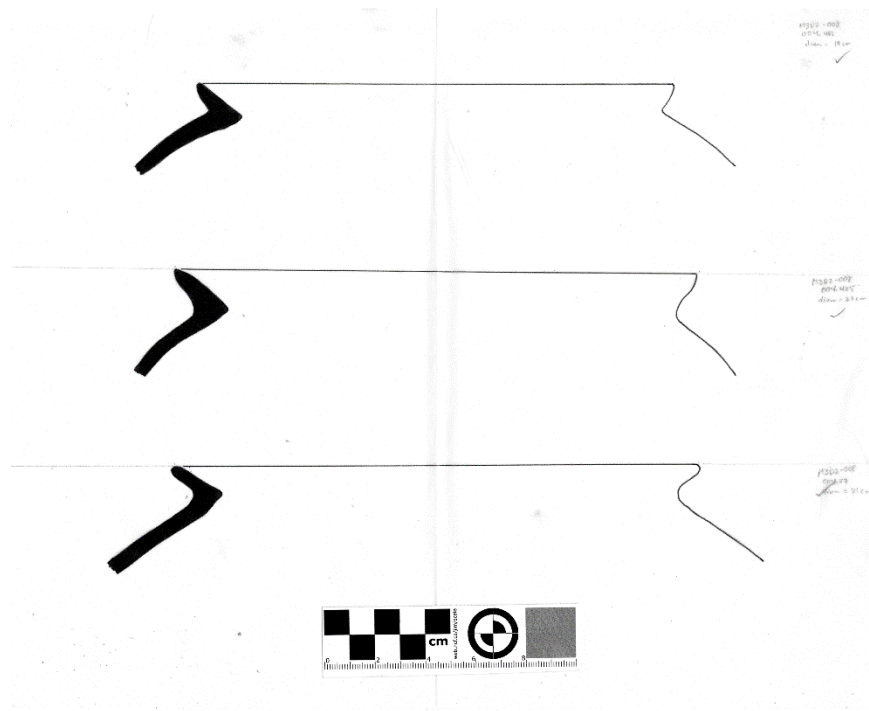


Figure 6.34. Drawings of everted rim jar sherds. Drawings by Evan Engwall.

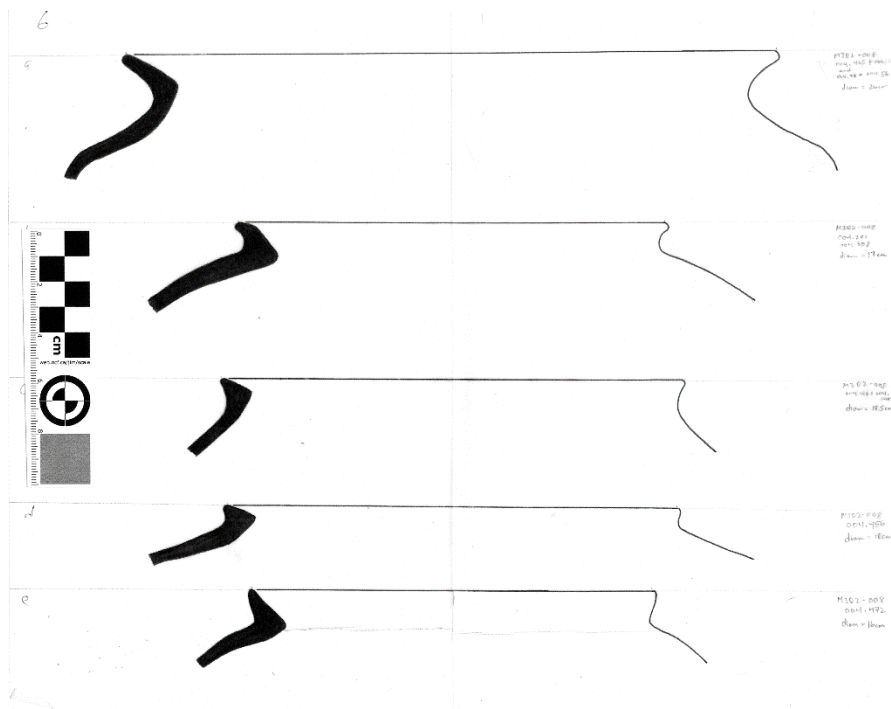


Figure 6.35. Drawings of everted rim jar sherds. Drawings by Evan Engwall.



Figure 6.36. Top-down photo of complete rim of everted rim jar. Note typical red slip. Photo by author.



Figure 6.37. Photo showing typical shoulder decorations for everted rim jars. Photo by author.



Figure 6.38. Photo showing typical shoulder decorations for everted rim jars. Photo by author.

cooking vessels due to their tendency to be sooted on their exterior. Everted rim jars like those in this assemblage, as mentioned, always have a red slip on the rim interior, and often have red bands of paint or coarse incised zig-zags on the shoulder.

This decorative choice on this vessel form is widespread in the western lowlands, with identifications made in the Santa Elena Peninsula (Beckwith 1996: 463), at the type site of La Chorrera (Beckwith 1996: 463; personal communication, Betty Meggers to James Zeidler, dated May 27, 2003) and at Peñon del Río (Zedeño 1990: 116). In addition, an everted rim jar sherd was identified from Deposit 21c in Sector XII/Area C at San Isidro; this jar sherd also exhibits the exterior shoulder incisions (albeit in a different motif) and the red-slipped rim interior (see Figure 7.2e, Zeidler and Sutliff 1994: 115).

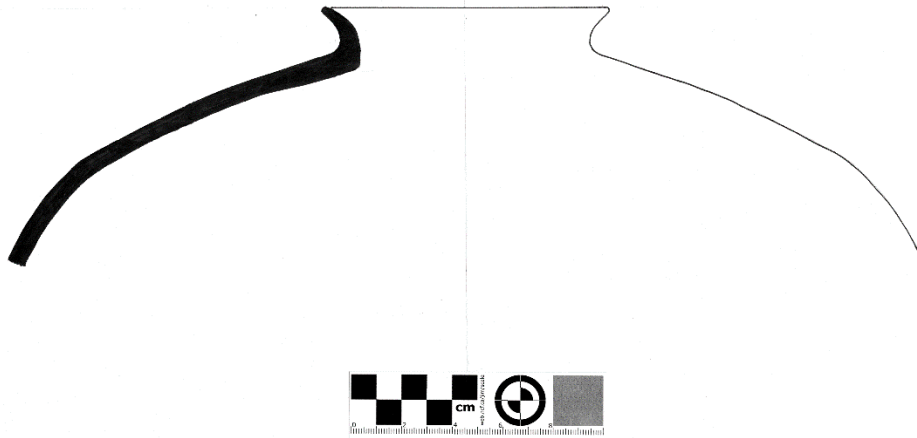


Figure 6.39. Drawing of globular jar with everted rim. Drawing by Evan Engwall.



Figure 6.40. Top-down photo of globular jar depicted in Figure 6.39. Photo by author.

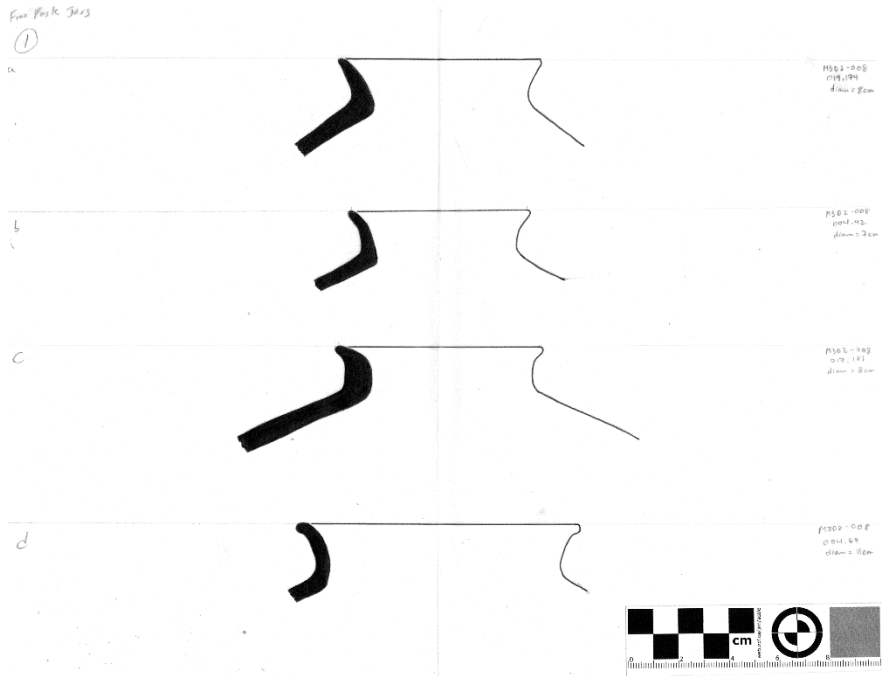


Figure 6.41. Drawings of short-necked jars. Drawings by Evan Engwall.

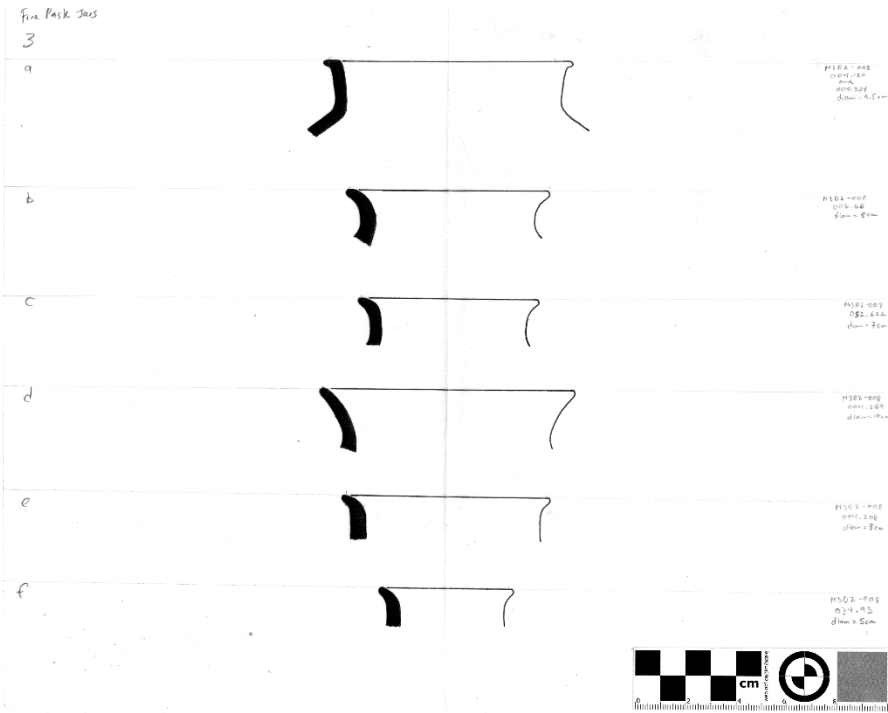


Figure 6.42. Drawings of short-necked jars. Drawings by Evan Engwall.



Figure 6.43. Drawings of short-necked jars. Drawings by Evan Engwall.

Form 13: Independent Restricted Vessels, Inflected Contours: Jars, Short Neck

This vessel is similar to everted rim jars in having wide globular bodies, but the orifice is much more restricted (*Figures 6.39, 6.40*). The neck of the vessel is short, and usually has an everted flared rim with no decoration (*Figures 6.41, 6.42, 6.43*). The simple execution and restricted orifice suggest that this vessel contained liquids to be poured, or else served some kind of storage purpose. Where other vessels like everted rim jars were commonly incised or decorated, these vessels are almost entirely undecorated. Rather, a simple red or brown slip is often applied to both surfaces of the vessel, as far as can be reached on the interior. A short-necked jar fragment matching this vessel form was also found at the site of San Isidro, in Deposit 21c of Sector XII/Area C (see *Figure 7.2d*, Zeidler and Sutliff 1994: 115).

Form 14: Independent Restricted Vessels, Inflected or Complex Contours: Bottles, Strap-handled with Whistle

Whistling bottles are one of Chorrera's most distinctive vessel forms. Executed in phytomorphic, zoomorphic, anthropomorphic, or elegant geometric designs, the multiple chambers of the bottle allow for air to be trapped within them. The movement of air and liquid in the vessel produces a whistling, trilling, or hooting through a small whistle hole punctured through the base of a strap-handle which connects to the bottleneck (Pérez de Arce 2015). Meggers (1966) established whistling bottles as a diagnostic Chorrera vessel form, and museums worldwide have Chorrera whistling bottles on display as examples of ancient Ecuadorians' unique and impressive contributions to ceramics. Within northern Manabí, numerous whistling bottles have been recovered by *huaqueros* and are now in collections in Quito, Guayaquil, and abroad; for instance, I have encountered at least one whistling vessel sourced to northern Manabí among the donated collections of the Denver Art Museum. Based on communications with looters and artifact collectors, these vessels are usually found complete within burial contexts.

Very few examples of whistling bottles were recovered in the excavations in the Jama River Valley. Evan Engwall began excavations at El Mocal with the recovery of a broken yet complete example of a whistling bottle in the shape of a cucurbit gourd. However, Engwall elected to donate this singular vessel to a national museum, and it is no longer in the assemblage. As it stands now, one whistle strap-handle base is present in the assemblage (*Figure 6.44*, left). The whistle has only one hole (Chorrera examples commonly have two), and was recovered from the early-dated bell-shaped pits. Another body sherd from Finca Cueva appears to have a whistle hole through the torso of an applique monkey; the head, one arm, the torso and part of the tail are all visible (*Figure 6.44*, right). The general dearth of whistling bottles does not necessarily call their diagnostic abilities into question; rather I argue that this is a consequence of

the likely domestic contexts that were excavated as opposed to the more ritual contexts (like burials). If whistling bottles were highly controlled vessels prized in their society as well as in today's museums, it would follow that controlled archaeological excavation (as opposed to opportunistic looting) may not necessarily recover many examples of this vessel in domestic contexts.

Form 15: Independent Restricted Vessels, Complex Contours: Figurines

Figurines are similarly regarded by collectors as hallmarks of the Chorrera ceramic style. Late Formative artisans' abilities to render naturalistic and realistic human proportions has made Chorrera figurines ripe targets for illicit looting. Within this assemblage only a few fragments representing figurines are present. However, several of them appear to resemble a specific vessel form known as the "neckrest"; this ceramic vessel form is (anecdotally) said to support the head and neck of human burials of the Late Formative. With a restricted orifice and a figurine embedded into the design, this complex figurine is difficult to piece together. However, within this assemblage, fragments of a neckrest's figurine foot, arms and a bit of the chin appear to be present (*Figure A.20*).

One other vexing body sherd appears to resemble either a part of a bottle or figurine, and was recovered from El Mocal. This sherd presents a bright white slip on part of its surface, which is uncharacteristic of northern Manabí but much more common in the Guayas Basin (*Figure 6.45*). I posit that this ceramic is non-local and was brought here by the residents of El Mocal. The presence of isolated body sherds of high quality in the bell-pits of Dos Caminos and the remote out-valley El Mocal will be discussed further in Chapter 7, but they pose intriguing questions about the agency and desirability of ceramic vessels and/or fragments from distant areas of the western lowlands.



Figure 6.44. Photo of two whistles, likely from whistling bottles. Photo by author.

Base Sherds

Base sherds are uncommon in the assemblage, with only 32 artifacts in the assemblage analyzed (as base sherds or as part of a more complete vessel). Several flat base sherds comprised part of one vessel's finely polished base, likely of Vessel Form #4.

Two modes of annular bases are present in the assemblage – a low and a high mode. Of the 32 artifacts examined, only eleven had an articulation with the body present (in order to estimate the height of the base). Seven sherds had low annular bases of approximately 10 to 20mm; the other three were 35mm, 36mm, and 44mm (with one medium height sherd of 27mm). Low annular bases are squat and undecorated, serving only to support the globular bodies of simple open or closed bowls (Vessel Forms #1 and #7). High annular bases, on the other hand, often have lateral S-curve incisions on a slipped exterior, and occasionally have a slightly outward-flaring contour (*Figure 6.46*). Unfortunately, very few refits could be made with



Figure 6.45. Possible figurine or bottle fragment, showing distinctive and uncommon white slip. Photo by author.



Figure 6.46. Two photos of high annular bases with incised lateral S-curve decoration. Photo by author.

annular bases to vessel bodies; since they have several modes all their own, future research in the Jama Valley should continue to seek out complete vessel profiles and vessels to help establish what base modes consistently combine with the vessel forms of the assemblage.

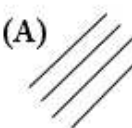
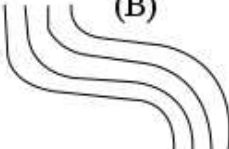








Decorated Body Sherds, Iconography and Modal Design Statements

The Jama Valley Chorrera assemblage also contains numerous decorated body sherds, which can be useful for determining some of the design statements and decorative motifs ceramicists created. Certain design statements are also highly correlated with certain vessel forms, so an element of reconstruction is also present in analyzing decorated body sherds (*Table 6.2*).

An example of this reconstructive effort comes from the presence of several body sherds which have fine-line incision in a zig-zag pattern resembling modern EKG monitors (a straight or curved line punctuated by occasional zig-zags). I have observed this incision motif in a few complete examples from the Museo Antropológico y de Arte Contemporáneo (MAAC) in Guayaquil, on a slightly closed bowl in the shape of an ocean fish (perhaps a flounder) with an applique face and fins. The EKG incision motif on this complete fish-bowl is present on the interior basin's surface, often in parallel pairs; the assembled effect of the motif resembles the shimmer of fish scales. While only a few sherds of this distinctive vessel appear in the Jama Valley Chorrera assemblage, enough traits are present on the sherds to establish the modal combinations and design statements are present – a feat that allows the archaeologist to begin asking anthropological questions of the material through modal analysis.

Iridescent painting is notably rare in the assemblage. Of all sherds analyzed, only one body sherd displays the telltale dark and reflective surface treatment, on its interior surface. This is curious but perhaps not unexpected. Iridescent painting was established by Meggers and Evans

Table 6.2. Design statements reconstructed in the Tabuchila Complex.

Design Statements	
<p>(A)  (B) </p> <p>#8, 9, 10, High ABs</p> <p>1. Diagonal line and lateral S-curves</p>	<p>(A) </p> <p>(B) </p> <p>(C) </p> <p>2. Cookware designs (everted rim jars)</p>
<p>EKG zig-zag </p> <p>Modeled fins on bowl exterior </p> <p>3. Fish zoomorph vessel elements</p>	<p>(A) </p> <p>(B) </p> <p>(C) </p> <p>4. Semicircle-and-band, red-on-buff (Machalilla?)</p>

as a diagnostic Chorrera type in the Lower Guayas; subsequent ceramic analyses across the western lowlands have shown that this technique is actually relatively restricted to the Lower Guayas and Santa Elena Peninsula and only a few centuries within the Late Formative. With that said, a few iridescent sherds have been found in Middle Formative assemblages like those at La Ponga; Lippi argued that the presence of iridescent sherds in low quantities showed that Machalilla ceramicists were experimenting with the technique (Lippi 1983). I surmise that the presence of a lone sherd in the Jama Valley assemblage reflects similar levels of experimentation in the valley, or even transport of the sherd from the coast to the valley by an intrigued ceramicist who wanted to emulate the design.

Life in Ceramics at Dos Caminos: Comparing Bell-Pit Features to Domestic Contexts

Excavations at Dos Caminos were instigated and dominated by Evan Engwall's exposure and excavation of two separate bell-shaped pit features. As discussed in Chapter 4, the first bell-shaped pit was found eroding out of the Río Cangrejo's right bank, and the second was found in

Units 11-15. However, possible domestic spaces were also excavated by Engwall in Units 1-8, and the presence of several post-holes that Engwall surmised were part of a former structure. The ceramic analysis undertaken allows us to examine this interpretation along a few traits.

First of all, most of the assemblage's sherds were recovered from Context 4 (the first bell-pit) and Context 52 (the second bell-pit) than from any other context (111 sherds from C4, 41 from C52; the next highest sherd count comes from C48 with 13 sherds). One of Engwall's assertions that contexts in Units 1-8 (C15-23) were domestic hinged on the small size of the sherds, possibly the result of trampling (see Isaacson 1987: 226). The average sherd weight from these contexts was between 10 and 17 grams. Meanwhile, the average sherd weight of Context 4's 111 sherds was 52 grams, and Context 52's 41 sherds averaged 40.4 grams.

Compositionally, twelve coarse-paste diagnostic sherds were found in Context 4, with only five more found at other contexts of Dos Caminos. Coarse paste wares may be considered more utilitarian, and are mostly the everted rim jar vessel form. Hundreds more non-diagnostic sherds were recovered from Context 4; many of these had the same coarse paste with large inclusions of rounded black and grey rock. It appears that from the composition of the sherds that domestic wares were not necessarily coarser than the fancy wares of the feasting events reflected in the "party pits" of Context 4 and 52. This is an intriguing result; rather than certain fine treatments or designs being restricted in their use, it appears certain vessel forms are only used in certain contexts. This echoes the results of analyses performed among early Nasca occupations on the southern coast of Peru, which saw similar preferences of vessel forms in elite contexts, but widespread access to polychrome painted motifs (Vaughn 2004).

Another dimension explored for differentiating these domestic spaces from the feasting pits was rim diameter and maximum vessel size. The maximum width of ceramic vessels are generally no less than 20 cm in contexts 4 and 52. Vessel width rarely exceeds 30 cm in non-party pit contexts, while many examples of wide-mouthed ollas, high shoulder closed bowls, and the generally larger ceramics come from Contexts 4 and 52. The average maximum vessel width by context also follows this trend, with averages centered around 20cm in the “domestic” contexts, and hovering closer to 30cm in Context 4, and 25 cm in Context 52.

Once again, an ethnographic analogy can help make sense of these three “sizes” of vessels: a “personal” or transport size of about 20cm, a “family” or communal size of 30cm, and a “feasting” or hyper-communal size of at 40cm and up. These three sizes have clear ethnographic analogues among the Shipibo-Conibo, who have a small transport size (*vacu*), a medium quotidian size (*anitama*), and a large feasting size (*ani*) of all their vessels. Shipibo-Conibo vessels come in all three sizes for their serving food bowls (*kencha*), beer mugs (*kenpo*), cooking jars (*chomo*), and cooking ollas (*kenti*) (Figure 6.47; DeBoer 2001: 223-225; DeBoer 2003). If we make the assumption that there is a contextual and functional difference between ceramics of varying sizes (Turner and Lofgren 1966), then archaeological ceramic assemblages become a powerful lens on different activities, practices, and spaces within Late Formative villages in the Jama Valley not just for their form but for the interaction between size and vessel form.

For Dos Caminos, the distinction between the bell-shaped pits and domestic contexts is greatly strengthened by this analogy. Bell-shaped pits at Dos Caminos contain most of the *ani* (40cm+) vessels, driving up their average vessel diameter; domestic contexts have some examples of larger vessels but also have plenty of *vacu* and *anitama* vessels for quotidian use.

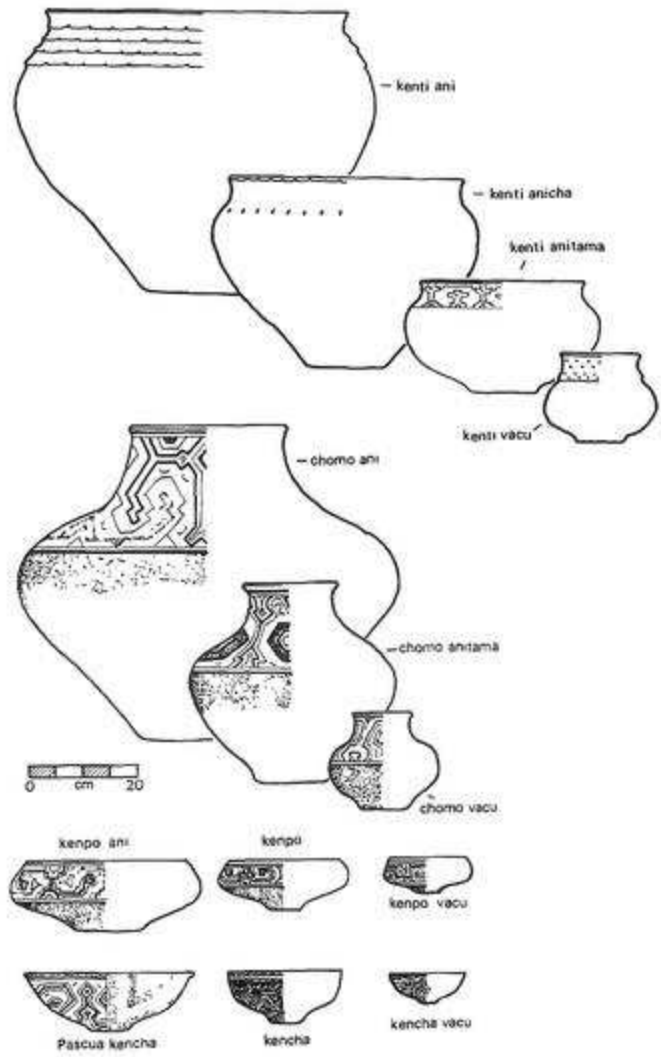


Figure 6.47. Drawing of the Shipibo-Conibo vessel forms, each with *vacu*, *anitama*, and *ani* sizes. Drawing by Warren DeBoer, in Dietler and Hayden 2001: 224.

This emphasis on size as well as vessel form also helps explain why most vessel forms can be present in both domestic and public contexts: they are performing the same function between quotidian eating and commensal feasting, but the primary difference is in the size of the event (and of the vessels).

As will be discussed Appendices A, several other lines of evidence contribute to the interpretation of bell-shaped pits at Dos Caminos as reflections of feasting activity. Deborah Pearsall performed phytolith and flotation analyses on the three sites Engwall excavated, as part

of larger PAPRJ goals to understand prehistoric subsistence strategies in the Jama Valley (Pearsall 2003). These reports show that at Dos Caminos (and especially in the bell-shaped pit contexts) corn is abundant, with both phytoliths and charred remains present in the samples. Tree fruits and common bean phytoliths were also present, but no root or tuber crops were found; maize dominates these samples with over ninety percent of the samples being maize. This comes amid a broader shift in Ecuador's agricultural base: the Early Formative established alluvial agriculture, before maize became widely implemented sometime around the Middle Formative (Pearsall 2003: 236).

Another dataset from these excavations comes from Peter Stahl, who collected data on the archaeofaunal remains from these three sites. Thorough statistical analysis has not been performed on this dataset, but several patterns are apparent even from cursory observation of the data. A large proportion of the archaeofaunal remains from Dos Caminos come from the bell-shaped pits, and are ocean-going fish which can only be caught in the shallows and estuaries of the coastline (Stahl 2003: 185). This is remarkable considering that inland communities of the Jama Valley had white-tailed deer, opossum, armadillo, rodents, and rabbits in their immediate vicinity (Stahl 2003: 187). Given that no fishing implements were found in Engwall's excavations, I suggest that these fish arrived to Dos Caminos from fishing families that brought them in anticipation of commensal consumption, though it is also possible that groups from San Isidro took "day trips" down to the coast to catch these fish. Either possibility implies that forethought went into selecting non-local animals for consumption, beyond the more easily accessible hunting animals.

Together the ceramic, ethnoarchaeological, paleobotanical, and archaeofaunal lines of evidence suggest that feasting was taking place at Dos Caminos, Finca Cueva, and San Isidro proper (since the first two sites are essentially satellites of the latter regional center). Bell-shaped pits, perhaps originally intended for the storage of agricultural surplus, were repurposed into trash pits after feasting in the vicinity of San Isidro's central mound. If these pits were filled in within a short amount of time (as radiocarbon results suggest), the presence of dozens of *ani*-sized (40+ cm) cooking and serving vessels, ocean fish, and abundant corn suggests that the community came together to take part in rituals, or even mound-building activity at San Isidro. This latter interpretation has a possible analogue from coastal Peru, with labor mobilized (and fed) by early elites to build monumental architecture at the Late Archaic site of Cerro Lampay (Vega-Centeno 2007).

Finca Cueva: A Microcosm of Dos Caminos

Nearly all vessel forms noted at Dos Caminos are present in the nineteen ceramic sherds analyzed from Finca Cueva. Context 90 specifically seems to have one or two examples of several modes of carinated and elaborated closed vessels, one wide-mouthed olla, a wide-rimmed direct bowl, and a small applique monkey on a body sherd which may be a whistle. Comparing the Finca Cueva assemblage to that of Dos Caminos is a near-perfect match with the selection and construction of certain modal combinations, their surface treatments, and the composition of the clay. Perhaps the only noticeable difference is the preference for 2.5YR 4/6 on all surfaces of the vessel. I attribute this as an artifact of the small sample size more than to a distinct group of ceramicists. However, the similarities are striking, and I argue that they are thus a reflection of the same commensal activity happening at Dos Caminos, at or very near the same time. This suggests that the village straddled both sides of the river.

Comparing Between Chorrera Sites in the Jama River Valley

The three sites of Finca Cueva, Dos Caminos, and El Mocoral were selected by Evan Engwall in order to answer his own lines of questioning: did ceramics from Dos Caminos and Finca Cueva resemble each other more strongly than El Mocoral? Would the distance from San Isidro affect El Mocoral residents' access to cultural capital and luxury material goods? Engwall chose to look at sites nearer and farther from the regional center of San Isidro so that he could examine the modal affinities between the recovered ceramics and evaluate these questions. I argue that while the ceramics from the vicinity of San Isidro do indeed differ from those of El Mocoral, this is owed to the difference in time rather than a difference in status for the people of the Late Formative Jama Valley hinterland.

The Jama Valley Chorrera assemblage bears many similarities to contemporary Machalilla and early Engoroy vessel forms and design statements, while also making innovations and contributions of its own to Middle and Late Formative ceramic complexes. This justifies the term "Tabuchila" as a moniker for the unique Late Formative ceramics of northern Manabí. The Tabuchila Complex is a reflection of the active relationships that San Isidro's residents maintained with coastal Machalilla and early Engoroy groups, and inland mound centers like La Maná. Based on the PAPRJ excavations at San Isidro (which established local cultural chronology by site stratigraphy and radiocarbon dating), Tabuchila can be divided into two phases (Zeidler 1994: 87, 90, 95; Zeidler and Sutliff 1994: 115). Tabuchila 1, which appears to straddle the Middle Formative – Late Formative boundary of 1000 BCE, is represented in this assemblage by the ceramics from Dos Caminos and Finca Cueva. Tabuchila 2, which is seen in El Mocoral's relatively later occupation (2500 ± 160 rcybp) as well as Deposit 21c at San Isidro, maintained formal similarities to the earlier Tabuchila phase while incorporating decorations and forms of Guayas Basin Chorrera. El Mocoral represents a new iteration of Chorrera ceramic

production, local to the Jama Valley but more reflective of regional connections with the Los Ríos and southern coastal styles after several centuries of ceramic exchange, despite its relative remoteness from the San Isidro regional center. The implication of this is that valley infilling processes of the Late Formative did not compromise the vibrant connectivity on display between centers in Manabí, Guayas, and Los Ríos.

Meanwhile, Dos Caminos and Finca Cueva's assemblages suggest commensal activity at some scale, in the heart of the Jama Valley adjacent to the San Isidro regional center. The performances involved in even a modest feast demanded notable ceramic products to support and entice participation from the communities of San Isidro and the Jama River Valley. The proliferation of fine ceramic decorations and technical innovations within Late Formative workshops appear to have permeated nearly every ceramic vessel form, and were widely accessible; certain vessel forms like whistling bottles and commensal wares were more restricted to specific activities. To use an analogue from contemporary Peru, the potential of all people to have finely made ceramics resembles the access that early Nasca people had to certain fine vessel forms (Vaughn 2004), as opposed to the more restricted and hierarchically bounded access that Chavín materiality enforced. Yet like Chavín and Nasca, ideology is firmly established in Ecuadorian ceramic production and exchange, as seen in the enacted materiality of Chorrera naturalistic expression (Cummins 2003). This enacted materiality will be discussed further in the following chapter.

A Closing Interpretation of Late Formative Life in the Jama Valley

The Chorrera ceramic assemblage gathered from the Jama River Valley reflects the activities of a bustling agricultural region with well-established and geographically vast socioeconomic networks. Sites like Dos Caminos and Finca Cueva established agricultural

surplus and celebrated that fact with lavish communal feasting. Communal feasting events have been inferred through established ethnoarchaeological analogies and the assumption by this study of a sovereign ideology which consistently utilized certain iconographic motifs like the lateral S-curve and the double line break), surface treatment combinations, and distinct vessel forms for fermentation and preparation of communal feasting. Commensal activity, under a sovereign view of practice and power is an accessible opportunity to gather and wield communal capital in society. The ceramics are the material reinforcement of these events' size and desirability, and their consistent execution across multiple sites speaks to a high degree of artisanship. This ideology was strengthened with a cooperative ontology which animated material objects of high Late Formative culture into numinous containers of life-energy as allies of traveling shamans. Individuals from downriver and down the coast alike may have participated in some of these events, and likewise individuals from San Isidro and the Jama were able to visit these colleagues' distant communities. Some centuries later, El Mocal was occupied as a part of valley-infilling processes and increasing population in the Jama River Valley. This out-valley location did not preclude the residents of El Mocal from having access to San Isidro and the distant communities of Guayas and the Santa Elena Peninsula.

The preceding interpretations of life in the Late Formative prioritize interconnectivity and mobility among the peoples of western lowland Ecuador. I argue that the impressive collection of ceramics recovered from the three sites in the Jama River Valley illustrates that interconnectivity and mobility. This vibrant atmosphere contributed greatly to the shared character of many Chorrera assemblages across the western lowlands, while also stoking local innovation and differentiation in regionally differentiated communities. The results of modal analysis from the preceding chapters shows that the assemblage maintains several broad ceramic

characteristics that have been identified by other scholars as Chorrera hallmarks, and specifically early Chorrera hallmarks. These include the closed carinated bowls and wide-mouthed olla forms (Forms 8, 9, and 10), red painted rims and shoulders on independent restricted vessels (Form 12), and brown bowls with incised rim interiors (part of Form 1). This last example suggests interaction with contemporary Machalilla communities on the coast, along with the red-on-buff semicircle and band design statement. This presents interesting answers to the questions laid out in this thesis; the following chapter will re-present and discuss those questions extensively, as well as lay out pathways forward in future research projects.

CHAPTER 7: CONCLUSIONS

This chapter answers the two queries posed at the outset of this thesis. First, in what ways is this assemblage representative of the Tabuchila regional variant of the Chorrera ceramic tradition? Second, how can this study and future research elaborate on archaeological interpretations of the nascent social complexity taking place during the Late Formative? As a methodological corollary, can the regional variant framework facilitate the explanation of Late Formative interactions, or is this framework in need of re-evaluation? Each of these questions will be discussed in turn. In the course of discussing the second question, I will address what a sovereignty approach to early social complexity can provide archaeologists, and will conclude with several avenues for future research in the western lowlands of Ecuador.

The Jama Valley Tabuchila assemblage is partly the ceramic reflection of a community engaged in mound building and feasting activity. This activity has been found at three sites (San Isidro, Dos Caminos and Finca Cueva), with the presence of numerous large cooking and fermenting *ollas*, corn and animal food remains subsequently discarded in bell-shaped pits. Ceramics from Dos Caminos and El Mocoral also provide glimpses into domestic activities both near and far from the regional center of San Isidro.

Analysis of this assemblage has established that some vessel forms and design choices are present in other Late Formative assemblages. However, most of these similarities are held with coastal collections and those of Los Ríos rather than those of the Guayas Basin. Some designs like the red-on-buff semicircle design and brown bowls with fine-line incision are more closely connected with contemporary Machalilla occupations of the central Manabí coast. These

results and the early dates associated with the Jama Valley assemblage (roughly 1300 BCE; Zeidler et al. 1998: Table 4) suggest that temporal variation may be of more importance than regional variation between Chorrera collections.

As discussed in Chapter 3, Chorrera as a moniker has expanded greatly from the early investigations at the type-site in the Guayas Basin (Evans and Meggers 1957), as a result of efforts to encompass many Late Formative assemblages under this monolithic term. This comes despite the protests of some scholars (notably Beckwith 1996: 468) who prefer that Chorrera nomenclature be restricted tightly to the type-site of La Chorrera and the Lower Guayas Basin. Broadening Chorrera beyond the Lower Guayas could dilute the usefulness of the term. The assemblage from the Jama River Valley presents a unique contribution to this debate. First of all, it is prudent to call this assemblage “Tabuchila”, because it has been referenced as such in the literature for many decades (Zeidler and Pearsall 1994; Zeidler 2003). Analysis in the prior chapter has also established that this assemblage is uniquely historically situated in its own place and time in Late Formative Ecuador, as one of the major contributors to Chorrera ceramic cultural expression. At the outset of this project I was content to ask whether Tabuchila was, in fact, a subset of Chorrera culture. Now, the question has been turned on its head: is Chorrera useful for describing Tabuchila?

The concept of Chorrera can be essentializing, rendering its constituent cultures static across the entire millennium of its extent. This is a downside of using arbitrary archaeological names which take on meanings far outside their original bounds, yet often grandfather in the original interpretations by their continued use. However, this should not stop archaeologists from using these terms, albeit with the proper disclaimers and understanding about the limitations of the nomenclature.

What makes the Tabuchila assemblage from the Jama River Valley so special is that it represents some of the inspiration for the “classical” Chorrera and Engoroy ceramics that Meggers, Evans, Estrada, and Bushnell documented decades ago. I argue that the Tabuchila assemblage’s shared affinities with Machalilla decoration and Chorrera vessel form situates it as a transitional Machalilla-Chorrera assemblage, at least at its outset (Tabuchila 1). This explains the results of the ceramic analysis and recognizes the early start dates of Late Formative occupations in the Jama Valley. There is a precedent for identifying ceramic assemblages as “transitional” within modal analyses of the western Ecuadorian lowlands. Specifically, the early ceramics of the La Ponga Machalilla assemblage were argued to represent transitional Valdivia-Machalilla occupations on the central Manabí coast (Lippi 1983); this hypothesis has been accepted by other scholars of the western lowlands (Beckwith 1996; Staller 2001). Transitional assemblages like La Ponga and Tabuchila help provide continuity to occupations that exist “between the lines” of broad cultural chronologies. As understood in modal analysis, they also serve to identify where and when innovations took place among ceramic-producing communities.

This “proto-Chorrera” is not just ceramic in nature, but potentially also ideological as well. Material reflections of this ideology include Mate-style figurines, strap-handled whistling bottles, and the exchange of luxury goods like obsidian and *Spondylus*. Karen Stothert (2003) has proposed that these exchanges were instigated by traveling shamans. These individuals would collect and wield exotic goods and esoteric knowledge in distant communities as a way of accruing spiritual power (Helms 1993). San Isidro would then be one of the early loci of Late Formative society, with deep cultural and spiritual roots in the Early and Middle Formative societies of Terminal Valdivia and Machalilla.

In sum, the northern Manabí assemblage represents two phases of the Tabuchila Complex. Tabuchila 1 (represented at Dos Caminos, Finca Cueva, and San Isidro's Sector XXXI/Unit A1, Feature 22) was a ceramic tradition already engaged with contemporary Machalilla ceramics of the central coast. In addition, the social networks established by Early and Middle Formative peoples allowed for Tabuchila ceramics to make their way down the coast and down the Río Daule toward the Guayas Basin. Tabuchila design logic, including the high quality of production and distinctive vessel forms, percolated into these coastal and southern communities and contributed to the development of numerous Chorrera regional variants like Engoroy and "classic" Chorrera. The second phase, represented at El Mocoral and in Deposit 21c at San Isidro, continues many of the formal aspects of the Tabuchila tradition, but also contains sherds (and pots) from more distant contemporaries in the Lower Guayas Basin ("classical" Chorrera) and the Santa Elena Peninsula (Engoroy). The Tabuchila ceramic complex can also be considered one material reflection of a larger shared Chorreroid ideology in the western lowlands of Ecuador, with communities maintaining this ideology and ontology despite varying executions and treatments of their ceramic vessels.

Before discussing the second question of this thesis relating to sovereignty and early social complexity in Ecuador, modal analytical methods will be briefly evaluated for their utility. After completing a modal analysis of the Tabuchila ceramics and comparing them to other assemblages of the Late Formative, I assert that the regional variation "framework" of understanding Chorrera ceramics has been useful for conceptualizing the spread of new design statements and vessel forms throughout the western lowlands of Ecuador. Modal analysis requires a great deal of work to build sensible interpretations, mostly because the "signal" of modal combinations is at first difficult to discern from the "noise" of each new sherd analyzed.

But once the analysis has identified numerous modal combinations this allows the data to inform the creation of categories which then enable the archaeologist to ask deeper anthropological questions about the lives and experiences of the people who used these ceramics. Considering that a coherent interpretation of regional ceramic variation has come out of the past four decades of modal analysis in western lowland Ecuador, and having identified one of these regional variants in the course of my own research, I think it is a sound approach for situating a local ceramic assemblage into regional trends and traditions.

Regional variants and the modal analyses which establish them are indispensable for continuing research in this region. These studies of the past few decades are sturdy building blocks for new syntheses of Ecuador's cultural history because they allow for temporal and spatial variation (or commonality) to be observed. More importantly, I contend that regional and temporal ceramic variation is a reflection of different practices within various communities – or shared practices experienced and constructed differently between communities. Horizontal excavation in the Jama Valley and in Late Formative sites across Ecuador will illuminate the homes and villages in which these practices were lived out, where Chorreroid culture was experienced. Future type-variety synthesis, informed by these temporally and spatially sensitive datasets, will be able to assemble a portrait of the trajectories of various cultural groups across the western lowlands. Such a synthesis would also incorporate historical facts like the eruption of Pululahua volcano and its variable impact across the western lowlands. These efforts will allow for the trajectory and experience (not just the presence) of Late Formative Ecuadorian cultures to be discussed.

Ultimately, the existence of numerous regional and temporal variations under the monolithic “Chorrera” classification is a point that should be explored further, and accepted rather than discarded. The deeper issue in Ecuadorian archaeology, which has been touched upon in the above discussion, is what constitutes “Chorrera.” Should it be considered a ceramic tradition, or strictly apply to only one variant of a larger style? Is it useful to think of it as a broadly “Chorreroid” ideological program spread across the western lowlands? At the risk of complicating the debate even further I suggest that Chorrera can be useful for the second issue raised in this thesis: evaluating the enactment and enforcement of sovereignty over populations of Late Formative Ecuador.

Sovereignty and Paths to Emergent Complexity in the Andes

It has been an assumption that social complexity was increasing through the Late Formative Period ever since Clifford Evans and Betty Meggers established their neo-evolutionary, pan-Ecuadorian chronology (Evans and Meggers 1961; Meggers 1966). In this trajectory the “Regional Developmental Period” begins where the “Formative” left off, “Integration” occurs once regions have been “developed”, and so on. Later research has poked numerous holes in this periodization scheme and the impositions it made on the culture history of Ecuador (see Zeidler, Buck and Litton 1998: 162, for a summary of these problems). Yet precious little research so far has addressed the mechanisms and strategies by which Late Formative peoples consented to their own rule at this critical juncture in Ecuador’s prehistory. The Ecuadorian Formative, and especially the Late Formative, may well be a situation in history when being ruled was not the only choice available to residents of Ecuador. Chorrera ceramics and “Chorreroid” culture would thus be part of a sociopolitical experiment by proto-elites of Ecuadorian centers like San Isidro, that I will call “Chorrerismo”. To support the possibility of

Chorrerismo being constructed in the Late Formative, we must return to earlier discussions of theory begun in Chapter 2 and use them to interpret the archaeological data and ceramic analysis of Chapters 4 and 6.

Bruce Routledge's (2014) sovereignty approach provides several examples of how power is most easily accepted and enforced when it is made sensible to all participants. Sovereignty studies examine power as it is gathered and wielded by elites through practices within the routine-spectacle continuum, with particular focus on understanding how local culture history affected the practices that were most sensible and accessible for co-optation by elites. Routine activities are not just fodder for spectacular amplification by elites; they are the primary means by which elites write themselves into the fabric of power relations. Whether that is achieved by the (re)establishment of routines that passively support elite domination, or by the active enforcement of power through violence or coercion, is dependent on the individuals and circumstances involved. Material culture and built environments aid in the routinization and acceptance of ceding one's sovereignty to other individuals, by passively yet continually asserting that concession. Describing and analyzing the material culture of a place is thus the first step in understanding how power could have been constructed and enforced within a community.

Adding to this discussion is Richard Burger's argument that power was more evenly and widely distributed in Ecuadorian complex societies than their Peruvian contemporaries (Burger 2003: 481). If the communities in current-day Ecuador and Peru diverged in their approaches to power distribution, then archaeologists must contend with emergent and perhaps more heterarchical power structures in Ecuador. Heterarchy is mentioned here to reflect that in some power relations, power is counterpoised or shared rather than held exclusively by one party (Ehrenreich, Crumley and Levy 1995: 3). How was power shared between many diffuse

Ecuadorian groups while their Peruvian contemporaries wove control hierarchies into the fabric of their own societies? Despite the different results, were there some shared strategies held between the two regions?

As discussed in Chapter 2, ceding authority to proto-elites with more knowledge and power does not have to be purely politically driven. Religious power can assert an ideology all its own, asking not for physical submission but spiritual submission, an acceptance of a cosmology and ontology beyond oneself and only somewhat glimpsed by shamans and cult participants. For the communities living in the beginning of the Late Formative (around 3000 years ago), religious authority may have been established and was shared amongst numerous communities, without concomitant political routinization. Religion was a powerful part of people's lives by the Peruvian Early Horizon. I suspect that religion was similarly powerful in Ecuador by the Middle Formative. Most routine in the Jama Valley was quotidian: ceramic production, agriculture, and family dining (if we continue the ethnographic analogy of ceramic size implying context from DeBoer 2001). Yet conspicuous burial events of a mortuary cult (with roots in Valdivia culture) would have punctuated this routine with spiritual spectacle; community members who followed the shamanic lifeway would routinize a spiritual hegemony by their consistent presence on the social landscape (Stothert 2003; Weinstein 1999). Mound-building activity was another spectacle made routine in Late Formative life at San Isidro. Events to expand the mound would have punctuated and reinforced the routine experience of the mound's presence as a material anchor of the community.

The Jama Valley Tabuchila assemblage, as interpreted through practices of sovereignty, represents a valuable portion of the Chorrera material environment. Commensal activities at San Isidro (asserted in Chapter 6) provided the opportunities for motivated individuals to accrue

status and ideological capital within and beyond their community. Ideological capital may have accrued more value as individuals brought it farther afield; Stothert has argued for a community of shamans that traveled throughout western Ecuador and took part in ritual pilgrimages (Helms 1993; Stothert 2003). The exotic goods that shamans and religious figures accrued in Peru and Ecuador were given great power; for Chavín, “from the very beginning, production, exchange, power, and ideology were inextricably linked” (Vaughn 2006: 321). I argue these linkages were also present in Ecuador; however, they were not as strongly centralized under political institutions.

Late Formative Ecuadorians and Early Horizon Peruvians seem to have diverged in their institution of hierarchical versus heterarchical power inequalities. I argue that this heterarchy in the Late Formative western lowlands manifests in the ceramic archaeological record as “Chorrerismo”: a shared materiality in whistling vessels, figurative art, and the practices of the Chorrera mortuary tradition and mound building. Greater latitude in producing utilitarian and commensal community wares was maintained, at least at the outset of the Late Formative. This is evidenced in the Tabuchila 1 ceramics by the presence of several treatments on certain vessel forms like the wide-mouthed closed ollas: some designs on these vessels are more Machalilla-influenced, and others present traits that would later define the Chorrera tradition, though they share the function of being fermentation or cooking vessels of three sizes. These contemporary ceramic assemblages could then represent different ceramicists from separate kin groups producing their own brand of Tabuchila ceramics.

Various interacting material logics composed the larger Chorreroid cultural experience; sovereignty theory suggests that motivated individuals had the opportunity to enact a “Chorrerismo” sovereignty supported by accessible and attractive Chorreroid cultural elements.

At Dos Caminos feeding, inebriating, and interconnecting disparate communities granted community organizers the ability to “inform consent” and engender indebtedness from participants. This indebtedness could have been reciprocated with labor at San Isidro’s mound or tribute like food for a future event. Regardless of the costs of participation, for Chorrerismo to succeed that cost must have been lower than the cost of non-participation. As discussed in Chapter 2, “raising the cost of non-compliance” through violence and casting out counter-hegemony can be as effective a strategy as constructing an attractive hegemony.

I suggest that a fundamental difference between the trajectories toward social complexity that contemporaneous Peru and Ecuador followed may lie in the interaction of ideology, politics, and the built environment. For Late Formative Ecuadorians, the more even distribution of diffuse socio-ideological power and the more readily available access to some measure of that power led to different built environments and material remains in the archaeological record. Contemporary Chavín cultists seem to have parlayed their ideological capital into monumentality and large-scale performance, an act that Ecuadorian religious elites either could not or would not accomplish. Instead, Ecuador’s religious authorities worked in concert with ceramicists of various kin groups to create stunning whistling bottles and figurines to be used in mortuary practice. Ceramicists’ innovations and skillsets permeated their utilitarian ware production as well as the more demanding products required by shamans. Mound-building activity is present in both cases, but these practices are much more ancient, prominent and persistent in Peru than in Ecuador. This issue deserves much more attention than it has been given in this thesis, and may be examined more extensively in future research. However, the early dates associated with Tabuchila 1 ceramics recovered from the Jama River Valley suggest that the contexts uncovered thus far were occupied early in this process. Further investigation can ask deeper questions about

the trajectory of social complexity in the Ecuadorian Late Formative. I am confident that continuing to compare and contrast the lives and experiences of ancient peoples in the north central Andes will greatly deepen our understanding of South America's precocious prehistory.

Future research should work to understand the trajectory of the Chorrerismo "experiment" through the Late Formative. At this point it is unclear if this experiment was underway from the outset – at this early stage of research, Dos Caminos and Finca Cueva's feasting activities represent early opportunities for the emergence of entrenched political power in the Jama River Valley. However it would follow that these opportunities were unevenly and only partially seized upon for short-term and limited exertions of power. What future research can examine is what happened over the course of the Late Formative in the Jama River Valley, up until the Pululahua eruption forced valley abandonment. I suspect that these opportunities were taken more regularly by residents of San Isidro, even as communities elsewhere in the western lowlands began to experiment with their own strategies of Chorrerismo sovereignty.

"Ticket-Stub" Agency and Chorrerismo at El Mocoral

Another example of this "Chorrerismo" sovereignty in action comes from the third site of this study, El Mocoral. Radiocarbon dates from the site show it was occupied several centuries after the feasting events identified at Dos Caminos and Finca Cueva – although San Isidro was still flourishing at that time – and contains Tabuchila 2 ceramics. In this rural agricultural site, what few ceramics were found are generally utilitarian and of domestic (i.e. crude, for Chorrera) make. Yet a complete strap-handled whistling bottle was recovered, as well as a few sherds of other bottles and figurines that are decidedly non-local based on their construction and decoration. Several finer vessels include Tabuchila wide-mouthed ollas and high-shoulder closed

bowls (complete with the distinctive shoulder nicking). For an out-valley site, its denizens appear to have been remarkably cosmopolitan, and would have had to devote some effort to remain connected from their rural home.

The desire of El Mocal residents to be participants in Chorreroid culture and Chorrerismo sovereignty is an opportunity to briefly discuss the agency that both sovereignty theory and Andean historicity assign to material culture. From the perspective of sovereignty, materials like ceramics are active participants in constructing and reinforcing power relations like Chorrerismo. Ceramics help bound storage, cooking, and serving activities. They encode who may eat from which vessels, and at what time. Ceramic objects like *orejeras* provide non-verbal affirmation of fully realized cultural affinity. Physical action and social cues are both informed by materials like ceramics. Strengthening this from an Andean perspective is the concept that ceramic vessels, especially those of high quality, contain life energy; figurines and effigies especially contain the essence of the person or creature they depict, and act as familiars for the individual themselves (Weismantel 2014).

Weismantel's "relational ontology" has a potent application in understanding the corpus of Chorrera whistling bottles, which trill and hoot with the movement of air and liquid through their multiple chambers. Tom Cummins (2003) analyzed museum collections of looted Chorrera ceramic vessels which excel in their accurate naturalistic depictions of animals, plants, people, and places. Cummins argues that this emphasis on natural accuracy, combined with a subtle swelling of these natural forms, was Chorrera ceramicists' presentation of the ideal form of the object or person depicted (Cummins 2003: 439). In addition, José Pérez de Arce's (2015) study of ancient Ecuadorian instrumentation supports Cummins' interpretation that interacting with Chorrera figurines and whistling bottles engaged multiple senses: from seeing the ideal form, to

touching and moving the figurine/bottle which would provoke auditory responses from the vessel. This engaged multisensory experience with singular Chorrera vessels and figurines is made more meaningful if these objects are interpreted through Weismantel's relational ontology and recognized as active participants in ritual.

I argue that the combination of Andean material agency utilized in sovereign action created a "ticket-stub" or souvenir agency to ceramics and other highly prized goods like obsidian or *Spondylus* by Ecuador's Late Formative Period. As referenced several times before in this study, Karen Stothert (2003) argues extensively for an ideology developed and expressed over the course of the Formative Period, primarily by identifying the material culture and activities of Formative Period shamans, who hold a pivotal role in maintaining communal health and cultural expression (Stothert 2003: 343). In this argument Stothert draws from numerous Formative sites to show that many material goods like obsidian, sodalite, greenstones, *Spondylus* shell, and *Strombus* conch, were highly prized items associated with the acquisition of spiritual (and perhaps even political) power. Following Helms (1993), Stothert explains that the increased production of elaborate ceramic fineware and exotic goods in the Late Formative "are expressions of the concept of divinity and that those who make or control such objects can effectively communicate their power and authority through them" (Stothert 2003: 371).

As communities grew and became more interconnected in the Late Formative, this practice of gathering "exotic" goods may have been picked up by anyone able to travel and participate in Chorrera spectacles. Material remnants of numinous containers were tangible connections to the festivals and ceremonies that had been experienced, and to the social and spiritual energies that were accessible at that place and time. Again, this interpretation accords

with those of recent Andean scholars who have attempted to understand and embed Andean worldviews into their archaeology, as in the relational ontology of the Moche and the taking of heads for use after death (Weismantel 2014).

Chorrerismo was supported in performances across the western lowlands and amplified in mounded regional centers like San Isidro; it evidently raised the cost of non-compliance through sovereignty's admixture of attractive spectacle and the risk of ostracism through routine. In this scheme ceramicist allies of the proto-elite (likely related by kin or community) directly supported Chorrerismo through the experience of ceramic object "otherness" and active participation in ritual spectacle. Strap-handled whistling bottles breathe and sing with the manipulation of liquids inside of them (Pérez de Arce 2015); figurines, wide-mouthed ollas and closed bowls swell with the energies (and sustenance) they contained in both spectacular and quotidian contexts.

The point of these discussions is not to definitively prove these assertions, but merely to suggest new hypotheses about how Chorrera – as a material culture, as a lifeway, as a period in Ecuador's history – was experienced by the people who constructed and lived it. Discussing Chorrera as a set of practices and experiences rather than a ceramic style broadens its utility as a window into Late Formative life. Chorrera ceramic assemblages are useful reflections of some of the activities that individuals fostered and the way they organized their lives.

Suggestions for Future Research

There is still much to be done in the study of the Late Formative of Ecuador. This thesis has sought to improve our archaeological knowledge of northern Manabí and the ceramics of that time and place, but it has also opened up several new avenues of inquiry. Within northern Manabí and the Jama River Valley specifically, there is much more to be done in establishing the

extent of Tabuchila both spatially and temporally. Examination of Tabuchila's origins and relationships with Machalilla were not thoroughly undertaken in this thesis, yet the contemporary occupation of different parts of Manabí deserves further investigation. Machalilla as a ceramic style is much more restricted than Chorrera both temporally and spatially, which could aid in strengthening ties between it and Tabuchila 1. Understanding how Machalilla-producing people and Tabuchila-producing people interacted with each other would broaden our knowledge of the Middle Formative, of what became of Terminal Valdivia culture, and how the stage was set for Late Formative cultures.

More specifically in the Jama River Valley, more excavations should be undertaken in order to explore Tabuchila's cultural trajectory. In particular, Tabuchila 2 must be more thoroughly delineated from its antecedent phase. Excavations at El Mocal and at San Isidro have only given glimpses of this later phase of Late Formative ceramic production (Zeidler 1994), and Tabuchila 1 has a much more robust representation in this study's assemblage. Looking at San Isidro at its apex (before the Pululahua eruption) would be enlightening – if unlooted contexts can be found near the modern community. One potentially accessible space for future horizontal excavation at San Isidro is at the structure floor of Feature 11, which was partially excavated in Sector XII/Area C (James Zeidler, personal communication 2016).

The identification and excavation of an intact Late Formative site would be a massive boon to archaeological interpretation in the western lowlands. To use a local analogue, the site of Real Alto was integral to understanding how Valdivia culture grew and changed over its entire span because excavations were horizontal and long-term. House and community layout were determined and discussed at length, with both domestic and ceremonial activities explored (Lathrap et al. 1977; Marcos 1978; Zeidler 1984). A “Real Alto” of the Late Formative, to my

knowledge, has not yet been discussed; very few house floors or ceremonial spaces have been excavated by archaeologists (but see Lunniss [2008]). All of these potential projects should also contend with the larger goals and questions mentioned earlier in this chapter: continued work on building a comprehensive chronology of Late Formative and Chorrera cultures is paramount for directing future research in the western lowlands of Ecuador.

Final Thoughts

This study has confronted several aspects of Ecuadorian archaeology and prehistory. In contending with the history of archaeology in Ecuador, it has shown how the Late Formative has been broadly sketched out by numerous scholars of the last century or more. The analysis at its heart has presented the field with new information on the Late Formative Tabuchila occupations of San Isidro as well as interpretations of the ceramic assemblage recovered from excavations performed by the PAPRJ. This study has also attempted to apply intriguing new theoretical approaches of sovereignty to non-state societies, in order to drive new anthropological lines of inquiry forward in Ecuadorian archaeology. Perhaps most exciting of all, this thesis has asked many more questions than it alone could answer. These questions have the capability of greatly expanding our archaeological understanding of Ecuadorian prehistory, and bringing deep anthropological questions into this exciting region of the Andes. For the Jama Valley, this study has also provided a valuable contribution to understanding the Late Formative occupations within the valley's larger cultural chronology. Despite thorough looting of San Isidro's ancient occupations, the work of archaeology in the Jama Valley is slowly revealing the nature of life in ancient Ecuador.

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APPENDIX A: EXCAVATION REPORTS FROM THE JAMA RIVER VALLEY

This appendix is a more thorough description of Evan Engwall's excavations at three sites in the Jama River Valley, as part of the Proyecto Arqueológico-Paleoetnobotánico Río Jama (PAPRJ). For contextualization and interpretations of these excavations with larger project goals and the questions of this study, refer to Chapter 4 of this study.

Investigations at El Mocoral (M3B4-031)

El Mocoral is located in a region of the valley known as the Jama Narrows (designated Stratum II in the PAPRJ systematic archaeological survey), a rugged section of the river valley with relatively large changes in topography, including the Jama Narrows where the river plunges down a 100-meter waterfall (*Figure A.1*). El Mocoral is located far upland, away from the main channel. The site is actually closer to the Estero Don Juan (a small neighboring drainage immediately north) than the drainages of the Jama River Valley.

The site is near the furthest extent of the Proyecto's northern boundary. Stratum II had thirty quadrats randomly assigned to it in survey, and eight of them (including El Mocoral) contained prehispanic occupations (Zeidler 1995); these occupations are diffused over the landscape with generally smaller sites and few clustered sites, unlike the higher site densities and generally larger sites found in the upper and lower strata of the valley. The presence of small sites like El Mocoral in more isolated locales of the valley suggests that a valley "infilling" process began in the Late Formative (Zeidler 1995; Zeidler and Isaacson 2003). This interpretation implies that larger mound centers like San Isidro first drew colonists to the Jama River Valley and easily arable agricultural land, and small sites like El Mocoral were occupied later, as San Isidro's "hinterland" expanded.



Figure A.1. The Bigua Falls of the Jama River Valley, located in the Jama Narrows. Photo by Evan Engwall.

El Mocoral was unfortunately too remote for me to visit it in 2015, taking several hours to reach. This site was discovered in a systematic random survey of the entire valley, which selected 1-hectare quadrats to examine through pedestrian walk-over and/or shovel testing where dense vegetation required it. El Mocoral was initially discovered by the identification of archaeological materials eroding out of a gully, which became exposed as a result of the El Niño of 1982-83. Surface collection and shovel testing demonstrated that the site was larger during Jama-Coaque times, in the range of 1.5-2 hectares; within this space the Tabuchila occupation was around a half-hectare in size (Engwall 2001: 5). Due to its remote location and the property owner's desire not to damage his lands, the site remained unlooted when Engwall investigated it (Engwall 2001: 5).

El Mocoral is bordered on three sides by steep hilltops, and the occupation was restricted to the resulting U-shaped space (*Figures A.2, A.3*). The western end of the site opens up to a drop toward the Estero Mocoral, which is a tributary drainage of the Río Don Juan. From the northern hilltop, the Pacific Ocean can be viewed some eight or nine kilometers away; from the southern hilltop one can access the Estero Sálima, which drains into the Jama River a few kilometers away (Engwall 2001: 6). Thus El Mocoral is located between several major drainages, at a crossroads for pedestrian travel and exchange.

The first visit to El Mocoral took place in 1990 in the course of archaeological survey in Stratum II; initial work focused on the gully opened by the 1982-83 rains, which was several meters wide and two meters deep at that time. One tephra layer (III) was identifiable in the gully, as well as associated Muchique phase ceramics of the Jama-Coaque Tradition. A few meters west of the cleared profile, sherds were identified that belonged to a nearly complete strap-



Figure A.2. Northeast view of El Mocal, showing two areas of excavation. Photo by Evan Engwall.

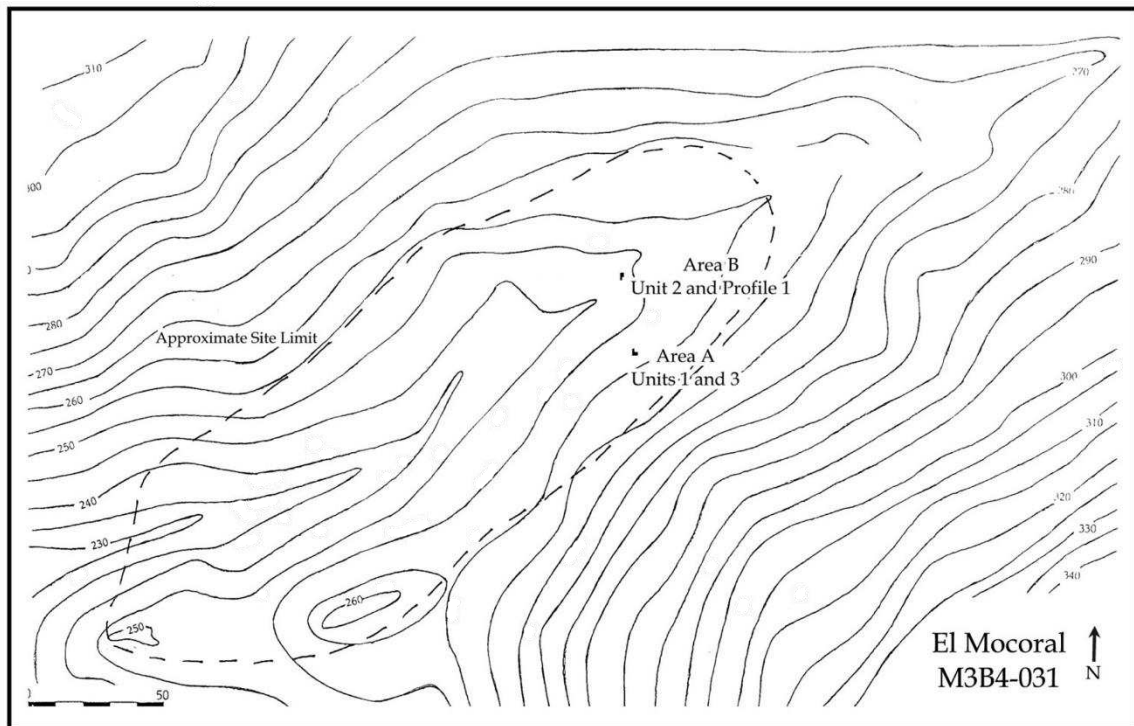


Figure A.3. Plan view of El Mocal, with approximate site size and location of excavations. Drawing by Evan Engwall.



Figure A.4. Complete cucurbit-shaped strap-handle whistling bottle, recovered from gully at El Mocoral during site survey in 1990. Photo by Evan Engwall.

handled whistling bottle, in the shape of a gourd. (*Figure A.4*). The formal and stylistic qualities of this vessel have long been considered “classic Chorrera”, signaling a Late Formative occupation at the site. However, no cultural features were found near this remarkable ceramic vessel, and after reconstruction Engwall donated it to the Museum of the Banco Central in Quito (Engwall, personal communication 2016).

A shallow profile created by slump movement in the gully also found other visible diagnostic ceramics, lithics, and bone remains that supported a Late Formative presence at El Mocoral. For these reasons the site merited further investigation by Engwall on his return the following year when he was given permission to excavate the site. Engwall notes that due to logging some years before, the site was covered in a dry grass upon which cattle grazed. However, the area also has some forest cover on the hillsides “harboring roaring howler monkeys and restless parrots” (2001:9).

Engwall began excavations by shovel-scraping and troweling part of the gully on the western end of the site, in order to determine stratigraphic layers for further testing. Profile 1 (*Figure A.5*) uncovered almost three meters of stratigraphy, which included cultural materials and two tephra events that aided in singling out Late Formative occupations on-site. This profile measured two meters wide and extended to a depth of 210 cm and to 300 cm in depth in a one-meter wide extension. The extension reached culturally sterile strata and confirmed an occupation in the Late Formative, as well as in the later Regional Developmental period. Importantly, Tephra II demarcated quite clearly (as mentioned in the first section) the end of Late Formative occupations at the site, as only Jama-Coaque ceramics were present above it. A second profile was initiated several meters south of Profile 1, near a location where Chorrera ceramics were found the year prior. However, this second profile's stratigraphy was less defined than the first. From there, Engwall laid out a 1x1 meter test pit (Unit 1). This unit was excavated in arbitrary 10 cm levels, with all soil passed through ¼ inch wire mesh, and all artifacts gathered in separate bags (Engwall 2001: 11). In addition, soil samples of approximately 30-35 liters were taken from each context (per project practices) for water flotation. Once these samples were floated, paleoethnobotanical analysis was carried out on the light fraction by Deborah Pearsall at the University of Missouri-Columbia (Appendix B). Flotation allowed the recovery of macrobotanical, faunal, and cultural data (especially beads). Separate sediment samples were taken for microscopic opal phytolith analysis, also conducted by Deborah Pearsall.

The first level of Unit 1 was excavated to a depth of 40 cm on the north wall, due to a steep north-south surface inclination. After this point, 10 cm levels were maintained. Artifact density increased in the region of 50-80 cm below surface (Contexts 20-24), yielding Chorrera ceramics with a reddish slip and annular bases. Interestingly, obsidian flakes were also recovered

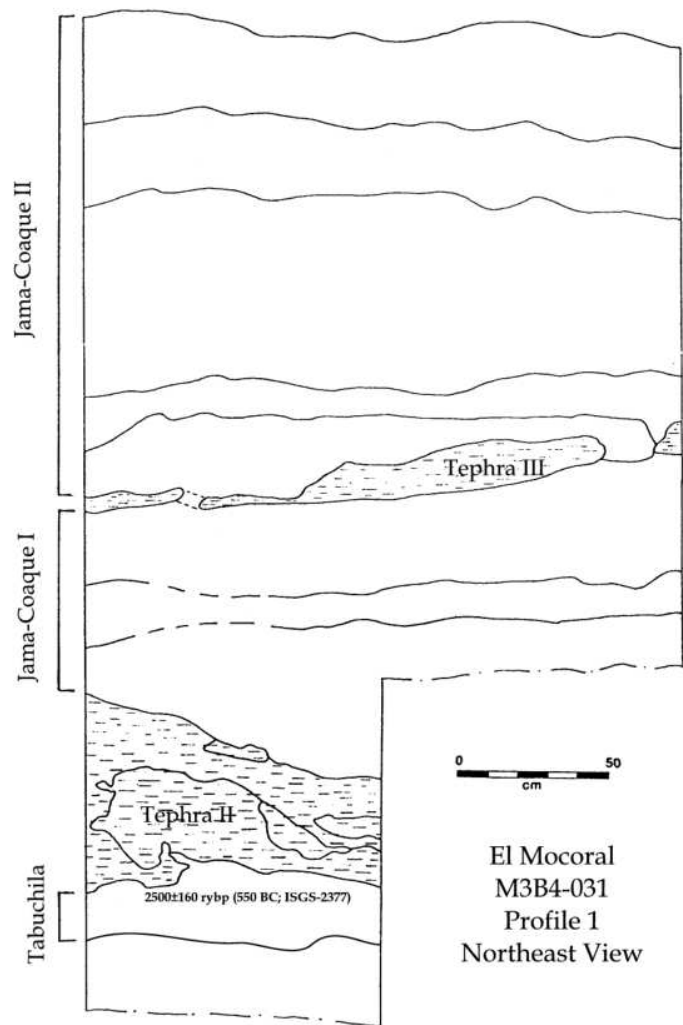


Figure A.5. Profile 1 at El Mocal, northeast view. Drawing by Evan Engwall.

from these contexts; all obsidian sampled from the Jama River Valley has been sourced to the Quito region (Zeidler et al. 1994; Zeidler 1998), suggesting that the occupants of El Mocal were keyed into trade networks that reached the highlands of Ecuador. Animal bone was recovered as well for archaeofaunal analysis by Peter Stahl, then at the State University of New York at Binghamton. Engwall also reported that small pieces of carbonized organic matter were recovered from these contexts, although none were large enough for radiocarbon dating.

Feature 1 (Context 23; *Figure A.6*) was encountered at roughly 62 cm below the surface in the center of Unit 1. This feature was a small pit with a line of deposited ceramics from the center of the unit toward the southwest corner. The brown clay loam of this feature was similar to the surrounding matrix but retained more moisture and contained pebbles.

All artifacts were piece-plotted and mapped, and the fill was removed for flotation. Below 80 cm (Contexts 25-27), artifact density dropped sharply, and the 100-110 cm level (Context 27) presented no artifacts; Engwall continued down to 170 cm to ensure the unit was culturally sterile. By this point, soils were sufficiently homogenous as to suggest that Late Formative occupations were indeed the earliest at the site (Engwall 2001: 12).

Unit 2, which measured 1m x 1m, was opened just off of Profile 1 and followed the stratigraphic layers identified in that profile. Deposit 1 of this unit (Context 35) showed modern disturbances, and yielded no cultural materials. Late Jama-Coaque (possibly Muchique 4) ceramics were recovered from Deposit 2 (Context 36). Deposit 3 was approximately 50 cm thick, and was split into 3A (Context 37) and 3B (Context 38) based on the thickness and the higher frequency of pebbles in the matrix. In Deposit 3B a Manteño *mascarón* (mask) fragment was recovered, identified by the black surface finish, decoration, and the molded face on it (Engwall 2001: 13). Deposit 4 (Context 39) showed a marked increase in pebbles (and a decline in artifacts). However, Deposit 5 (Context 40) yielded many artifacts, including a complete Muchique 2 low annular-base bowl. This bowl was located immediately above Tephra III, placing it in the early Integration Period (Zeidler et al. 1998; Zeidler and Sutliff 1994).

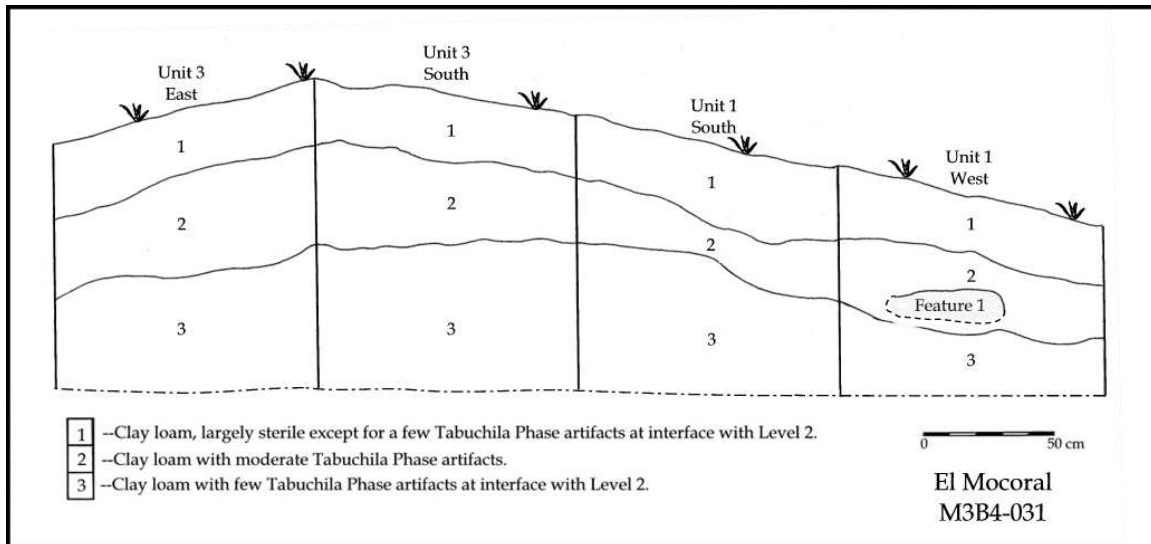


Figure A.6. Profiles of Units 1 and 3 at El Mocoral, illustrating the three deposits Engwall identified. Drawing by Evan Engwall.

Deposit 6, then, consisted of Tephra III ash deposits, which stratigraphically separate Jama-Coaque I and Jama-Coaque II occupations throughout the valley and caused a lengthy hiatus (circa 330 years) in human occupation (Zeidler et al. 1998; Zeidler 2016). Notable in this deposit is its brownish-gray color and clay texture. Engwall suggests that this deposit of tephra was secondary, having washed downslope into the site from the hillsides (2001: 15; see Isaacson 1987; Zeidler and Isaacson 2003). Deposit 7 (Context 41) was a thick deposit of a clay loam, with moderate amounts of Jama-Coaque ceramics; likewise Deposits 8 and 9 (Contexts 42 and 43) contained Muchique 1 artifacts in low quantities. These early Jama-Coaque ceramics roughly date to the Regional Developmental Period. This series of Muchique 1 deposits overlaid Deposit 10, which pertained to Tephra II, the Pululahua volcanic eruption that ended the Formative occupation in the Jama region (Zeidler and Isaacson 2003). Deposit 10 was partly made up of a secondary brownish-gray clay (similar to Deposit 6), but also partly a very fine, white sediment which may be primary airfall from the eruption. Deposit 10 was culturally sterile.

However, immediately underlying Deposit 10, Late Formative cultural materials began to appear. Engwall was able to recover a scattered charcoal sample at this interface between Deposits 10 and 11 (Context 44). This sample dated to 2500 ± 160 rybp (550 BC; ISGS-2377; see Table 4.1), and acts as an end marker for Late Formative occupations at El Mocoral and potentially the Jama valley (Zeidler et al. 1998). Deposits 11 and 14 (Contexts 45 and 46) below the tephra represented another Late Formative occupation, with very few diagnostic Chorrera artifacts. Engwall notes that these ceramics' surfaces were eroded, implying they may have been exposed for some time, or deposited from uphill (2001: 15). The end of this unit came in Deposit 15, a culturally sterile layer of many pebbles, with a matrix that resembled the parent hillsides; this again signified that the earliest occupations at El Mocoral were Late Formative.

During the excavation of Unit 2, the 1x1 m Unit 3 was opened up off the east wall of Unit 1. This followed the stratigraphic layers of the profile rather than the arbitrary levels of Unit 1, and was divided into three deposits (*Figure A.6*). Deposit 1 (Context 28) uncovered very few artifacts, and those artifacts present came near the interface with Deposit 2, which Engwall describes as a vague interface. Deposit 2 (Context 29) contained fragments that joined those found at the bottom of Deposit 1, supporting the broad interface between the deposits. Many more artifacts in Deposit 2 were able to illustrate Late Formative occupation at the site; these included obsidian, chipped quartzite tools, and ceramics. One sherd in particular displays white paint on a red slipped vessel; this is the only sherd of this vessel, and appears to be one of only a few extant examples of white paint in the Late Formative in the Jama River Valley (see Chapter 5). In addition, fragments of *orejeras* (napkin-ring earspools) were recovered from this context. Orejeras, as will be discussed in Chapter Six, have long been considered diagnostic of Chorrera culture (Meggers 1966). More recent interpretations by Evan Engwall have suggested that

earspools were a cultural marker of adulthood (or at least affiliation) as in modern South American cultures (Engwall 2002). Deposit 2 also yielded small amounts of burned clay, or *bajareque*, which suggested to Engwall that a structure was perhaps nearby (2001: 17). Finally, Deposit 3 (Context 30) yielded some artifacts, but only in proximity to Deposit 2.

Investigations at Finca Cueva (M3D2-009)

The Finca Cueva site, located on the outskirts of the modern town of San Isidro (*Figure A.7*) was investigated at the tail end of the 1991 season and the beginning of the 1994 season. Finca Cueva was well-known by the residents of San Isidro before it was recorded during Zeidler's initial visit to the Jama River Valley in 1980. Many ceramics had been turned up from this site, including some of apparent museum quality (as these pieces were sold to collectors and museums after being looted). Engwall reports that looting by the landowners "uncovered dozens, if not hundreds of burials, many with impressive mortuary remains, including ceramic vessels and figurines, shell ornaments and beads, and small metal artifacts" (2001: 18; *Figure A.8*). Engwall, along with Augusto Oyuela-Caycedo, documented the site's boundaries during the PAPRJ's 1989 regional survey, and found Terminal Valdivia (Piquigua Phase), Chorrera (Tabuchila Phase), and Jama-Coaque (Muchique Phase) ceramics onsite. Considering its proximity to the central mound at San Isidro and its reported importance to the archaeological record, Engwall placed several test units over the site in an attempt to understand the Late Formative occupations there.

The site itself is located on a relatively flat space, where the Cueva family principally grows bananas and coffee; it is bordered on the south by the Río Cangrejo, which flanks the north side of San Isidro and drains directly into the Jama River just downstream from the modern town. The Cangrejo is normally a tranquil stream, passable by foot, and has cut several meters

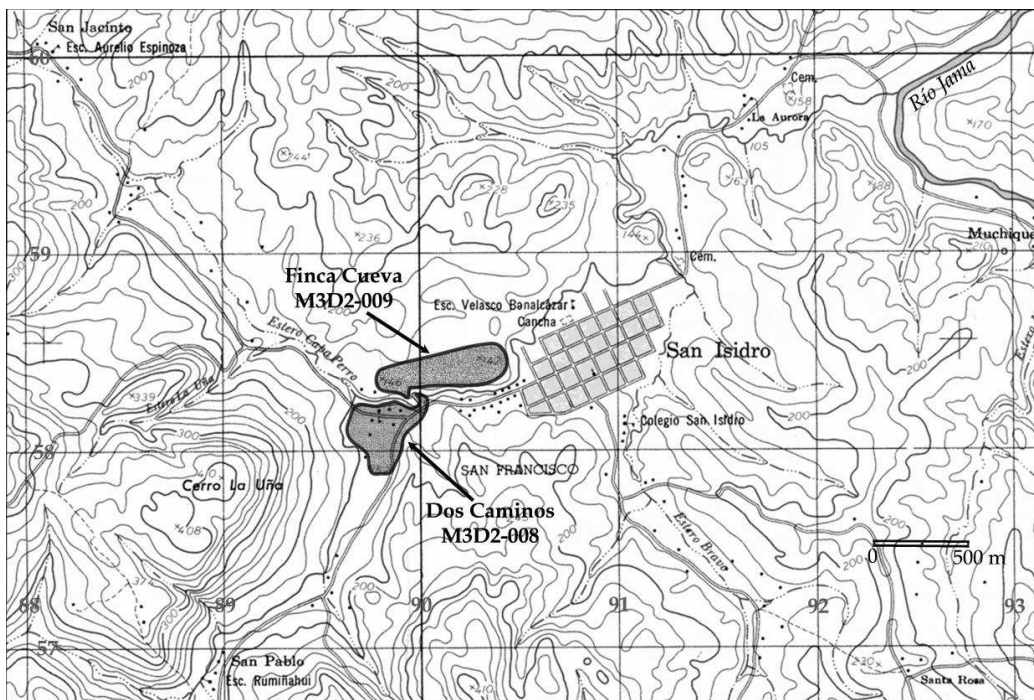


Figure A.7. Location of Finca Cueva and Dos Caminos, near the modern town of San Isidro. Drawing by Evan Engwall.



Figure A.8. Don Angel Cueva, directing me to various excavations (and looting pits) on the Finca Cueva (M3D2-009). Photo by author.



Figure A.9. The north bank of the Río Cangrejo, with water levels typical of the dry season. Photo by author. downward (*Figure A.9*). Part of this downcutting is triggered by El Niño events, which swell the Cangrejo greatly. After inspecting these river cuts, Engwall was unsure as to the presence of Late Formative materials onsite, as Tephra I and III were identifiable in profiles but II was not. However, landowners and local *huaqueros* directed him to parts of the site that were “pura Chorrera”; that is, that had Late Formative materials found in them before (Engwall 2001: 22).

Unit 1, a 1x1 m, was laid out on the edge of a terrace on the western side of the site, in a location that the landowners indicated as unlooted. Engwall began this unit with 20 cm arbitrary levels, and found apparently undisturbed Jama-Coaque deposits, but at approximately 40 cm, looter’s backfill was encountered and the unit was abandoned. Engwall reports that his informants then showed him an area of the site that was completely free of looting. Unit 2, then, was located in this area of the site, in a clearing at the base of a small hill.

Unit 2, a 1x1 m unit, had all soil passed through ¼ inch mesh, with soil samples taken from all contexts for phytoliths and flotation. Unit 2 was also excavated in 20 cm arbitrary levels. The first two levels of this unit contained dense concentrations of ceramics and lithics which pertained to Jama-Coaque occupations of the Integration Period (Muchique 3). However, these ceramics were mostly plainware (Engwall 2001: 23). This pattern continued for several more levels, with only a few diagnostic decorated Jama-Coaque sherds showing up amidst these upper levels of the unit (*Figure A.10*). The difficulty in assigning phases to these sherds was also complicated by the lack of visible ashfall in this unit.

At approximately 155 cm b.s., two features (Feature 2, Context 23; and Feature 3, Context 24) were uncovered in the unit. These features were both circular deposits of softer greyish-brown soils. Feature 2 extended down for 20 cm, and had no associated artifacts. However Feature 3 extended much further down, and had some artifacts pertaining to the Late Formative; this soil was a yellowish clay loam. Once these features were excavated, work continued in the rest of the unit, in several more 20-cm levels. At 235 cm b.s., Engwall uncovered the distal phalanges of an adult human in the northwest corner of the unit, at the base of Feature 3. These remains were pedestaled as excavation continued in the rest of the unit down to a depth of 260 cm, where sterile base soils were reached. Contexts 28 through 30, which pertained to the 20 cm levels between 200 and 260 cm, were sparsely populated with artifacts, but Engwall was able to identify some as belonging to the Late Formative. The deepest level even presented a few sherds belonging to Valdivia VIII, the earliest occupations in the valley. However, at this time Engwall's first field season was over. Don Angel Cueva assured Engwall that the burial would remain in place, and so it was covered with plastic and Unit 2 was backfilled.

Engwall returned to this unit in 1994 to begin fieldwork for that season. Unit 2 was deemed suitable to expand upon, principally because Engwall believed that the burial encountered in 1991 dated to the Late Formative. Looting had persisted elsewhere on site, but Unit 2 (and its burial) had remained undisturbed. Context 90 pertained to this looting, as Engwall gathered Chorrera ceramics onsite that were churned up from looting activity.

Five more 1x1 m units (3 through 7) were opened up, to the north and west of Unit 2 (*Figure A.10*). This allowed for Engwall to expose the rest of Burial 1. Unit 3 (to the west of Unit 2) was considered relatively unremarkable for its first 140 cm, with modest amounts of Jama-Coaque ceramics recovered there. However, in the 140-160 cm level, at 152 cm b.s., two circular stains appeared in the unit (Feature 4, Context 39; and Feature 5, Context 40). Each of these circular stains was approximately 25 cm wide, and 12 cm deep. Both of them held dark, carbon-rich soil which was collected for flotation and phytolith analyses. Ultimately, Unit 3 was excavated to a depth of 200 cm, but no evidence of the burial was present and no further features revealed themselves.

Unit 4 was opened up to the north of Unit 3. This unit's upper levels were similar in artifact density to Units 2 and 3, with some evidence of light disturbance due to a *mate* tree atop the unit. These early levels notably contained some black sherds with burnished lines; Engwall believed these were Manteño in affiliation, implying that late Jama-Coaque occupants had contact with their coastal neighbors to the south. At a depth of 152 cm b.s. in the southeast corner of Unit 4, the yellowish clay loam diagnostic of Feature 3 (and the burial) appeared. Based on this location it was determined that the burial extended to the north and east; thus Unit 5 was opened up.

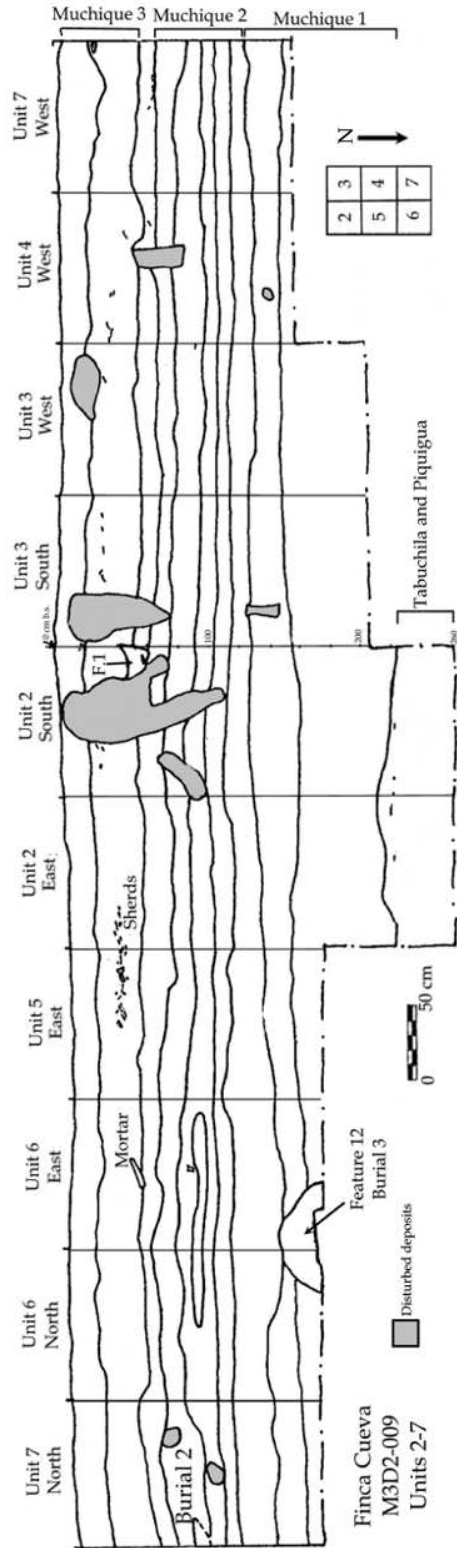


Figure A.10. Profile drawing of Units 2-7 at Finca Cueva (M3D2-009). Drawing by Evan Engwall.

Engwall mentions that the soil of this feature is unlike any other in the site; according to him, this may have been brought in from offsite (Engwall 2001: 27). If this is true, this is an intriguing aspect of possible burial practices in the Jama River Valley.

Unit 5 was now opened with the intent of revealing the full Burial 1. In the first level of this unit, several hundred Jama-Coaque sherds were recovered, as well as obsidian. At 15 cm b.s., a Guangala ceramic figurine mold was found in the east wall of the unit. This mold also showed fabric impressions on its exterior and is of interest because Guangala, like Manteño, was present on the southern coast of Ecuador. By 30 cm b.s., Jama-Coaque sherd density dropped sharply, and the unit began to look more like its neighboring units in artifact density. At 133 cm b.s., a 10 x 15 cm oval stain of darker soils (Feature 7, Context 58) was uncovered. This feature was 10 cm deep, and had no artifacts, but appeared to resemble Features 4 and 5. Engwall decided that this feature was not associated with Burial 1, which appeared at 152 cm in Unit 5. Most of the western half of the unit was taken up by the burial's characteristic yellowish soil, though it continued into the north wall of the unit. Thus, Units 6 and 7 were opened to the north of Units 4 and 5, in order to completely expose the burial.

Units 6 and 7 were taken down alternately in 20 cm levels, and contained many fewer artifacts than the first four units. However, at 70 cm b.s., a human tibia and fibula intruded into the unit from the northwest corner. This was labeled Burial 2, but was not excavated for lack of time and labor. At 90 cm b.s., a large soft stone appeared in between Units 6 and 7. This stone, measuring approximately 35 x 25 x 35 cm, was partially burned. Underneath this stone were several unremarkable Jama-Coaque ceramics. Feature 8, another circular stain of 10 cm in depth, was found 20 cm directly east of the burned stone. In addition, the burned stone was separated from Burial 1 by some 25 cm, leading Engwall to believe the two were not associated (2001: 29).

At this point Engwall was able to fully define the burial, as it extended into the southeast corner of Unit 7 and the southwest corner of Unit 6. Several other features were present at this level. Feature 9 (Context 78) was another small (10 cm) dark organic soil lens, 30 cm north of Burial 1 (*Figure A.11*). Other elements were uncovered at this level, 35 cm east of Feature 9 (Element 3, Context 80; Element 4, Context 81). These elements were circular and only a few centimeters in depth, and were composed of soft, dark grey-brown soil. No artifacts were retrieved from these elements. Another burial (no. 3) was encountered in the northeast corner of Unit 6; this burial, like Burial 2, was not excavated. Meanwhile, Feature 10 was encountered in the northwest corner of Unit 7. This feature contained the yellowish-brown clay loam of Feature 3/Burial 1, suggesting to Engwall that this may have contained another burial (2001: 29). Feature 11 was discovered in Unit 4 while cleaning the unit for the photo in *Figure A.11*; this was also a circular, shallow lens of dark grey-brown soil. Finally, Element 2 was found immediately to the west of the burial; in this shallow depression were some bones of a rodent, known locally as a “guatusa” (genus *Dasyprocta*).

Burial 1 held a fill that resembled the yellowish brown clay loam noted earlier. At 192 cm b.s., a ceramic vessel was uncovered in this burial. This ceramic turned out to be a nearly complete Jama-Coaque (Muchique 1) bowl with a wide annular base (*Figure A.12*). This vessel exhibits extensive grinding wear on its interior surface, in addition to post-depositional spalling.

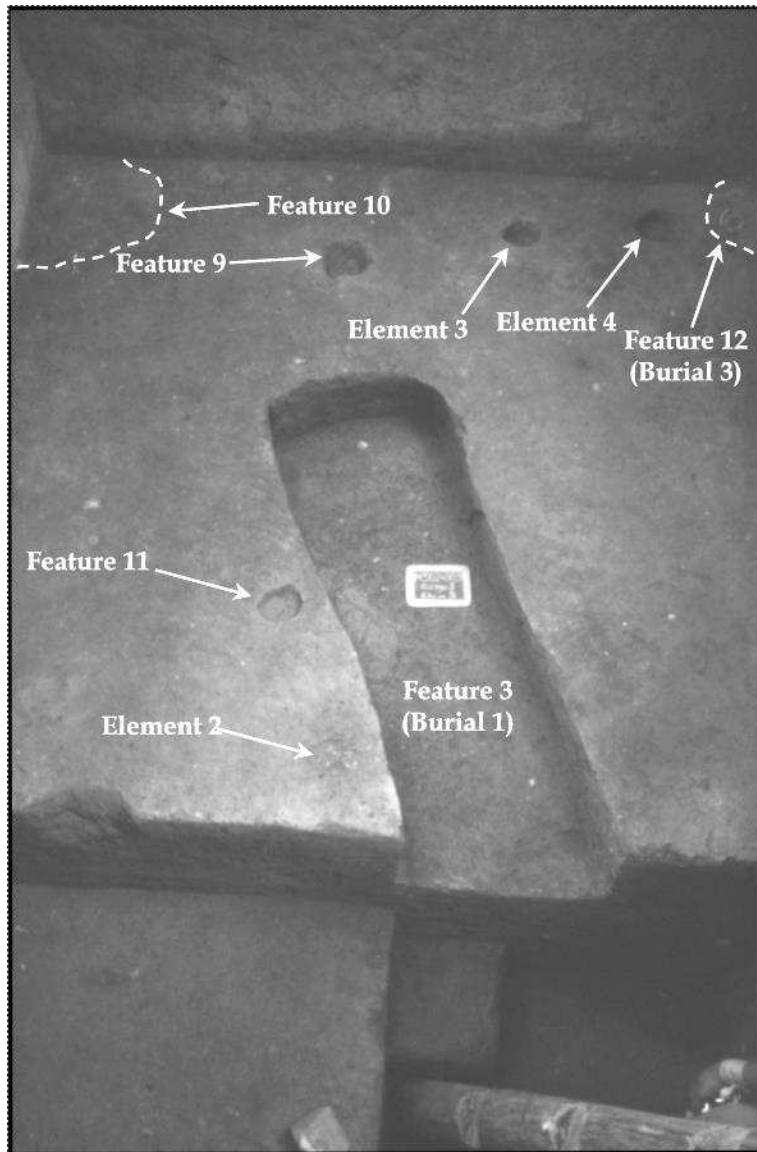


Figure A.11. Profile drawing of Units 2-7 at Finca Cueva (M3D2-009). Drawing by Evan Engwall.

This bowl was placed upside-down in the burial, atop the face of the individual. The rest of the skeleton was carefully exhumed for drawing (*Figure A.13*), revealing the individual as laying on her back, with hands placed over the pelvis. Preservation of the skeleton was somewhat poor, with the cranium broken and many small bones deteriorated or broken apart. Initial measurements and osteological analysis of this individual by Engwall determined this was a woman of approximately 150-160 cm in height, estimated to be 40-45 years of age at death (2001: 31-32).

Investigations at Dos Caminos (M3D2-008)

During Evan Engwall's investigation of cut banks along the Río Cangrejo for Finca Cueva, he noticed evidence of recent looting activity along the opposite bank of the river. This southern bank was part of the site named Dos Caminos, which was recorded in the 1989 regional survey. The previous year, the river had washed out a section of bank and revealed two bell-shaped pits (*Figure A.14*) which were eventually looted. Closer inspection by Engwall revealed fine Chorrera ceramic sherds, obsidian, shell, and carbon. Finca Cueva's disappointingly small Late Formative component led Engwall to believe that excavating Dos Caminos would be more productive.



Figure A.12. Complete Jama-Coaque (Muchique 1) annular-base bowl. Photo by author.

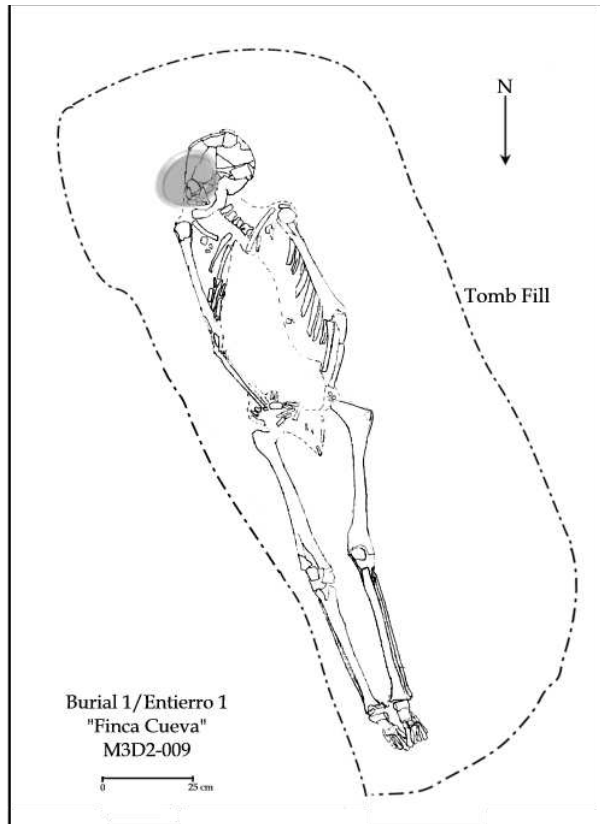


Figure A.13. Burial 1 at Finca Cueva. Note the dark circle over the face, denoting where the annular-base bowl (Figure A.12) was placed. Drawing by Evan Engwall.



Figure A.14. Bell-shaped pit visible in the cut bank at Dos Caminos, at center-right in the photo. Photo by Evan Engwall.

Dos Caminos, like Finca Cueva across the river, has been a profitable source of looted antiquities for the people of San Isidro for many years. In the intervening two decades between Engwall's excavations and my visit, the town has expanded greatly to the west, into this site. It appears that the new hotel I was staying in, the Hotel María Agustina, lies atop Engwall's old excavation units. New homes have sprung up across the site, and with them have come more opportunities for landowners to collect what they find in the course of home expansion or agricultural practice. In short, both sites are critically endangered and partially destroyed by the growth of the modern town.

Engwall began investigations at Dos Caminos by excavating the partially looted bell-shaped pits in the cut bank. While looting activity had disturbed the exposed portion of the pits, much of the fill remained intact which allowed for Engwall to scientifically excavate what remained of these pit features. Tephra II was also readily visible in the bank just above the bell-

shaped pits which helped determine the affiliation of the pits to the Late Formative (*Figure A.15*). Many well-finished ceramic sherds were removed from the pits (as Context 4), and they comprise a great deal of the collection under study in this thesis. In addition, the western looted pit contained several intact deposits of charcoal, which were retrieved for radiocarbon dating. This returned a date of 2930 ± 80 rybp (approximately 1130 BCE; ISGS-3308; see Table 4.1). A partially looted burial was also present in the riverbank, approximately 50 cm west of the western looted pit; Engwall decided not to excavate it, and it was further looted later in the field season (2001: 36).

A four-meter wide profile was laid out along the riverbank to the west of the bell-shaped pit (*Figure A.16*). The profile was excavated as a staircase in order to mitigate mass subsidence of the riverbank; for the same reason, this staircase also narrowed several times as it approached the level of the river. Engwall reported that twenty-two strata were encountered in this profile, from Jama-Coaque to Terminal Valdivia occupations (2001: 38). More importantly it also determined that a sizable Late Formative component was intact in the site's stratigraphy.

Deposit 1 contained heavily disturbed, loosely compacted soils with ceramics of the Jama-Coaque culture, and was likely the product of looting activity onsite. However, Deposits 2-4 all pertained to Tephra II, which appeared undisturbed. These deposits of ashfall ranged from 25 to 50 cm in thickness. Most of these deposits had no artifacts, save for a few Late Formative sherds in the lowest deposit (4; Context 6?), perhaps due to bioturbation by rodents or roots. The underlying Deposit 5, then, was of greatest interest to Engwall, as it yielded diagnostic Chorrera ceramics, obsidian, and carbon.

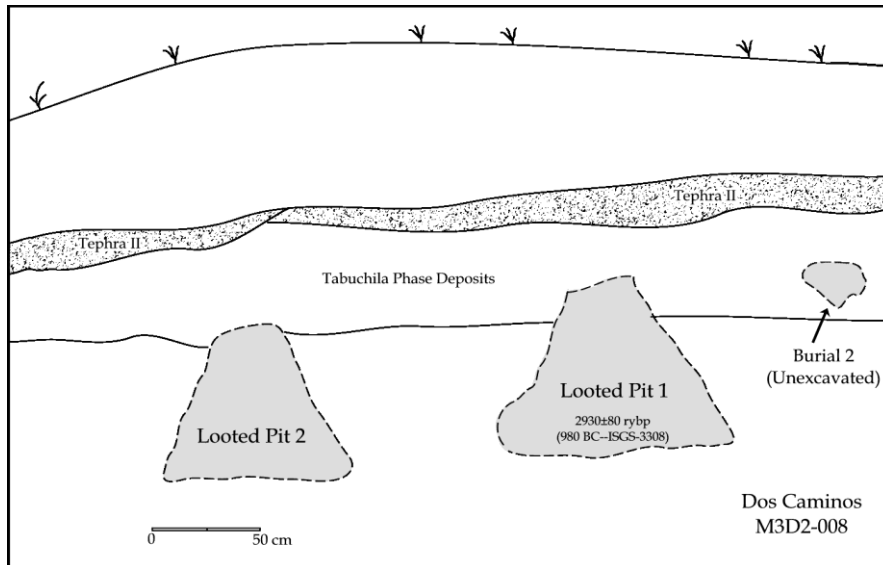


Figure A.15. Profile sketch of the two looted pits investigated in the southern river bank by Engwall (Context 4). Drawing by Evan Engwall.



Figure A.16. Profile 1, excavated at Dos Caminos. View is to the southeast, from the water level. Photo by Evan Engwall.

This deposit was 35-60 cm thick, and was composed of a homogenous dark brown clay loam; Engwall made this deposit the prime target for further investigation. Engwall also noted two “post-mold-like dips” in Deposit 5 that intruded into Deposit 6, though he was never able to determine their function (2001: 39).

Deposits 6 through 9 were culturally sterile olive-brown soils, which added another 90 centimeters or so of depth to the profile. Deposit 10, then, was a dark clay loam with small amounts of Valdivia Phase 8 ceramics. Deposit 11 was a sandy olive-brown stratum, lying atop the darker clayey Deposit 12, which also had some Valdivia Phase 8 ceramics. This pattern continued for Deposits 13 through 20, with Valdivia sherds showing up occasionally over two meters of depth. Engwall was intrigued by this (though unable to investigate further), as it is possible that with this depth of Valdivia occupation, earlier phases of Valdivia may have been present before the Terminal Valdivia presence currently known for San Isidro. However, Tephra I (Deposit 20) was encountered below all of these; prior excavations in the Jama River Valley considered Tephra I as a cap on Terminal Valdivia occupations in the region. Thus it is also possible that stream action or other processes of perturbation were at play. Below Tephra I, two more deposits were uncovered, but neither of these contained any artifacts. The profile at Dos Caminos demonstrated that many Late Formative contexts were intact; Deposit 1 represented heavily looted Jama-Coaque contexts, but evidently looters stopped once they encountered Tephra II. Engwall laid out four 1x1 m units (1-4) along the southern end of the profile (*Figure A.17*). As with other excavations, all deposits had samples taken for flotation and phytolith analysis, and all soil was passed through ¼ in mesh.

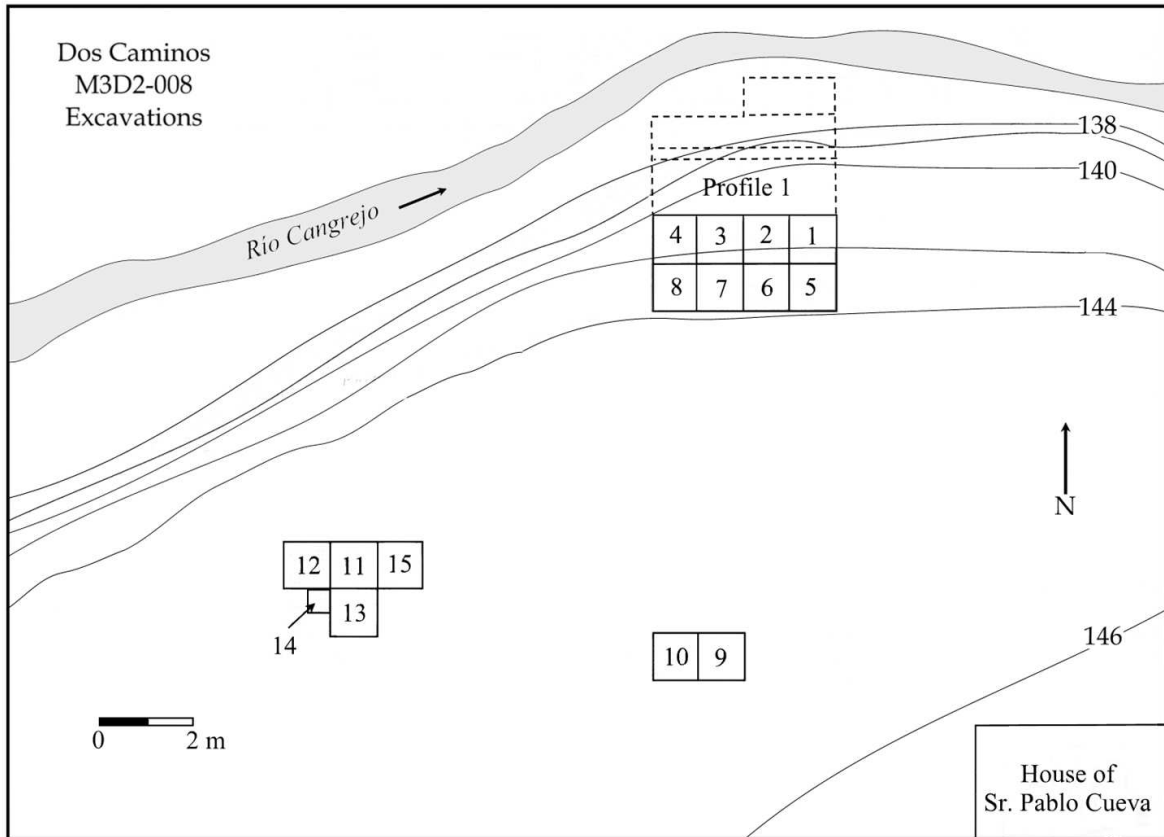


Figure A.17. Units excavated at Dos Caminos. Grid north was set at 305 degrees. Drawing by Evan Engwall.

Deposit 1, as in the profile, consisted of heavily disturbed soils with few Jama-Coaque sherds in them. Deposits 2, 3, and 4 were culturally sterile, save for at the interface with Deposit 5, where some Chorrera artifacts were encountered. Deposit 5 in each unit (Context 15 in Unit 1, Context 17 in Unit 2, Contexts 19 and 20 in Unit 3, and Contexts 22 and 23 in Unit 4) contained moderate amounts of small (1-4 cm) Chorrera sherds. Engwall noted that the generally small size of sherds could be a result of trampling in an ancient human thoroughfare or activity area (2001: 41; see also Isaacson 1987:226). Small obsidian waste flakes were also recovered in this deposit, as well as several small rounded and flattened stones. These look much like river stones from the Río Cangrejo, and Engwall suggested their use as ceramic burnishers (2001: 41). As at El Mocal, these contexts also contained fragments of *orejeras*. Charcoal was collected as it was found, and a suitably large sample (in Unit 3's Deposit 5A, Context 19) was combined from two

sources 30 cm apart at the shared depth of 160 cm b.s. This sample returned a date of 2880±70 rybp (930 BCE; ISGS-3310; see Table 4.1), on the early side of the Late Formative Period (Zeidler et al. 1998: note 1). Unit 3's and Unit 4's Deposit 5 was split into two parts (A and B), differentiated by the increased density of small gravel and decreased artifact density in the final 12-15 cm of the deposit.

Units 1-4 were expanded to the south, with another 1 x 4 designation of four units (5-8). Excavations continued rapidly through the first four deposits and the pattern of Units 1-4 continued with few differences. Deposit 1's meager Jama-Coaque looting backfill gave way to the layers of Tephra II, with some Chorrera sherds retrieved in Deposit 4 near the interface with Deposit 5A. Knowing at this point that Deposit 5 had two strata within it, Units 5-8 all had Deposits 5A and 5B differentiated (Contexts 25 and 26 in Unit 5, 28 and 29 in Unit 6, 31 and 32 in Unit 7, 34 and 35 in Unit 8). As with in Units 1-4, Deposit 5A was dense with Chorrera ceramics, before artifact density decreased in Deposit 5B. In addition, a rounded and perforated shell ornament was recovered from Context 28 (Dep. 5A in Unit 6).

With Deposit 5B removed, several features were visible in Units 1-8 (*Figure A.18*, *Figure A.19*). Feature 1 was a long (1.5 m), dark lens (3-6 cm thick) of organic soil with flecks of carbon and red hematite within it. This feature was primarily encountered in the southern profile, and Engwall argued that it was perhaps part of an occupation floor. Features 2 (Context 36), 3 (Context 37), 4 (Context 38) and 5 (Context 39) all presented as circular features of 10-20 cm in diameter, and intruded approximately 15 cm into Deposit 6 with the exception of Feature 5 which continued at least 35 cm in depth. These "post-hole" like features were similar to those encountered in the riverbank profile, but were indistinguishable from their parent matrix of

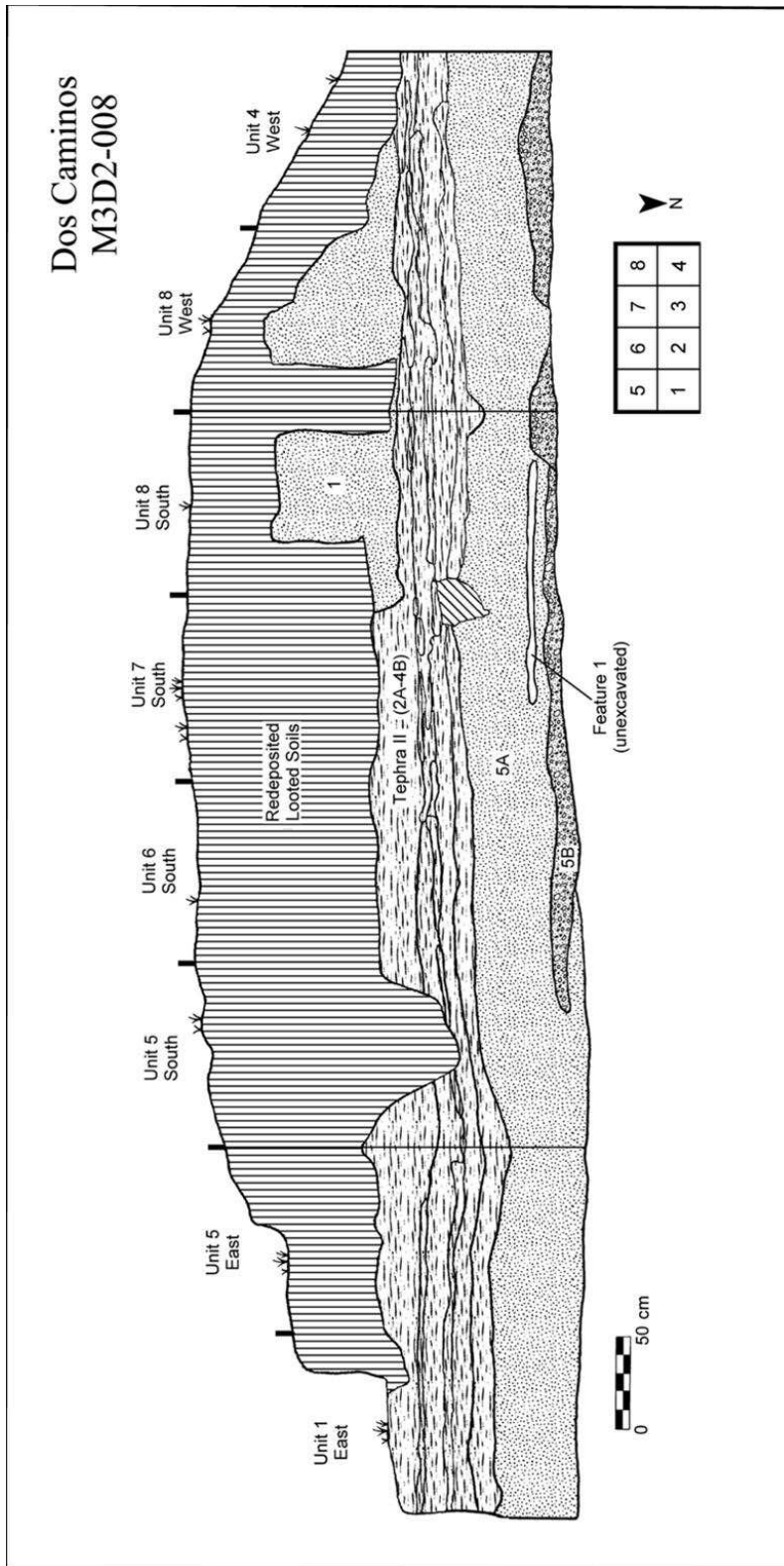


Figure A.18. Profile drawing of Units 1-8 at Dos Caminos. Drawing by Evan Engwall.

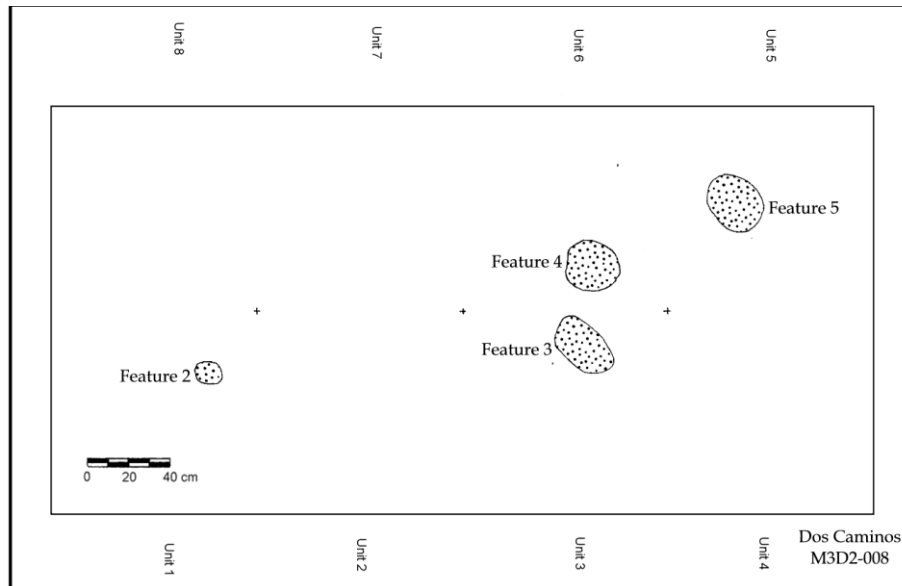


Figure A.19. Plan view of Units 1-8 at Dos Caminos, illustrating locations of Features 2-5. Drawing by Evan Engwall.

Deposit 5; thus Engwall was unable to determine where they began in Deposit 5. However, these features were closely associated with Feature 1, and altogether Engwall argued that these features may have represented a Late Formative structure which was only partially excavated (2001: 46). This argument is strengthened by the interpretation of the recovered sherds' small size as evidence of trampling and activity at the site. Unfortunately, further expansion of these units (and the possible structural remains) was precluded by the landowner, who began to fear destruction of the riverbank with more investigation.

Excavations then moved to the south of the first eight units by about seven meters, and Units 9 and 10 (a 1 x 2 m exposure) were established. As with the first eight units, the top layers were heavily looted, and so they were quickly excavated. However, stratigraphy in these units was slightly different. Deposit 1, as before, consisted of the looted Jama-Coaque contexts; however, Deposits 2 through 5 continued this pattern, though they were less disturbed by looting. Deposits 6 through 8 consisted of Tephra II ash deposits, linking these deposits to Deposits 2-4 in the first eight units. Deposit 5's analogue in Units 9 and 10, then, was Deposit 9 (Context 41

in Unit 9 and 42 in Unit 10), which occurred about 2 ½ meters below the surface. However, in this deposit no features were identified, no radiocarbon samples were recovered, and only a few small Chorrera sherds were found. Flotation was not performed on the soil from this deposit.

Two more units were then opened a meter north and six meters west of Units 9 and 10. These units, 11 and 12, were excavated in a similar fashion to the earlier ones (which is to say, rapidly through upper deposits). Deposit 1 was sterile, and Deposits 2 through 4 had sparse amounts of Jama-Coaque ceramics. Deposits 5 and 6A-E were composed of Tephra II's various layers, with some manifesting the fine white texture of primary airfall and others darker and coarser. However, at the interface between Deposit 6 and 7, a few interesting artifacts were revealed. One of these is a remarkable ceramic fragment that appears to be part of a Chorrera "neckrest" vessel (*Figure A.20*; see Lathrap et al. 1975: nos. 342, 343, 344). The other artifact was actually recovered in the course of flotation, as part of the heavy fraction. This artifact is a small bead in the shape of a monkey, carved from an animal claw (*Figure A.21*). Few if any beads of this size and design have been discussed in the literature of Late Formative Ecuador, and it is a compelling example of the kind of artifacts that can be recovered through flotation.

Deposit 7 (Context 47 in Unit 11 and Context 48 in Unit 12) yielded considerable amounts of ceramics, which were generally larger than those encountered by Engwall in the other units. This implied to Engwall that the ceramics were located in areas where less daily activity had occurred (2001: 49). Feature 6 was first identified in this stratum, at a depth of 240 cm in the southwest corner of Unit 11 and intruding slightly into Unit 12 as well. The portion visible was rectangular and distinctly lighter in color. However, most of this feature was still in the southern profile; thus Unit 13 was opened to the south of Unit 11 in order to more fully



Figure A.20. Fragments of “neckrest” vessel. Photo by author.

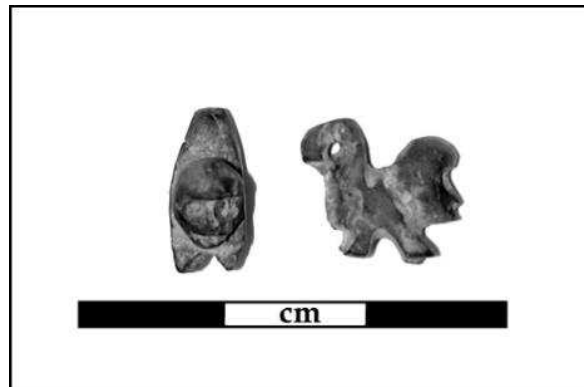


Figure A.21. Carved claw bead in the shape of a monkey. Photo by Evan Engwall.

explore Feature 6. Deposit 7 in Unit 13 (Context 49) was dense with artifacts immediately above Feature 6. Unit 14, a 50cm x 50cm unit, was also opened up in order to gain a full view of Feature 6 (*Figure A.22*).

Feature 6 (Context 51), when fully visible, was a yellow-brown mottled clay feature with a distinctly trapezoidal shape but the feature changed shape drastically with depth (*Figure A.23*). By 276 cm b.s., part of the feature had terminated, while the wide end of the trapezoid extended to show a darker brown soil by 280 cm b.s. This part of the feature measured approximately 150 cm long, 50 cm wide, and was 40 cm deep, oriented along an E-W axis; within this part of the feature was a burial. Burial 1 (Contexts 54-57) was fully exhumed and drawn (*Figure A.24*; *Figure A.25*). This individual was buried on her back with legs drawn up to her right side and hands placed at the pelvis. No artifacts were found directly associated with this woman, but based on stratigraphic grounds, Engwall dated this individual to the Late Formative. This is the only burial dated to the Late Formative in the Jama River Valley, and one of only a small set across Ecuador.

Just east of Burial 1, Engwall identified another feature, this time a dark stain that may have intruded slightly into the burial at its eastern extent. To examine this stain Engwall opened up Unit 15, immediately east of Unit 11, and quickly excavated down to Deposit 7 once again. 20 cm into Deposit 7, the outlines of the dark stain were encountered once again. Now classed as Feature 7 (Context 52; *Figure A.26*), the irregular shape of the fill soon took on a more rounded appearance, and flared outward with depth: Engwall had encountered a bell-shaped pit much like those in the cut bank. This pit held large sherds, numerous figurine fragments, obsidian, and abundant charcoal.



Figure A.22. Feature 6 in Units 11-14 at Dos Caminos. Photo by Evan Engwall.



Figure A.23. Feature 6, excavated down to the top level of Burial 1. Photo by Evan Engwall.



Figure A.24. Feature 6 and Burial 1, fully exhumed and excavated. Also note the top of Feature 7, in Unit 15 at the bottom of the photo. Photo by Evan Engwall.

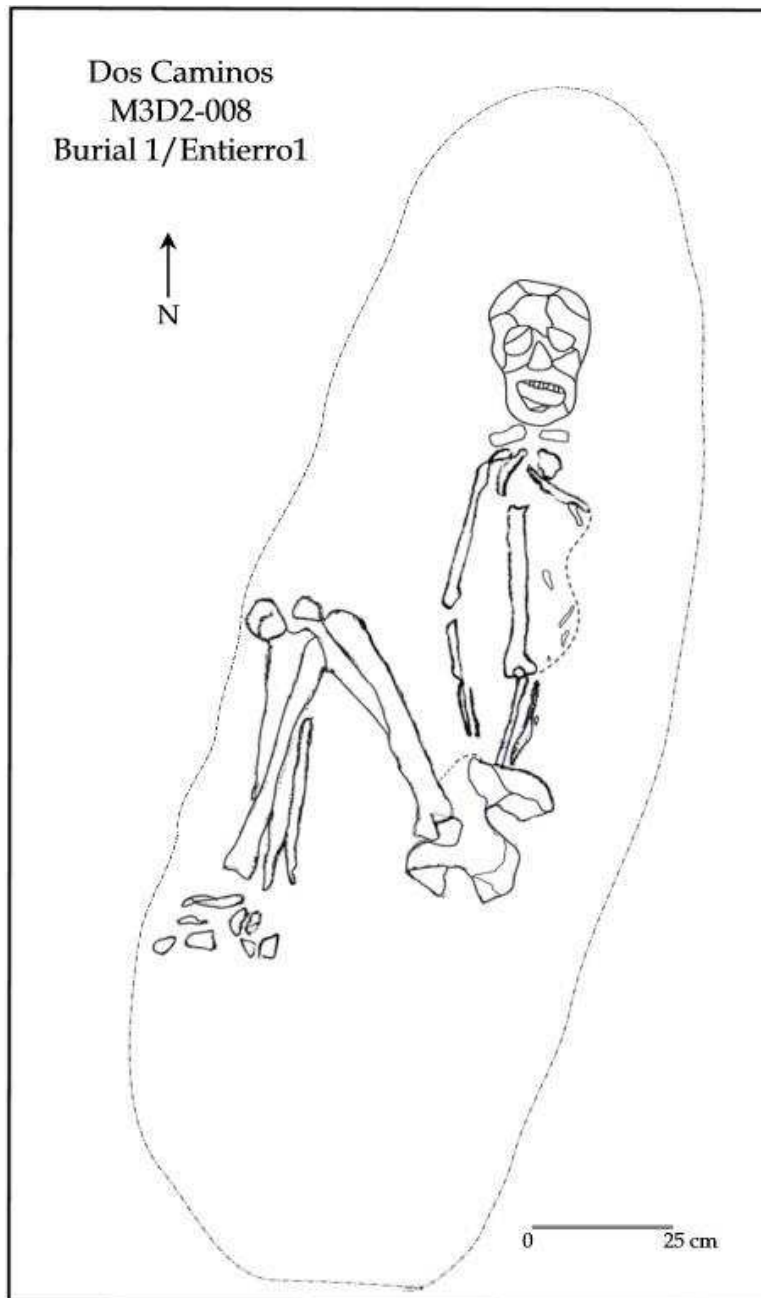


Figure A.25. Drawing of Burial 1 at Dos Caminos; however, figure is oriented incorrectly, as Burial 1 is oriented along an E-W axis. Drawing by Evan Engwall.

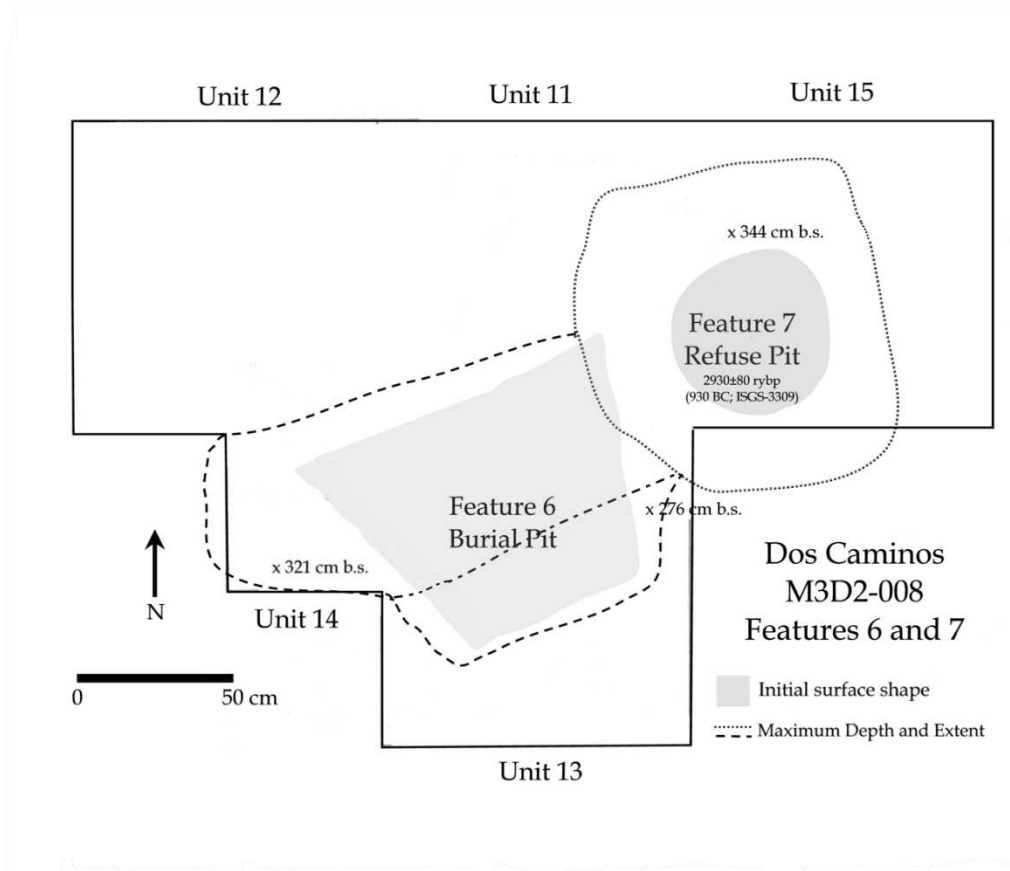


Figure A.26. Plan drawings of Features 6 and 7 at Dos Caminos, with initial surfaces and maximum extents noted. Drawing by Evan Engwall.

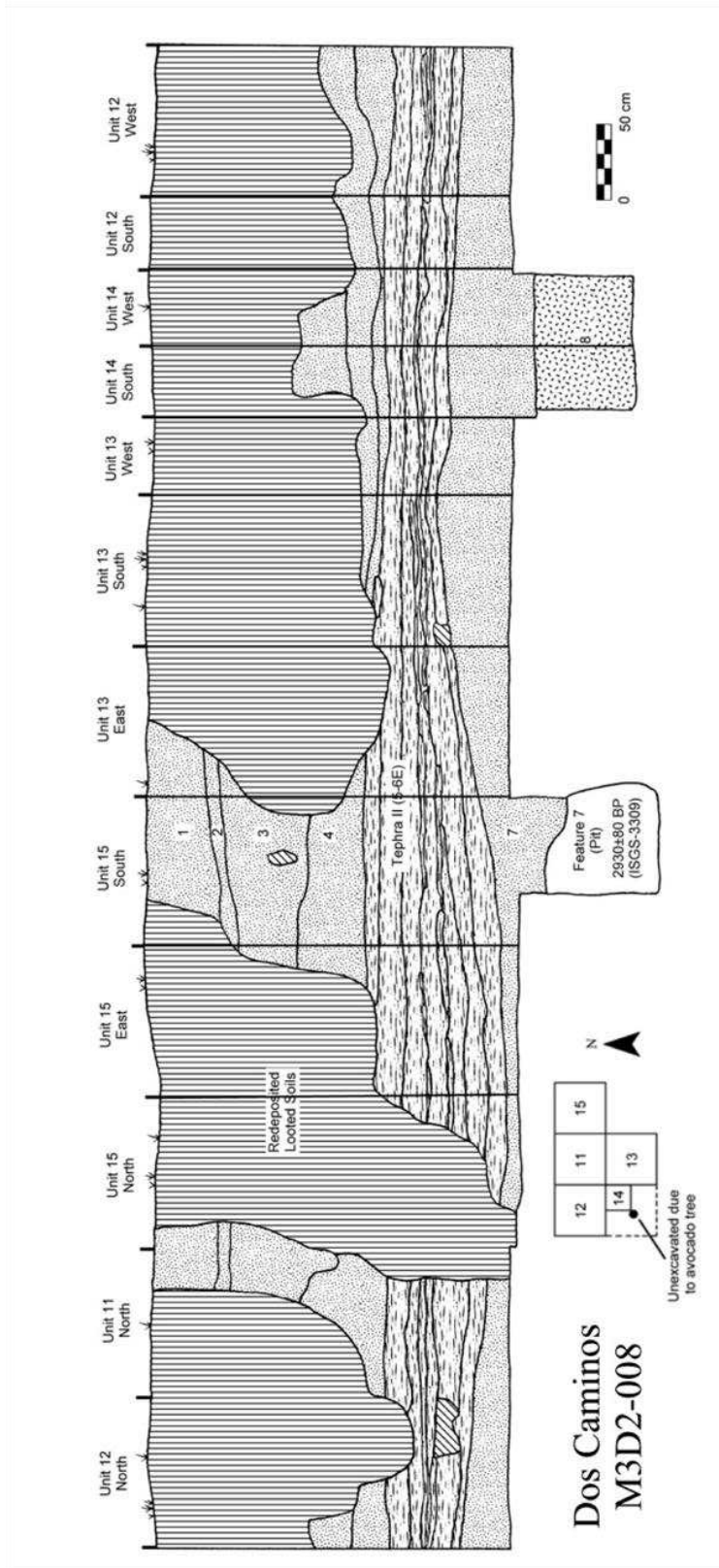


Figure A.27. Profile drawing of Units 11-15 at Dos Caminos. Drawing by Evan Engwall.

Two of these pieces of charcoal were combined into a radiocarbon sample, which returned a date of 2930 ± 80 rybp (1130 BC; ISGS-3309; see Table 4.1) (Zeidler et al. 1998: note 1). This date is identical to the determination from the bell-shaped pits in the bank. The fill of the feature appeared to be homogenous in texture and color. The base of the pit was reached at a depth of 344 cm b.s., making it 120 cm deep and around a meter wide at the base (*Figure A.27*).

Engwall separated the recovered materials into a general assemblage (which remained in Ecuador) and a diagnostic assemblage. Diagnostic ceramics, lithics, obsidian, the human remains, shell, and the other biological samples were all taken to the University of Illinois for further analysis. Unfortunately, these analyses were never reported fully by Engwall, due to extenuating circumstances.